

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

Order Instituting Rulemaking to Establish
Policies, Processes, and Rules to Ensure
Reliable Electric Service in California in the
Event of an Extreme Weather Event in 2021

Rulemaking 20-11-003

**REPLY BRIEF OF THE
CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION**

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The California Independent System Operator Corporation (CAISO) submits this reply brief pursuant to the *Assigned Commissioner's Amended Scoping Memo and Ruling for Phase 2* (Ruling) issued on August 10, 2021.

I. Introduction

The CAISO appreciates the opportunity to provide reply comments. The CAISO urges the Commission to adopt the CAISO's proposal to establish a system resource adequacy requirement at the 8:00 p.m. hour to reflect system needs at the net demand peak period for both the 2022 and 2023 resource adequacy compliance years. The Commission should focus, at minimum, on implementing the new system resource adequacy requirements during the summer months for 2022 and for the full resource adequacy year in 2023. In addition, the Commission should increase the planning reserve margin for both the gross and net demand peak to 17.5% so the CAISO can identify resource deficiencies through its monthly resource adequacy validation process. This will result in the most efficient, automated, and straightforward process to meet deficiencies in advance of challenging system conditions.

II. Discussion

A. Insufficient Resource Adequacy Capacity Is Available During the Net Demand Peak Period.

Several parties, including The Utility Reform Network (TURN), Public Advocates at the California Public Utilities Commission (Cal Advocates), and Middle River Power (MRP) recognized the need to institute a resource adequacy requirement to meet the net demand peak

period.¹ The CAISO’s proposal to establish an additional system resource adequacy requirement to meet 8:00 p.m. demand serves this purpose. The Commission should adopt the CAISO’s proposal as outlined in its opening brief.

Protect Our Communities Foundation (PCF) asserts that net demand peak resource adequacy requirement is unnecessary because other resources substitute for the lack of solar later in the day.² As support for this argument, PCF provides data from the CAISO website regarding resource production during specific high heat events. Specifically, PCF states that “[b]y 8 pm, large hydro, imports, and battery storage, combined with lower demand, are filling the supply ‘gap’ in the absence of solar power. This reality indicates that existing reserve margins are sufficient at 8 pm.”³ However, PCF’s data provides no information regarding the resource adequacy capacity available during these high heat events.

The fact that market resources were available to “fill the gap” on specific days is not evidence of a well-functioning resource adequacy program. Indeed, the existence of a gap between the amount of resource adequacy capacity required and the amount of resource adequacy capacity procured shows the system depends on non-resource adequacy market resources to meet reliability needs. However, market resources not committed to serving CAISO load may not be available to meet future needs. This risk of resource unavailability is increasing as other load serving entities in the west procure resources in advance of summer in expectation of extreme temperatures and high loads. As the CAISO indicated in its testimony, the CAISO struggled to find available capacity when it conducted its CPM Significant Event solicitation in mid-summer 2021. It would be imprudent for the Commission to assume resources will be available in summer to fill the gaps in the resource adequacy program. Relying on frequent Flex Alerts, last minute scrambling to procure capacity, and pleas for conservation because insufficient capacity was procured in advance is not a realistic or effective approach to maintaining reliability and meeting load and reserve obligations. The resource adequacy program is designed to ensure the CAISO has capacity resources available when and where necessary, and with the right attributes to meet system needs including during stressed conditions. The CAISO’s proposal better prepares the system to achieve this result.

¹ Opening Legal and Policy Brief of Cal Advocates, p. 4; Opening Legal and Policy Brief of MRP, p. 7; and Opening Legal and Policy Brief of TURN, pp. 4-5.

² Opening Legal and Policy Brief of PCF, pp. 18- 19

³ Opening Legal and Policy Brief of PCF, p. 19.

B. An “Effective” Planning Reserve Margin Increase Will Not Adequately Incentivize Resource Adequacy Procurement.

California Community Choice Association (CalCCA) and Southern California Edison (SCE) recommend the Commission adopt an “effective” 17.5% planning reserve margin requirement for 2022.⁴ This “effective” planning reserve margin requirement would operate similar to the requirement implemented for summer 2021, which failed to produce resource adequacy showings at the 17.5% level. During the gross peak, resource adequacy showings were 1,151 MW and 1,563 MW short of meeting the 17.5% effective planning reserve margin in August and September, respectively.⁵ During the net demand peak, resource adequacy showings were 3,017 MW and 2,862 MW deficient in August and September, respectively.⁶

The failure to secure sufficient capacity led Commission President Batjer and California Energy Commission (CEC) Chair Hochschild to write a joint letter to the CAISO requesting the CAISO pursue backstop procurement for summer 2021.⁷ After receiving the joint letter, the CAISO immediately began its significant event capacity procurement process, but by the time this process began (July 1, 2021), limited resources were available for summer procurement. To avoid repeating this series of events in 2022 and beyond, the Commission should act now to implement a firm 17.5% planning reserve margin at both the gross and net demand peak.

