

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

Order Instituting Rulemaking to Oversee the
Resource Adequacy Program, Consider
Program Refinements, and Establish
Forward Resource Adequacy Procurement
Obligations.

Rulemaking 19-11-009
(Filed November 7, 2019)

**COMMENTS OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR
CORPORATION ON ADMINISTRATIVE LAW JUDGE'S RULING ON
ENERGY DIVISION'S DEMAND RESPONSE PROPOSAL AND
SEEKING COMMENTS ON THE PROPOSAL**

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I. Introduction

The California Independent System Operator Corporation (CAISO) submits its comments on the April 19, 2021 *Administrative Law Judge’s Ruling on Energy Division’s Demand Response Proposal and Seeking Comments on the Proposal* (Ruling) on issues regarding Proposed Revision Request (PRR) 1280 and supply side demand response.

The CAISO appreciates the Energy Division staff’s efforts to resolve the interconnected issues raised in the CAISO’s PRR 1280 and Tracks 3B.1 and 4 in this proceeding. The CAISO generally supports Energy Division staff’s proposals and has worked closely with Pacific Gas & Electric (PG&E) and Southern California Edison (SCE) to address and resolve several issues raised in the proposals.

The CAISO summarizes its comments on Energy Division staff’s proposals below:

Energy Division Proposal 1: Demand Response (DR) on Supply Plans with a Variable DR Model

- The CAISO fully supports the Commission directing investor owned utilities (IOUs) to show all resource adequacy demand response resources on supply plans.
- The CAISO already has a demand response model that allows for variable bidding.
- The CAISO commits to make a filing at the Federal Energy Regulatory Commission (FERC) to exempt IOU demand response programs from the application of the resource adequacy availability incentive mechanism (RAAIM) based on the interim

application of the effective load carrying capability (ELCC) methodology for the 2022 resource adequacy year, as described in Proposal 2.

Energy Division Proposal 2: Methodology for Determining Qualifying Capacity (QC) of DR Resource

- To exempt the IOU demand response programs from RAAIM, the CAISO, PG&E, and SCE have discussed and agreed to work together to refresh the previously filed Energy+Environmental Economics (“E3”) study on ELCC.¹ The results of the study will inform qualifying capacity values for IOU demand response resources on an interim basis for the 2022 resource adequacy year.
- The CAISO supports the process at the California Energy Commission (CEC) laid out by the Energy Division staff. The Commission should use demand response qualifying capacity values resulting from the CEC’s assessment starting in resource adequacy year 2023.

Energy Division Proposal 3: DR Adders

- The CAISO supports the removing the 6% operating reserve component and load forecast error component of the planning reserve margin (PRM).
- The CAISO continues to have concerns with retaining the forced outage component of the PRM given there is no factual evidence in the record that demand response reduces the system average forced outage rate across the RA planning horizon. However, the CAISO supports the staff proposal that the CEC investigate this issue to inform its resolution for the 2023 resource adequacy year, while the forced outage component stays in place in 2022 pending completion of the CEC process.
- The CAISO supports retaining the distribution loss factor, but there is insufficient evidence in the record to support retaining the transmission loss factor. However, the CAISO supports the CEC studying the transmission loss factor to inform a permanent resolution for 2023 resource adequacy year, while the transmission loss factor adder remains in place in 2022 pending completion of the CEC process.

¹ See CAISO Track 3B.1 Proposals, Attachment A. Available at http://www.caiso.com/Documents/Jan28-2021-Track-3B1_Proposals-ResourceAdequacyProgram-R19-11-009.pdf.

II. Discussion

A. Energy Division Staff Proposal 1: DR on Supply Plans with a Variable DR Model

1. Background and Clarifications

The CAISO supports Energy Division staff’s Proposal 1 to recognize demand response as a variable-output demand response resource. As the CAISO explained in its Track 3B.1 and 4 proposals, demand response is a variable output resource and should have a qualifying capacity counting methodology consistent with its reliability contribution.² To inform Energy Division staff’s proposals, the CAISO provides several clarifications regarding how the CAISO market treats demand response.

