

**BEFORE THE PUBLIC UTILITIES COMMISSION OF THE
STATE OF CALIFORNIA**



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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)

Application 17-01-018
(Filed January 17, 2017)

Application 17-01-019
(Filed January 17, 2017)

And Related Matters.

**COMMENTS OF THE CALIFORNIA INDEPENDENT SYSTEM
OPERATOR CORPORATION**

Roger E. Collanton
General Counsel
Anthony Ivancovich
Deputy General Counsel
Anna A. McKenna
Assistant General Counsel
Jordan Pinjuv
Senior Counsel
California Independent System
Operator Corporation
250 Outcropping Way
Folsom California 95630
Tel.: (916) 351-4429
jpinjuv@caiso.com

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**COMMENTS OF THE CALIFORNIA INDEPENDENT SYSTEM
OPERATOR CORPORATION**

I. Introduction

The California Independent System Operator Corporation (CAISO) hereby provides comments in response to the February 28, 2019, *Administrative Law Judge's Ruling Directing Responses to Questions Resulting from the February 11-12, 2019 Demand Response Auction Mechanism Workshop and Comments on Proposals to Improve the Mechanism* (Ruling), issued in this proceeding.

II. Discussion

A. Issue Prioritization and Timeline

The Ruling requested parties to address specific questions regarding how to improve the Demand Response Auction Mechanism (DRAM). As a general matter, the CAISO recommends that the Commission focus on (1) implementing measures to ensure that DRAM capacity shown on resource adequacy supply plans is deliverable, and (2) adopting a 2019 DRAM solicitation timeline that allows sufficient time for DRAM participants to complete the necessary Commission and CAISO implementation procedures to meet 2020 resource adequacy delivery timelines. The DRAM solicitation timeline must provide sufficient opportunity to resolve identified issues regarding the deliverability of contracted capacity. In particular, the Commission must ensure that DRAM resources shown on year-ahead and month-ahead resource adequacy supply plans can actually deliver the capacity shown.

In addition, the DRAM solicitation timeline should finalize procurement with sufficient time to allow DRAM contract holders to work with the CAISO to implement new resource market participation by 2020. The CAISO notes that it has experienced implementation difficulties with prior DRAM solicitations because not all new demand response providers fully understood the wholesale electricity market, market participation requirements, or the resource adequacy rules. Additionally, prior to market participation, DRAM participants and the CAISO require sufficient time to (1) register DRAM end-use customer accounts; (2) allow load serving entities (LSEs) to review end-use customer registrations; (3) establish net qualifying capacity values for DRAM resources; and (4) allow DRAM participants an opportunity to submit supply plans (for the year-ahead and/or month-ahead timeframe, as applicable). Market implementation may take additional time to the extent DRAM contract terms require the demand response provider to complete any additional processes in advance of CAISO processes. In any 2020 DRAM solicitation, the Commission must ensure there is sufficient time to perform all necessary Commission and CAISO tasks prior to actual capacity delivery requirements.

B. Response to Ruling Questions

In the section below, the CAISO reproduces the specific questions posed in the Ruling along with relevant CAISO response. Questions not addressed by the CAISO have been omitted.

Question 1: Explain, in detail, whether the Commission should adopt a two-step approach wherein the auction mechanism is adopted allowing for:

Step One – limited critical improvements to the mechanism in the initial decision to provide for a solicitation in 2019 and deliveries in 2020 (considered to be a bridge period) and,

Step Two – continuous and iterative improvements to the mechanism in future decision(s) based on additional experience, continuous monitoring, and evaluation data from future solicitations.

As indicated above, it is critical that the Commission address capacity and resource adequacy deliverability and timeline concerns prior to the 2019 DRAM solicitation. Nonetheless, any solicitation must be finalized with sufficient time for the CAISO and DRAM participants to implement new DRAM resources as market participants. The CAISO discusses these timeline concerns in more detail below.

Question 2: If the Commission authorizes a two-step approach, explain which critical recommendations or party proposals should be required in order to implement a solicitation in 2019 for 2020 deliveries (*i.e.*, a bridge period). Be specific about the details of the recommendations, including timing.

The Commission should first address proposals designed to ensure that DRAM resource capacity listed on resource adequacy supply plans accurately reflects resource performance capability. In general, the CAISO agrees with party proposals that would require DRAM participants to provide an ex-ante capacity demonstrations—using customer load information—prior to submitting monthly resource adequacy supply plans.¹ The CAISO agrees in principle with proposals that would introduce financial consequences for DRAM participants that provide less than their contracted capacity, but is sensitive to the concerns that some of the proposed penalties may incentivize undesired market behavior.² The CAISO supports penalties that help incentivize market performance and the delivery of the energy associated with the shown resource adequacy capacity using resource bidding and performance data from market activity and testing.