By implementing a firm 17.5% planning reserve margin, the CAISO will be able to identify resource deficiencies through its monthly resource adequacy validation process. In 2021, the CAISO was unable to effectively backstop for July because it had to wait for a significant event to trigger its capacity procurement mechanism authority. For example, if the CAISO had been able to procure for a resource adequacy deficiency for July it could have

⁴ Opening Legal and Policy Brief of CalCCA, pp. 3-6; Opening Legal and Policy Brief of SCE, p. 59.

⁵ Opening Testimony of Jeff Billinton and Abdulrahman Mohammed-Ali on the behalf of the CAISO, p. 7. Note: The calculations are derived based on data in Table 2. A 17.5% planning reserve margin was applied to the CEC-Adjusted Peak Load Forecast (MW) [column B]. The resultant capacity shortfall is calculated as the resultant load plus 17.5% planning reserve margin minus the Total Resource Adequacy Capacity Shown to CAISO plus Credits (MW) [column D].

⁶ Opening Testimony of Jeff Billinton and Abdulrahman Mohammed-Ali on the behalf of the CAISO, p. 8. Note: The calculations are derived based on data in Table 3. A 17.5% planning reserve margin was applied to the 8:00 p.m. load (MW) [column B]. The resultant shortfall is calculated as the resultant 8:00 p.m. load plus 17.5% planning reserve margin minus the Total Resource Adequacy Capacity Shown to CAISO plus Credits, Net of Solar 8:00 p.m. (MW) [column D].

⁷ Joint Letter from the CPUC President Marybel Batjer and CEC Chair David Hochschild to the California ISO CEO Elliot Mainzer, June 29, 2021. Available at:

<http://www.caiso.com/Documents/CapacityProcurementMechanismSignificantEvent-JointStatementandLetter.pdf>

commenced procurement potentially at the beginning of June rather than in the middle of a summer after a significant west-wide heat wave had already occurred.⁸ The monthly resource adequacy validation process provides a more straightforward and automated process that will allow the CAISO to procure capacity in advance to meet deficiencies. Without the planning reserve margin increase, the CAISO will have no automatic backstop authority to meet the 17.5% requirement and will again need to identify a significant event to procure resources beyond the current reserve margin. In addition, to the extent the “effective” resources are not shown on resource adequacy plans, they will not be subject to the CAISO’s tariff mechanisms, such as the must-offer obligation and the resource adequacy availability incentive mechanism. Thus, there is no mechanism to ensure, or incent, their availability when needed.

C. The CAISO Supports TURN’s Recommendation to Reject Eliminating the Existing Restrictions on Emergency Load Reduction Program (ELRP) Compensation for Base Interruptible Program (BIP) Customers.

The CAISO agrees with TURN that the Commission should reject SCE’s and Pacific Gas & Electric’s (PG&E’s) proposals to compensate BIP resources for participation in ELRP events that do not overlap with BIP events. TURN correctly notes these proposals would cause greater uncertainty around the load drop the CAISO would observe through Reliability Demand Response Resource (RDRR) dispatch of BIP resources, and that this uncertainty poses a serious reliability concern.⁹ RDRRs are resource adequacy resources—and are compensated accordingly—so that they will be operationally available to the CAISO when necessary. The CAISO urges the Commission to reject SCE’s and PG&E’s proposal because it undermines the resource adequacy program.

D. The CAISO Does Not Oppose SCE and CLECA’s Proposal to Move Demand Response From a Supply Side Resource to a Load Modifying Resource, but Strongly Opposes Providing Resource Adequacy Value Without Market Integration.

SCE and the California Large Energy Consumers Association (CLECA) request the Commission remove RDRR as a supply side resource. SCE further requests the “removal of RDRRs from the wholesale market and maintain[ing] RA associated with these resources.”¹⁰

⁸ See <https://www.usnews.com/news/us/articles/2021-06-25/historic-heat-wave-blasts-pacific-nw-as-wildfire-risks-soar>.

⁹ Opening Legal and Policy Brief of TURN, p. 12.

¹⁰ Opening Legal and Policy Brief of SCE, p. 36.