First, demand response resources can submit variable bids in the CAISO market. Energy Division staff’s proposal states “demand response should be...allowed to bid different capacity amounts on different days and hours depending upon the applicable operating conditions that logically affect the magnitude of load impact (reduction) that could be expected on any given day and hour, if dispatched.”³ The CAISO market already allows for this, and there is variable bidding behavior from demand response providers today. In fact, the CAISO’s E3 ELCC analysis used this bid variability as a foundational element. Energy Division staff’s concerns may conflate bidding functionality with the application of RAAIM, which are separate issues. Because there is no prohibition on bidding variably, the CAISO need not develop or adopt a different demand response “model.”

Energy Division staff’s proposal also suggests demand response resources should be exempted from RAAIM because their output is variable. However, resources should not be exempt from RAAIM solely because they are variable. Instead, resources must receive qualifying capacity values based on a reliability-based counting methodology to allow the CAISO to request FERC to permanently exempt them from RAAIM. The CAISO tariff exempts wind and solar resources from RAAIM because those resources receive a qualifying capacity value based on an ELCC methodology. Prior to adopting the ELCC, the Commission applied an exceedance methodology—also a reliability-based counting methodology—to establish qualifying capacity values for wind solar.

² See R.19-11-009, CAISO comments on proposals in Track 3B.1 and Track 4, March 12, 2021.

³ Ruling, Appendix A, p. 3.

The Commission can adopt a reliability-based counting methodology for demand response. Contrary to the California Large Energy Consumer's Association's (CLECA) concerns, the CAISO is not abrogating the Commission's authority to set qualifying capacity values for its jurisdictional load serving entities by proposing an ELCC methodology.⁴ In fact, the CAISO's Track 4 ELCC methodology proposal explicitly provided that the Commission should adopt an appropriate reliability-based counting methodology for the demand response fleet.

Second, Energy Division staff's proposal states "it is reasonable to expect that the available load reduction for a weather-sensitive [demand response] resource will deviate on a day-to-day (or hour-to-hour) basis from the established" qualifying capacity derived from a planning scenario. Although the CAISO does not object to this point in concept, "planning scenarios" are used to prepare for operations. Therefore planning scenarios must be realistic and cover a sufficient number of actual operating conditions. The Commission should not separate planning and operational elements; they must remain highly coordinated. As discussed below, the CAISO supports an ELCC methodology precisely because it provides more realistic demand response counting in the planning timeframe to match actual operational experience.

Third, Energy Division staff characterizes the CAISO's current bidding requirements and the application of RAAIM for demand response as "conflicting requirements" and therefore argues that the IOU demand response resources need a RAAIM exemption if they are to be shown on monthly supply plans.⁵ However, the CAISO's current bidding requirements and RAAIM penalties are consistent *if* the demand response qualifying capacity counting methodology is accurate. In fact, demand response auction mechanism (DRAM) participants are already on monthly supply plans and subject to RAAIM. Underbidding a resource or over-estimating its capacity value can lead to RAAIM penalties, and it implies planning and operational assumptions where inconsistent.

2. Response to Proposal

The CAISO supports showing all resource adequacy demand response resources on supply plans. As explained above, the CAISO need not adopt a different demand response model as the current model allows for varying bids. Instead, and as explained in more detail in

⁴ Ruling, Appendix A, footnote 4 on p. 3.

⁵ Ruling, Appendix A, p. 3.

the next section, the CAISO commits to working with the IOUs to rerun the E3 study with updated data to determine the qualifying capacity of IOU demand response resources on an interim basis for the 2022 resource adequacy year.

