

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

Order Instituting Rulemaking to Continue Electric
Integrated Resource Planning and Related
Procurement Processes.

Rulemaking 20-05-003
(Filed May 7, 2020)

**REPLY COMMENTS ON PROPOSED AND ALTERNATE PROPOSED DECISION
REQUIRING PROCUREMENT TO ADDRESS MID-TERM RELIABILITY (2023-2026)
OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION**

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Dated: June 15, 2021

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I. Introduction

The California Independent System Operator Corporation (CAISO) hereby provides reply comments on the proposed *Decision Requiring Procurement to Address Mid-Term Reliability 2023-2026* (PD) and Alternate Proposed Decision of Commissioner Rechtschaffen (APD).

II. Discussion

The CAISO provides responses to comments regarding the CAISO's interconnection queue, maximum import capability concerns for import resources not yet online, coordination with the resource adequacy proceeding, and the need for additional analyses.

A. The Commission Should Authorize all 11,500 MW of Procurement as Party Concerns Related to the CAISO's Interconnection Queue are Misplaced.

Parties note concerns regarding the significant increase in applications in the CAISO cluster 14 interconnection process, the most recent generator interconnection queue, and the extended timelines the CAISO is proposing to address the high interconnection request volume. Some parties cite the interconnection queue as a reason to reduce the procurement authorized in the PD and APD.¹ The CAISO reiterates its strong support for the 11,500 MW procurement the

¹ California Community Choice Association (CalCCA) Opening Comments, p. 11; The City and County of San Francisco and Peninsula Clean Energy Opening Comments, p. 4; Silicon Valley Clean Energy Authority and Central Coast Community Energy Opening Comments, pp. 5-7; and Southern California Edison Company (SCE) Opening Comments on PD, p. 8.

PD and APD authorize to address mid-term reliability. Parties' concerns regarding the interconnection processes are misplaced and do not diminish the need for new resources.

The protracted schedule necessary to address cluster 14 will not preclude load serving entities from timely accessing resources necessary to meet the proposed procurement. Parties ignore that prior to cluster 14, there were already over 69,000 MW of energy storage resources and over 68,000 MW of renewable resources in the CAISO generator interconnection queue.² This reflects the CAISO's efforts to facilitate the interconnection of additional resources. In 2019, the CAISO proactively launched an effort to modify the generator interconnection requests using the CAISO's material modification assessment (MMA) process to add energy storage and transfer deliverability from solar to storage resources.³ The CAISO's actions successfully accommodated an additional 8,000 MW of storage capacity and essentially fast-tracked the associated interconnection applications. The CAISO's interconnection process has not been a barrier to achieving targeted procurement, and concerns about the process should not cause the Commission to delay authorizing procurement of resources needed for mid-term reliability.

Load serving entities can also proactively ensure projects are on the fastest path to reach commercial online dates by siting new resources in locations studied in the CAISO's transmission planning process, which are based on the direction received from the Commission. Load serving entities should leverage the busbar mapping work the Commission transmitted to the CAISO's transmission planning process to understand where new resource locations (1) may minimize the need for new transmission and thereby reduce network interconnection requirements, (2) can be grouped together and prioritized for transmission expansion, and (3) can address reliability needs.

Load serving entities should also make use of existing generation sites to the extent possible. In particular, the Commission should direct load serving entities should to contract with existing combined heat and power (CHP), other qualifying facilities, and units under reliability must run (RMR) contracts to both maximize existing deliverability and avoid additional CAISO backstop procurement.

² See <http://www.aiso.com/Documents/Briefing-Renewables-EnergyStorage-Generator-Interconnection-Queue-Presentation-July2020.pdf>

³ See materials available at: <http://www.aiso.com/Pages/documentsbygroup.aspx?GroupID=EF2158F2-93A7-45A3-94DB-2D02262D6E6A>

B. Parties Should Work Collaboratively with the Commission to Ensure the Base Case Portfolio Transmitted to the CAISO Appropriately Reflects Imports Based on Incremental Capacity.