The CAISO also agrees with recommendations to change DRAM contract terms to ensure that Investor Owned Utilities (IOUs) have access to data to assess whether DRAM resources can meet resource adequacy must offer obligations and deliver load curtailment when dispatched by the CAISO.³

¹ See Ruling Attachment 1, Proposals for Working Group 1, Topic 1.1 Qualifying Capacity in Supply Plans. The Joint Demand Response Parties Working Group (JDRP WG) 1.1 Proposal recommends an initial step that includes review of customers and historical loads that make up each resource serving a contract; OhmConnect’s WG 1.1 Proposal recommends a plausibility demonstration of ex ante supply which includes a reasonableness check as the first-tier ex ante approach.

² See Ruling Attachment 3, Proposals for Working Group 1, Topic 1.3 Penalties and Incentives for Performance. Workshop participants suggested that penalty structure proposed by Southern California Edison (SCE) might result in undesired behavior to avoid dispatch and/or inability to respond fully when dispatched.

³ See Ruling Attachment 1, Proposals for Working Group 1, Topic 1.1 Qualifying Capacity in Supply Plans. As suggested in the JDRP WG 1.1 Proposal “the IOUs can invoke their audit capability within the DRAM contract to require the DRP to provide further substantiation of its supply plan.”

Question 4: If the Commission authorizes a two-step approach, describe the solicitation schedule the Commission should approve for the bridge period (a 2019 auction for 2020 deliveries). Include in your response a proposed schedule in which a final decision is issued by July 11, 2019 and the proceeding remains open to address the second step improvements. Include details on the timing for the deliveries.

Any solicitation schedule must provide DRAM participants with adequate time to conduct CAISO market training (if necessary), demand response resource registration and implementation, and reliability requirement processing. It is critically important that the DRAM solicitation concludes with sufficient time to allow DRAM resources to be shown on Commission and CAISO resource adequacy supply plans. If the Commission intends that DRAM resources will be shown on year-ahead resource adequacy supply plans, the timeline is significantly shorter because year-ahead resource adequacy supply plans must be submitted to the CAISO by October 31, 2019.

In the alternative, if the DRAM resources will not be shown on the year-ahead supply plan, but instead will only be required to submit a month-ahead supply plans, the DRAM solicitation can be finalized later. Resources must submit month-ahead resource adequacy supply plans 60-days prior to the delivery month. As a result, DRAM resources shown for summer 2020 (*i.e.*, beginning in May) would need contracts finalized with sufficient time to allow DRAM contract holders adequate lead time to complete CAISO processes in March 2020.

Question 8: Building on the small group discussion in the workshop and the developed options for a goal provided above in Table 1, what should be the goal of the Auction Mechanism? Keep in mind that a goal is abstract, not measurable and long term. For example, the adopted goal of demand response is: *Commission-regulated demand response programs shall assist the State in meeting its environmental objectives, cost-effectively meet the needs of the grid, and enable customers to meet their energy needs at a reduced cost.*

The DRAM should (1) spur greater innovation in the demand response space to help achieve California's energy policy goals; (2) shift performance risk away from ratepayers to third-party providers; and (3) provide greater price discovery and transparency into the costs end-use customers are willing to accept to provide demand response. Non-competitive, utility-run demand response programs provide little information regarding the amount customers are

willing to accept to provide demand response, but rather indicate the amount the Commission and utilities are willing to pay for demand response. This is inefficient because the Commission and the IOUs will over-pay for demand response because end-use electric customers only rationally participate in a demand response program if the price set by the Commission and the utilities is *equal to or greater than* what customers are willing to accept to curtail load. This cost-effectiveness concern can be remedied by establishing a goal to transition to competitive solicitations for all demand response resources.

Another important goal of the DRAM is to procure demand response resources that are used and useful as suitable preferred resources that can avoid or defer the need for existing or new greenhouse-gas emitting resources. In this respect, the CAISO recommends that the Commission limit the role of Reliability Demand Response Resources (RDRR) in the DRAM solicitation because these resources are not designed to be used on a regular basis to address grid reliability needs, and, in the CAISO's opinion, do not represent the future direction of demand response as a preferred resource. The Commission should avoid creating new opportunities to develop highly limited resources because the DRAM should spur innovation in the demand response space and create preferred resources that are flexible and are useful to help California achieve its environmental objectives. (See also the CAISO's response to Question 12, below.)

Question 9: Building on the discussion in the workshop and the developed list of objectives and principles provided above in Table 2, what objectives and principles should the Commission adopt? Keep in mind that objectives are specific, measurable, attainable, realistic, and timed. Principles are assumptions, fundamental rules, or guiding doctrines.