Once the CAISO assesses the interim ELCC values, the CAISO commits to making a tariff amendment filing with FERC⁶ to exempt IOU demand response resources from RAIM compliance for the 2022 resource adequacy year. The Commission should adopt the ELCC results from this revised E3 study as the interim percent derate to the qualifying capacity established by the 2022 Load Impact Protocol rather than the 5 percent derate proposed by Energy Division. The CAISO will need to make a subsequent filing to continue the RAIM exemption after the Commission adopts a permanent ELCC methodology based on the CEC's analysis, as discussed in the next section.

Energy Division staff encourages the CAISO to explore an alternate mechanism to hold DR bidders accountable for the DR resource market bids accurately reflecting the capacity available under the applicable operating conditions associated with the specific day and hour. The CAISO understands Energy Division Staff would like the CAISO to apply a performance penalty to demand response. However, if the CAISO were to develop and apply a performance penalty, the CAISO would consider this in the context of a penalty that would apply to all resources across the market, as appropriate. The CAISO would not single out demand response or a particular resource type or technology. Additionally, the Commission might consider rescinding or reducing capacity payments to its jurisdictional demand response providers for under-performing and under-delivering on agreed to capacity amounts, where such programs or pilots are paid for directly by ratepayers.

B. Energy Division Proposal 2: Methodology for Determining Qualifying Capacity (QC) of DR Resources

1. Background and Clarifications

The CAISO offers the following clarifications on E3's ELCC study and the use of ELCC in general. The CAISO clarifies that the percentages cited by the Energy Division staff are not comparable. The 5% reduction from E3's study cited by the Proposal only reflects the demand

⁶ In order to pursue a tariff amendment, the CAISO must conduct a stakeholder process and obtain approval of the proposed changes from its Board of Governors. The CAISO commits to pursuing these changes in time for FERC order approving these changes to apply for the 2022 RA year.

response resources' availability given call and duration limitations.⁷ On the other hand, the 19-23% reduction cited by the Proposal considers bidding behavior relative to the credited resource adequacy capacity value, even after considering the "adders."⁸

The CAISO acknowledges the E3 ELCC study uses 2019 data and, therefore, it did not capture summer 2020 performance, when the CAISO frequently dispatched demand response, including the large pool of investor-owned utility reliability demand response resources (RDRR). Similarly, the original E3 study may not have fully captured the change in Availability Assessment Hours (AAH) times.⁹ As explained below in the next sub-section, the CAISO proposes to rerun the analysis with updated data and in collaboration with the IOUs.

As Energy Division staff notes, the current Load Impact Protocol (LIP) methodology does not capture demand response resources' reliability contributions considering their variable nature and interaction with "other supply-side, use-limited, variable resources present in the CAISO market... [which] is particularly relevant with expected growth of solar and storage resources and amidst changing grid conditions as the net load peak is pushed further into evening hours due to increased solar and storage penetration on the system."¹⁰ The CAISO agrees. As an alternative, the CAISO believes an ELCC methodology is more appropriate, and it brings the planning space as close to the operational space as possible, while providing a feedback loop where performance informs the planning values. This allows assessment of saturation effects on capacity value considering other similarly situated availability and use-limited resources.

Lastly, the CAISO clarifies that the CAISO tariff does not require using an ELCC methodology. Instead, the CAISO tariff defers to local regulatory authorities, including the Commission, to set appropriate qualifying capacity values.

2. Response to Proposal

To address the points highlighted by Energy Division staff, the CAISO commits to rerun the E3 ELCC study in collaboration with the three IOUs using 2020 data to establish the percent derate to the qualifying capacity values on an interim basis for 2022. This will enable the use of a larger pool of bids from summer 2020 to inform the ELCC assessment, address Energy

⁷ Ruling, Appendix A, p. 5.

⁸ Ruling, Appendix A, p. 5.

⁹ Ruling, Appendix A, p. 5.

¹⁰ Ruling, Appendix A, p. 6.

Division staff's concerns about AAH and, most importantly, provide the analysis needed for the CAISO to make a strong argument at FERC to remove the application of RAAIM on an interim basis for IOU demand response resources in 2022.

