BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Application of Pacific Gas and Electric Company (U39E) for Approval of Demand Response Programs, Pilots and Budgets for Program Years 2018-2022.	Application 17-01-012 (Filed January 17, 2017)
And Related Matters.	Application 17-01-018 (Filed January 17, 2017) Application 17-01-019 (Filed January 17, 2017)

COMMENTS OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

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I. Introduction

The California Independent System Operator Corporation (CAISO) hereby provides comments on the *Final Report of the Demand Response Auction Mechanism Working Group* (Report), issued in this proceeding on August 9, 2019. The CAISO appreciates this opportunity to provide opening comments.

II. Discussion

In general, the CAISO supports the integration of supply-side demand response resources into the wholesale electricity market and the equal treatment of third-party and investor-owned utility (IOU) demand response resources. Pursuant to Decision (D.) 19-07-009, the CAISO was an active participant in the Demand Response Auction Mechanism (DRAM) Working Group (WG) and provided input on several of the proposals. In these comments, the CAISO provides comments on the WG Report. Specifically the CAISO (1) does not support the consideration of a minimum dispatch hour requirement, and (2) clarifies a statement on the assessment of settlement quality meter data penalties.

A. The CAISO Does Not Support Considering a Minimum Dispatch Hour Requirement.

The DRAM WG discussed several proposals to drive competition and ensure that DRAM resources are bid competitively in the wholesale electricity market. The CAISO presented data to the WG showing that in 2018, a majority of the DRAM capacity bid into the CAISO energy market ranged between $250-$1000 per MWh, while market awards cleared between $80-$190 per MWh, well below demand response resource bids.[1] On the surface, the disparity between DRAM resource energy bid prices versus market clearing prices may indicate a need to impose a minimum dispatch requirement, but; the CAISO does not believe such a requirement is appropriate.

Requiring demand response resources to submit bids to ensure dispatch could require bids that are below marginal costs, which is not an efficient bidding practice. Rather than implementing a minimum dispatch requirement, the Commission should ensure that DRAM resources are bidding their marginal cost plus any appropriate opportunity costs so that the market can efficiently derive a least cost dispatch from the available resources. By leveraging the DRAM pilot to understand these costs, the Commission can gain a better understanding of the levelized cost of demand response, considering both capacity and energy costs. Understanding the value of demand response relative to other resource types is essential as the Commission seeks to encourage the most effective and least-cost preferred resources to achieve California's decarbonization goals.

Prior iterations of the DRAM have helped the Commission better understand third-party demand response capacity costs, but they have not provided a clear indication of energy costs. The CAISO agrees with stakeholders that resource adequacy resources must follow must-offer obligations and allow the wholesale market to derive a least-cost energy dispatch using resource parameters and economic bids that reflect marginal and appropriate opportunity costs.[2] The Council's joint proposal states that "[t]he 'economic' bid of a DRAM resource is determined by its opportunity cost, which is an aggregate of the opportunity cost of each customer comprising

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[1] CAISO presentation to DRAM working group from, July 29, 2019, Slides 1 and 3, 2018 July and August Day Ahead market bids and LMP from hours ending 13-21.
[2] Proxy Demand Response resources have a must offer-obligation based on its physical ability per section 40.6.4.4 of the CAISO tariff, which is recognized as a local regulatory authority program designation or customer contract.

the resource. The opportunity cost for a customer is based on the benefit that each customer associates with the electricity they would otherwise consume during a DR event."[3] Additionally, the CAISO Department of Market Monitoring (DMM) states:

> when import, demand response, and battery capacity is available, this capacity is relatively expensive to dispatch during high net load periods. DMM believes the costs and actual operation of these types of resources in CAISO markets to meet both peak demand and energy needs will be important to consider in procurement directives, particularly if these resources will comprise an increasing share of the RA fleet going forward.[4]

The CAISO believes that in lieu of a minimum dispatch hours requirement, the Commission should create and define a transparent process to understand the marginal cost and opportunity costs of participating DRAM resources to help inform its understanding and ratepayer impacts of the cost-effectiveness of demand response resources—from both a capacity and energy perspective. The CAISO further believes that if the Commission is concerned about high bid costs from DRAM resources, then the marginal cost information can be used to establish an informed "hedging mechanism" threshold in the DRAM contracts in addition to the CAISO's must-offer obligation requirements.