The DRAM objectives and principles must ensure that resources participating in the CAISO market do so in a manner that is fully compliant with CAISO market participation and must-offer obligation tariff requirements, and in accordance with their resource supply plans submitted to the CAISO.

Question 11: Describe and explain the standards that the Commission should adopt for estimating the Qualifying Capacity of an Auction Mechanism resource applicable to Supply Plans. Be specific and include comments on the options discussed during the workshop: test, market dispatch, or an ex ante estimation method. Explain the process the Commission should use to implement the standards.

The Commission should adopt standards that ensure that the estimated DRAM qualifying capacity values reflect the ability of the resource to deliver the energy associated with that capacity as required by the CAISO tariff and approved performance methodologies. The standards should ensure that capacity values on month-ahead resource adequacy supply plans accurately reflect energy delivery capability through CAISO-approved load curtailment performance methodologies.

As highlighted in answer to Question No. 2, above, the CAISO suggests that the Commission adopt standards for estimating DRAM resource qualifying capacity values that includes an ex-ante demonstrations using customer load information prior to submitting its resource adequacy supply plan. The DRAM resource should also further demonstrate performance capability based on market or test dispatch responses. To this end, the CAISO previously supported the SCE's proposal in the Commission's resource adequacy proceeding⁴ to implement a performance assessment for DRAM resources.

Question 12: Explain whether the Commission should adopt an energy component requirement Auction Mechanism resources. If the Commission authorizes optional dispatch hours in solicitations, explain whether and how the values of the bids should be modified to account for this additional requirement. If the Commission adopts a minimum dispatch hour performance requirement, explain the parameters the Commission should adopt.

As California progresses to an increasingly diverse mix of preferred and energy storage resources, the CAISO and the Commission must ensure resource adequacy resources are procured so that the CAISO can reliably serve both its capacity *and energy needs*. The CAISO has raised this same issue in the Commission's resource adequacy proceeding and in the

⁴ Proceeding No. R.17-09-020. See CAISO Comments on Proposals, filed March 22, 2019, pp. 12-13.

CAISO's Resource Adequacy Enhancements stakeholder initiative.⁵ As the state's resource adequacy program evolves, demand response resource procurement—including the DRAM—must also evolve to maintain consistency with resource adequacy requirements. This section provides background regarding the CAISO's proposed enhancements to the resource adequacy program to better align resource procurement with local capacity area reliability needs.

The resource adequacy program is currently designed to meet peak capacity requirements defined in megawatts (MW) without considering resource availability limitations. The CAISO noted that ignoring resource availability limitations would eventually lead to an insufficient resource adequacy fleet to meet local (and potentially system) energy needs. Availability limitations—such as limited duration hours or event calls—limit a resource's ability to respond to contingency events in local areas. In the Commission's resource adequacy proceeding and the CAISO's Resource Adequacy Enhancements stakeholder initiative, the CAISO has emphasized the need to identify and account for availability limitations, particularly for resources located within local capacity areas, to ensure that LSEs procure resources that are sufficient to meet system and local energy needs.

The CAISO is proactively taking steps to ensure sufficient energy is available to meet local and system needs. In its Resource Adequacy Enhancements stakeholder initiative and as proposed in the Commission's resource adequacy proceeding, the CAISO indicated its intent to provide detailed hourly load and resource analysis for each local area and sub-area to inform procurement efforts that align with capacity and energy needs.⁶ At a minimum, DRAM resources must have a four-hour energy delivery requirement through load curtailment, consistent with the Commission's current resource adequacy rules. In addition, to ensure that DRAM resources continue to meet local resource adequacy requirements, the Commission should procure DRAM resources in local areas consistent with the local area duration needs identified in the CAISO's hourly load and resource analysis.⁷

⁵ See the CAISO's Resource Adequacy Enhancements Stakeholder Initiative Webpage: <http://www.caiso.com/informed/Pages/StakeholderProcesses/ResourceAdequacyEnhancements.aspx>.

⁶ See the CAISO's Resource Adequacy Enhancements Stakeholder Initiative Webpage: <http://www.caiso.com/informed/Pages/StakeholderProcesses/ResourceAdequacyEnhancements.aspx>; and See the CAISO's Track 2 Testimony, Chapter 6, Availability-Limited Resources: http://www.caiso.com/Documents/Jul10_2018_RAProceedingTrack2Testimon-Chapter6-AvailabilityLimitedResources_ProposalNo5_R17-09-020.pdf.

⁷ The CAISO notes that the hourly load and resource analysis will be updated annually as part of the CAISO's Local Capacity Technical Study process.