The Commission should direct the IOUs to work with the CAISO to timely rerun the ELCC study for all IOU supply side demand response programs refreshed with 2020 bid data. The CAISO proposes limiting the application of this interim ELCC methodology to IOU demand response resources because the third party participants under DRAM are differently situated for several reasons. First, DRAM contracts treat the resources as having sold fixed, not variable, capacity amounts and do not recognize demand response as a variable resource. This is reinforced through claw-back provisions on the resource adequacy capacity payment. Second, LSEs already show DRAM resources on supply plans and the resources are subject to RAAIM. More importantly, because the Commission does not “credit” these resources on load serving entity resource adequacy plans, they do not receive the PRM, distribution and transmission adders. Third, DRAM contracts would require the Commission to revise and expressly establish the qualifying capacity under ELCC versus the LIP and there is likely insufficient time for this change to occur for 2022. Finally, the CAISO supports including DRAM resources in the CEC's ELCC assessment, applicable for the 2023 RA compliance year.

The CAISO fully supports the CEC's involvement in establishing a permanent reliability-based counting methodology for all demand response resources. The CEC's findings should be the basis of a permanent methodology for setting the qualifying capacity of demand response resources in the Commission's proceeding starting in the 2023 resource adequacy year.

C. Energy Division Proposal 3: DR Adders

1. Background and Clarifications

The CAISO seeks clarification on forced outage and transmission loss adders the Energy Division staff Proposal seeks to retain. Energy Division staff argues that the “LIP-based [qualifying capacity] method may already derate the [demand response] capacity for this factor [forced outages] and thus the portion of the reserve margin attributable to forced outages should be retained to avoid doubly penalizing” demand response resources.¹¹

¹¹ Ruling, Appendix A, p. 10.

However, demand response resources are comparable to wind and solar in this scenario, which also have outages reflected under ELCC but do not (appropriately) receive credit for forced outage or transmission loss adders.¹² It is unclear what percentage amount the Energy Division staff is seeking to retain since the original PRM included a 9% component that reflected the combination of forced outages and load forecast error. This should be clarified.

As the CAISO previously noted in Track 4 comments, when the CAISO dispatches supply-side demand response resources, the locational marginal price will already compensate the resources for the marginal transmission line loss factor. This marginal loss factor is dynamic and a more accurate loss assessment than a static transmission line loss adder. If transmission line losses are included at all, the Commission should require it to be represented in the meter data in an equivalent way that distribution line losses are reflected.

2. Response to Proposal

Of the five sub-parts of Energy Division staff's Proposal 3, the CAISO supports the following three: (1) removal of the 6% operating reserve component of the PRM adder; (2) removal of the load forecast error component of the PRM adder; and (3) retention of the distribution loss factor. The CAISO continues to have concerns with the Energy Division staff's proposal (1) to retain the adder for the outages component of the PRM, and (2) the retention of the TLF adder. However, the CAISO supports staff's proposal that these two adders remain in place for 2022, whilst they are considered further in the CEC process. The CAISO continues to have concerns with retaining the forced outage adder. If the Commission retains the forced outage component as an interim measure in 2022, it must determine the appropriate percentage. The CAISO supports the CEC studying this issue to inform the record at the Commission to develop a permanent resolution for 2023 resource adequacy year.

The CAISO finds there is insufficient analysis in the record to support inclusion of transmission line losses, especially as they are likely accounted for elsewhere such as in the locational marginal price. If the Commission continues to support accounting for transmission line losses in demand response resources' qualifying capacity, CAISO supports the CEC studying this issue to inform the record at the Commission to develop a permanent resolution for 2023 resource adequacy year.

¹² Ruling, Appendix A, p. 10.

III. Conclusion

The CAISO appreciates this opportunity to comment on Energy Division Staff's proposals.

Respectfully submitted

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