

Pacific Gas & Electric Company Comments

Energy Storage and Distributed Energy Resources (“ESDER”) Stakeholder Initiative

Submitted by	Company	Date Submitted
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General Comments:

PG&E appreciates the work CAISO has done to advance energy storage and increase participation of Distributed Energy Resources (DERs). Overall, PG&E is supportive of utilizing DERs to meet both customer and grid needs. However, there are a number of unresolved policy and implementation issues within the CAISO’s ESDER proposal that must be resolved prior to PG&E being able to support the ESDER initiative.

With respect to the Non-Generating Resources (NGR) market participation model, the CAISO would need to provide the state of charge (SOC) mathematical formulation to enable PG&E to test and validate to ensure accuracy, before the company could support the proposal. For enhancements to the Proxy Demand Response (PDR) / Reliability Demand Response Resource (RDRR), along with Multiple Use Applications (MUA),¹ PG&E opposes the Draft Final Proposal due to unresolved issues, many of which require coordination with the CPUC.² As stated in prior comments, PG&E believes that the complexity inherent to integrating behind-the-meter resources into the market, along with unresolved issues pertaining to rate treatment, interconnection procedures, metering requirements and cost responsibility, and jurisdictional authority warrant more careful and thorough consideration of issues raised in the ESDER Initiative for 2015.

Furthermore, the CPUC has a number of active proceedings in which DERs are either the focus or a topic of discussion. Ultimately the aforementioned issues would be resolved through open proceedings then integrated into Long-Term Procurement Plans and the anticipated Integrated Resource Plans mandated by Senate Bill 350. PG&E maintains that better coordination with CPUC proceedings, including

¹ Resources which provide retail, distribution and wholesale services.

² As a point of clarification, PG&E continues to support retail load participating in PDR and RDRR under current rules. Some retail loads participating in today’s PDR rules include customer-sited energy storage as part of the participating load.

appropriate sequencing of decision points, would yield better outcomes in ESDER. Specifically, PG&E recommends a detailed plan and timeline for resolution of key issues that addresses overlap between CAISO initiatives and CPUC proceedings.

While PG&E supports continuing to evaluate the structure of multiple-use behind-the-meter resources, PG&E cannot support the CAISO's Draft Final Proposal at this time, given the number of unresolved policy and implementation issues. PG&E looks forward to continuing to work with stakeholders on resolution of these issues.

Topic-specific Comments:

Topic Area	Overall Level of Support (Fully support; Support with qualification; or, Oppose)	Comments (Explain position)
Proposed enhancements to the non-generator resources (“NGR”) market participation model	Additional information from CAISO requested	<p>Throughout the ESDER initiative, PG&E has requested that the CAISO provide the mathematical formulation for how the state of charge (SOC) of a resource is optimized. All stakeholders should be able to test and validate that CAISO’s interpretation of the resources’ SOC used in the market is accurate. While other RTOs and ISOs make mathematical formulations of market optimization public, CAISO has stated this information is proprietary.³ PG&E requests additional information on why these mathematical formulations are proprietary. To clarify, PG&E is not requesting the actual code the vendor would use, but rather only the mathematical framework that would be used in the optimization. PG&E believes this level of detail should be foundational to CAISO’s stakeholder processes to better understand what the CAISO is proposing.</p> <p>At minimum, PG&E requests that in all three markets (DA, FMM and RT), the CAISO provide the estimates of the SOC in CAISO’s Market Results Interface (CMRI) that were used in each of these markets for each hour or market interval. Providing the SOC estimate in CMRI would allow market participants to confirm that the CAISO is interpreting and modeling the SOC correctly. This also mirrors similar information provided in CMRI today – attributes of the market that affect the results – such as transmission constraints. If not in CMRI, CAISO could provide hour-by-hour results against the modeling, similarly to how Pay for Performance has been exposed. If using the latter case, results should be available to any NGR resource (not NGR-REM, due to the resource being managed by the CAISO under this scenario).</p>

³ CAISO. Energy Storage and Distributed Energy Resources Draft Final Proposal. Pg. 5. <https://www.caiso.com/Documents/DraftFinalProposal-EnergyStorageandDistributedEnergyResources.pdf>

<p>Proposed enhancements to demand response performance measures and statistical sampling for the proxy demand resource (“PDR”) and reliability demand response resource (“RDRR”) market participation models</p>	<p>Oppose pending resolution of issues</p>	<p><u>Meter Generating Output (Section 6.2.1)</u></p> <p>PG&E’s understanding is that the fundamental change from the prior proposal is the conditional reduction in the look-back when 10 non-event days are unavailable. Specifically, if the 10 target days are not met then there is the option to default to a minimum of 5 days for weekday measurements. While such a reduction is not unreasonable, it does not address the fundamental issue at hand, which is the possibility of payment in the wholesale market for activity that would have already occurred for retail purposes (i.e., double compensation).</p> <p>In the interest of supporting a near-term solution, but recognizing that current proposals do not address these concerns, PG&E previously suggested that any baseline proposal that has the potential for double compensation be applied on a pilot basis without setting precedent for a permanent solution.⁴ The use of a pilot methodology appeared to be shared by both SDG&E and CLECA.⁵ PG&E maintains that the pace of Phase I of this initiative has left stakeholder concerns unanswered. PG&E is disappointed that the Draft Final Proposal does not appear to address extensive stakeholder comment on compensation concerns. While the Draft Final Proposal seemingly rejects the idea of a “sunset” approach, PG&E nevertheless supports the CAISO’s willingness to explore modifications to this approach in the 2016 phase.</p> <p><u>Baseline Type-II (Section 6.2.2)</u></p> <p>CAISO’s proposed method depends upon hourly data for residential customers that meet the requirements to become revenue quality meter data (RQMD). However, as previously addressed in PG&E’s comments,⁶ RQMD at the intervals that CAISO expects is not readily available for a vast majority of residential customers at this time. Because of this limitation, the use of statistical sampling for day-ahead participation when hourly interval data is</p>
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⁴ PG&E’s position set forth in its comments dated October 29, 2015 in response to the CAISO stakeholder call held on October 27, 2015.