Parties argue the Commission should waive the existing resource adequacy requirement to have a maximum import capability (MIC) allocation for imports backed by resources that are not yet online because MIC is based on historic flows.⁴ This is unnecessary. The CAISO's business practice manual already describes how the CAISO's transmission planning process can consider expanded MIC values for imports included in the base case resource portfolio to identify policy-driven transmission additions and upgrades.⁵ Parties should work collaboratively with the Commission to ensure projects are reflected in the base case portfolio transmitted to the CAISO for study.

C. The Commission Should Ensure the Resource Adequacy Program Adopts the Resource Requirements from the Mid-Term Reliability Procurement Order.

Parties raise important coordination issues between the integrated resource plan (IRP) and resource adequacy proceedings. Specifically, parties point to the supposed disconnect between the resource adequacy program's existing four-hour minimum energy requirement for energy storage resources versus the five-hour minimum energy requirement identified in the PD and APD.⁶ Party concerns are misplaced. The resource adequacy program's four-hour energy requirement is a generic minimum requirement for energy-limited resources and does not preclude the Commission from requiring load serving entities to procure longer duration resources to meet IRP-identified reliability needs.⁷ The PD and APD direct load serving entities to procure 2,500 MW of five-hour duration resources to address specific grid conditions. This 2,500 MW procurement should not be subject to any "recalculation" of capacity based on the resource adequacy program's four-hour minimum duration requirement.

In addition, the Commission is considering significant structural changes to the current resource adequacy program rules in its ongoing proceeding. Thus, the current resource adequacy program rules should not prevent the Commission from requiring energy storage resources

⁴ American Clean Power Opening Comments, p. 3; Southwestern Power Group and Pattern Energy Opening Comments, pp. 3-4.

⁵ CAISO Business Practice Manual for Reliability Requirements, p. 68.

⁶ Public Advocates Office at the California Public Utilities Commission (Cal Advocates) Opening Comments, pp. 3-5; Silicon Valley Clean Energy Authority and Central Coast Community Energy Opening Comments, pp. 5-7.

⁷ Decision ("D.") 04-10-035 at Conclusion of Law 17; D.05-10-042 at Conclusion of Law 16.

procured to meet mid-term reliability needs from meeting a higher standard. The Commission should not let outdated resource adequacy program rules dictate new capacity procurement, especially given that the 2,500 MW of proposed procurement in 2024—which will have only a five-hour minimum energy requirement—is meant to replace Diablo Canyon Power Plant’s 24-hours-a-day energy output.

In the future, the Commission should ensure the resource adequacy program adopts, or takes as an input, requirements developed in the IRP proceeding to align procurement direction with on-the-ground contracting. For example, the IRP proceeding produces a variety of model-driven outputs such as a planning reserve margin that meets a 0.1 loss of load expectation, calculation of marginal ELCC values, minimum duration values, and other necessary resource characteristics.

D. The Commission Should Consider Additional Modeling to Assess the Operational Impact of Resources Under an Effective Load Carrying Capability Value.

The CAISO agrees with Southern California Edison Company (SCE) that the Commission should consider the “actual operational and market performance for stand-alone solar PV and wind in contributing to system reliability during critical hours.”⁸ This analysis is important because the actual solar and wind resource operational contributions are time sensitive and can reveal a higher energy need compared to analyses using the ELCC values, which do not vary across time. As the grid incorporates more renewable and storage resources it is increasingly important to conduct more granular reliability studies considering the unique operational characteristics of the resource fleet under varying system conditions.

The CAISO provided such an analysis in 2019 with two stack analyses showing the system resource adequacy versus operational analysis using ELCC and average generation values for wind and solar resources, respectively. In those analyses, the capacity shortfall under the system resource adequacy analysis based on ELCC values was at most 2,300 MW, but it increased to 4,700 MW under the operational analysis.⁹ The Commission should develop an

⁸ SCE Opening Comments, p. 13.

⁹ CAISO Reply Comments, R.16-02-007, August 12, 2019.

additional stack analysis using the operational values to highlight the known differences between ELCC-based counting and actual operational experience focused on time periods of greater need.

III. Conclusion

The CAISO appreciates the Commission's efforts to address mid-term reliability and looks forward to working with the Commission, Energy Division staff, and parties.

Respectfully submitted

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