Question 13: Explain whether the Commission should adopt penalties for shortfalls in both Qualifying Capacity and Demonstrated Capacity. If the Commission adopts penalties, explain at what point in time penalties should be assessed and under what conditions. Explain whether the penalties should be based on costs incurred by a utility for failure to perform or the price of the contract.

There must be assurance that any penalty structure adopted would not result in undesired market behavior from the DRAM resources, including increases in bid pricing and under-performance of resources when dispatched. Penalties, therefore, may need to be accompanied with appropriate review of market activity including evaluation of bidding behavior and resource dispatch performance

Question 14: Explain whether over-performance should be incentivized and what the incentive should be. Explain whether there should be a cap and what the cap should be.

The Commission should not incentivize energy “over-performance.” Resources perform according to CAISO market instructions—not above or below. As a balancing area authority, the CAISO must continually balance supply and demand. In order to maintain balance, the CAISO must issue re-dispatch instructions to balance the system if resources do not perform according to their dispatch instructions. Resource re-dispatch can be costly. From the CAISO’s perspective, there is no such state as “over-performance” and a resource is considered to be deviating from its dispatch instruction if it produces more or less energy than instructed. The Commission’s goal should be to incentivize DRAM resources to make their capacity available to the market and perform as accurately as possible with the CAISO’s dispatch instructions.

Question 15: Explain the approach the Commission should adopt regarding Demonstrated Capacity on invoices including Must-Offer Obligation invoices and full or partial dispatch or test requirements. Explain what method demand response providers should use to calculate performance. Explain how the Commission should address the issue of locations moving between resources in a given month.

The CAISO understands there is a need for demand response providers to add or remove service accounts (locations) within a registration to accurately reflect that registration’s

participating end-use customers. The CAISO also understands that service accounts may move between registrations and/or resources within a month because a service account may move between LSEs. The later situation may become a non-issue after the CAISO modifies its tariff to remove the current single LSE aggregation requirement. This tariff change has been approved by the CAISO's Board of Governors as part of the third phase of its Energy Storage and Distributed Energy Resources stakeholder initiative.⁸ The CAISO's registration system ensures that the same location cannot be included in multiple resources for the same effective date.

Question 17: Explain whether the Commission should adopt a contract remedy for a utility's failure to deliver Revenue Quality Meter Data in time for CAISO settlement and what the remedy should be. Explain what improvements could be made to streamline communication between utilities and third-party demand response providers regarding missing data, data quality concerns, and gaps in data.

Scheduling Coordinators representing demand response resources must submit their performance measurements to the CAISO as Actual Settlement Quality Meter Data (ASQMD) no later than the 48 business day after the trading day (T+48B) for the recalculation settlement statement to avoid a possible sanction of \$1,000 pursuant to CAISO Tariff Section 37.11.1.⁹ It is imperative that Revenue Quality Meter Data (RQMD) is available and accurate with adequate time for these Scheduling Coordinators to develop the ASQMD representing the performance of the resource in response to a market dispatch prior to this submittal deadlines. The CAISO supports adopting contract incentives to improve RQMD accuracy and delivery to demand response providers.

⁸See the CAISO's Energy Storage and Distributed Energy Resources stakeholder webpage at: http://www.caiso.com/informed/Pages/StakeholderProcesses/EnergyStorage_DistributedEnergyResources.aspx; and See the CAISO's Board of Governors' documents approving this tariff change:

<http://www.caiso.com/Pages/documentsbygroup.aspx?GroupID=97C3E62B-ECDB-4CCC-AC3D-98263F57F5E4>.

⁹ See CAISO Tariff section 37.11.1.9, available on the CAISO website at: <http://www.caiso.com/Documents/Section37-Rules-Conduct-asof-Nov6-2018.pdf>.

Question 18: Explain whether the Commission should approve implementation milestones with regard to utility systems, Commission registration, CAISO registration, and customer acquisition and what the milestones should be.

The CAISO supports implementation milestones that take into account all processes (*e.g.*, training, acquiring a CAISO scheduling coordinator, system access, registration, resource implementation, net qualifying capacity approval from the CAISO, supply plan process timelines, *etc.*) that must occur prior to new market resource implementation.

III. Conclusion

The CAISO appreciates the opportunity to provide feedback on the DRAM program and looks forward to working with the Commission to continue to improve the program.

Respectfully submitted

By: /s/ Jordan Pinjuv

Roger E. Collanton

General Counsel

Anthony Ivancovich

Deputy General Counsel

Jordan Pinjuv

Senior Counsel

California Independent System

Operator Corporation

250 Outcropping Way

Folsom, CA 95630

Tel.: (916) 351-4429

Fax: (916) 608-7222

jpjuv@caiso.com

Attorneys for the California Independent
System Operator Corporation

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