The CAISO supports PG&E's proposal for DRAM resources to submit "bidding behavior and the rationale for it"[5] and "marginal cost and the rationale for it"[6] to ensure that its resources are efficiently bidding into the wholesale market. At minimum, the CAISO requests that the Commission develop a working group to understand how to derive the marginal costs for participating DRAM resources, *i.e.* the array of costs that make up a demand response resource's marginal cost and potential opportunity costs. Given that DRAM is a pilot, the CAISO supports PG&E's proposal to include market bidding data in the DRAM Evaluation Report (redacted as appropriate) because the Commission should learn about DRAM resource costs—both capacity and energy—to inform the cost effectiveness decisions and ratepayer benefit analyses.

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[3] Report, p. A-13.
[4] DMM, *Reply Comments of the Department of Market Monitoring*, August 12, 2019, *Order Instituting Rulemaking to Develop Electricity Integrated Resource Planning Framework and to Coordinate and Refine Long-Term Procurement Planning Requirements* (R.16-02-007), p. 4.
[5] Report, p. 10.
[6] *Id.*

B. CAISO Supports Efforts to Ensure Delivery of Timely, Complete, and Correct Revenue Quality Meter Data.

The CAISO supports Commission efforts to ensure that Demand Response Providers are provided complete and accurate revenue quality meter data in a timely manner so that CAISO settlement quality meter data submittal timelines are met to prevent errors in market settlements and re-settlement of previously submitted inaccurate meter data.

To remedy demand response providers inability to receive revenue quality meter data from the IOU in a timely manner, PG&E proposes that demand response providers employ "the use of statistical sampling methodologies, which allow the use of estimation for a portion of the meter data required to be submitted to the CAISO."[7] CAISO notes that neither its tariff nor its business practice manual allows the use of statistical sampling methodology for the purposes of late meter data estimation. As clarification, CAISO tariff section 10.1.7 provides for the use of statistical sampling to derive settlement quality meter data "in cases where interval metering is not available for the entire population of underlying accounts." The CAISO's business practice manual further clarifies that statistical sampling may be used in the following cases:

- For day-ahead participation, when hourly interval metering is not installed at all underlying resource locations;
- For day-ahead participation, when hourly interval-capable meters are installed but RQMD is not derived from the hourly interval meter data (e.g., where load profiling is used to develop ISO submitted load settlement quality meter data); and
- For real-time and ancillary services participation when interval metering installed at all underlying resource locations is not recorded.[8]

Additionally, PG&E's proposal misrepresents the CAISO's enforcement of late meter data non-compliance, stating "the CAISO confirmed that penalties for late [settlement quality meter data] have not yet been assessed, so it is unclear what are the specific adverse impacts, especially if there are methodologies or waivers that could be employed to alleviate those risks, including the use of statistical sampling."[9]

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[7] Report, p. 15.
[8] Business Practice Manual for Metering, May 24, 2018, p. 68, available at https://bpmcm.caiso.com/Pages/BPMDetails.aspx?BPM=Metering.
[9] Report, p. 15.

Settlement quality meter data not successfully corrected or received by the CAISO from the demand response provider or its scheduling coordinator by T+48 business days from the trading day is considered late meter data. Any submission of late meter data to the CAISO is a violation of the CAISO's Rules of Conduct and may result in sanctions as provided in section 37.5.2 of the CAISO tariff. The CAISO has actively enforced its Rules of Conduct in the context of submission of inaccurate or late meter data submittal. There have been multiple instances when penalties have been assessed to demand response providers with participating demand response resources since 2018.

III. Conclusion

The CAISO appreciates the opportunity to provide comments.

Respectfully submitted

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