⁵ Comments filed respectively by SDG&E and CLECA on October 29, 2015.

⁶ PG&E Comments dated October 9, 2015, pages 5-7, response to Q-1(a).

		<p>unavailable should be considered by the CAISO.</p> <p>Notwithstanding the availability of data, there are numerous issues associated with sub-metering, subtractive billing, rates, and meter ownership that need to be addressed in coordination with the CPUC, as these issues have a CPUC nexus and most would require funding to address (potentially through a General Rate Case).</p>
<p>Proposed clarifications to rules for non-resource adequacy multiple-use applications (provision of retail, distribution and wholesale services by the same resource)</p>	<p>Oppose pending resolution of issues</p>	<p>Regarding the MUA of energy storage serving customer load and participating in wholesale markets (MUA Type 2), PG&E generally regards these configurations as energy storage located behind the customer meter, serving retail load, and therefore considers them retail assets. The process for rates, interconnection procedures and metering cost responsibility must be clearly defined, and opportunities for wholesale/retail ‘gaming’ should be eliminated in order to avoid shifting grid service costs to other customers. PG&E looks forward to working with the CAISO, the CPUC, and other stakeholders to resolve these issues. PG&E requests that the CAISO and CPUC work together to develop a detailed plan and timeline of when these issues will be resolved, and in what proceedings at the CPUC. This plan should include, at a minimum:</p> <ul style="list-style-type: none"> • Rates for resources serving customer needs and participating in the wholesale market (with particular attention to accuracy, applicability and feasibility), to avoid: <ul style="list-style-type: none"> ○ Cost shifts that would result from participating DERs avoiding applicable Transmission, Distribution and Retail Generation costs ○ Multiple payments for the same service or benefit, which would increase costs to customers (for example, PG&E does not believe NEM resources should be able to participate in CAISO wholesale markets) • Interconnection procedures; operating & reliability issues • Metering requirements and cost responsibility

		<ul style="list-style-type: none"> • Jurisdictional authority, such as CAISO’s jurisdiction over non-WDAT connected resources <p>Many of these same issues are being addressed in open proceedings at the CPUC:</p> <ul style="list-style-type: none"> • Energy Storage OIR (R.15-03-011)⁷ • Distributed Resources Plan (R.14-08-013) • Integration of Distributed Energy Resources (R.14-10-003) • Distributed Generation (R.12-11- 005) • Demand Response (R.13-09-011) • Net Energy Metering Successor Tariff (R.14- 07-002) • Electric Rule 21 Interconnection (R.11-09-11) <p>The proposed plan for resolution should address how and when outstanding issues will be coordinated among and within the above proceedings.</p> <p>The CAISO states in the ESDER Draft Final Proposal that “the ISO does not believe that there are issues that need to be addressed at this time on this topic beyond the issues being addressed in the PDR/RDRR topic.”⁸ PG&E believes that this statement only refers to BTM storage participating in PDR/RDRR under new proposed baselines. PG&E outlines its remaining issues with PDR/RDRR baselines in the PDR/RDRR Topic Area.</p> <p>As clarified by the CAISO in ongoing communications, BTM storage participating in ESDER may also serve in NGR markets. Since NGR allows market participation beyond load reduction, including load consumption, frequency regulation and other ancillary services, and NGR considers participating resources as wholesale assets in all operating hours, there</p>
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⁷ Track 2 within the Energy Storage OIR will address energy storage MUA that serves the end customer and wholesale markets.

⁸ ESDER Draft Final Proposal, Section 7.3, p. 46.

		<p>is still uncertainty regarding rate structures, metering cost responsibility, interconnection procedures, and jurisdictional overlap. PG&E has described these issues in greater detail in past comments throughout the ESDER stakeholder initiative, including an example of a BTM resource participating in NGR in its October 9 ESDER comments.</p> <p>These uncertainties may be partially alleviated by enabling NGR-participating BTM DERs to be settled only in the intervals when that resource is explicitly participating in the ISO market as suggested in the ESDER Draft Final Proposal,⁹ but this doesn't fully resolve the issues. Because Load Serving Entities do not currently have a rate structure, metering cost policy, or interconnection procedure for BTM DERs, PG&E proposes that BTM DERs that have a MUA should be prohibited from participating in any wholesale market until the jurisdictional issues listed above are fully resolved. PG&E also reiterates its position that BTM DERs participating in NEM should be prohibited from participating in any wholesale market because this dual participation would amount to a double payment. PG&E looks forward to collaborating with the CAISO, the CPUC, and other stakeholders to develop a plan and timeline, as suggested above, to ultimately resolve these issues.</p>
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⁹ ESDER Draft Final Proposal, Section 2.3, p. 8.