The Commission should not remove RDRRs from the wholesale market, while simultaneously allowing them to count as resource adequacy capacity. The Commission's Bifurcation Decision recognized only two types of demand response resources: (1) load modifying resources that reshape or reduce the net demand curve or (2) supply-side resources integrated into the CAISO markets.¹¹ Load modifying resources are embedded into the CEC's demand forecast to reduce the resource adequacy requirement. On the other hand, the CAISO dispatches supply-side demand response resources. As a result, supply-side demand response resources receive a qualifying capacity value and can be included in resource adequacy showings to count towards the resource adequacy requirement. Demand response can be either load modifying or supply side, but not both.

SCE's proposal is problematic because demand response resources would not be integrated into the wholesale market, meaning they would not be operationally dispatchable by the CAISO, nor would they have a must offer obligation as supply-side resource adequacy capacity. Therefore, these resources should not be counted as resource adequacy resources that receive a qualifying capacity value. Consistent with the bifurcation principles, the Commission should not provide a qualifying capacity value for resources that are not integrated into and dispatchable by the CAISO market.

The CAISO is open to counting demand response as a load modifier. However, if the Commission treats RDRRs as a load modifier, parties should collaborate with the CEC on how these resources will be accounted for in the CEC's year-ahead load forecast to reduce the resource adequacy requirement. Any approved treatment must appropriately value the variable load curtailment nature of demand response and how its variability affects system reliability at different times of the day and year. This is important because any reduction in the resource adequacy requirement also translates to a reduction in the resources the CAISO can access and operationalize. Thus, any load forecast adjustment must be well-vetted, accurate, and demonstrate these load modifying resources are actually reducing load in a predictable and consistent manner to reduce the resource adequacy requirement over time.

¹¹ Commission Decision Addressing Foundational Issue of the Bifurcation of Demand Response Programs, Bifurcation Decision, *Order Instituting Rulemaking to Enhance the Role of Demand Response in Meeting the State's Resource Planning Needs and Operational Requirements*, D.14-03-026, March 27, 2014.

The CAISO also continues to support demand response as a market integrated, supply-side resource. As noted in the CAISO's Opening Brief, the CAISO has made numerous improvements to its demand response and RDRR model and continues to seek approaches to improve the representation of demand response in the market.¹² However, if RDRR remains a market integrated resource, it is imperative that enhancements also be made to the operational dispatch capabilities of the investor-owned utility (IOU) demand response programs. IOUs must be able to dispatch their programs at a granular level if they represent their resources as continuous (*i.e.*, denoting various operating ranges) or available to the market. The Commission should require IOUs, through their 2023-2027 Demand Response Application, to update their systems; enhance their demand response programs to be more used and useful; and develop tools to dispatch supply-side demand response programs more flexibly and effectively when and where needed.

E. The CAISO Opposes the Joint DR Parties Proposal for Increased Dispatch Notification Times for BIP on the Basis That the Proposal is Infeasible.

The Joint DR Parties reiterate their proposal to increase the BIP dispatch notification time from 15-30 minutes to one to two hours.¹³ BIP is an emergency-response, market integrated resource that is bid into the CAISO market as RDRR. The CAISO stresses that the proposed one to two hour dispatch notification time is infeasible operationally as it exceeds the real-time market timeline. Also, it is counter to the nature of an emergency response resource, which should be a relatively fast responding resource that can timely react to unanticipated and urgent emergency conditions. RDRRs can alternatively use hourly block bid options to receive additional notification time. The Federal Energy Regulatory Commission (FERC) approved this optionality in response to the CAISO's Market Enhancements for Summer 2021 tariff amendment filing, and the CAISO has implemented it. RDRR was designed to be fast-responding to reliability events, particularly in local areas. Extending the notification time for RDRR is infeasible from a real-time market timeline perspective and would significantly diminish the value of these resources.

¹² Opening Brief of the CAISO, p. 16.

¹³ Opening Legal and Policy Brief of the Joint DR Parties, p. 11.

F. The CAISO Clarifies its Understanding of Sunrun’s Resource Registration Comments.

In the CAISO’s Opening Brief, the CAISO requested clarification on Sunrun’s proposal to streamline the demand response program sign up process. The CAISO sought clarification on Sunrun’s claim that “[e]ach individual act of enrolling and un-enrolling in programs with utilities or the CAISO wholesale market requires an independent action by the customer.”¹⁴¹⁵ In subsequent discussions with Sunrun, the CAISO obtained clarification¹⁶ that this statement was not in reference to CAISO processes, but rather related to improving the customer experience with the authentication and authorization for enrollment in market integrated programs via utility Rule 24/Green Button processes.

III. Conclusion

The CAISO appreciates the opportunity to provide reply comments and looks forward to working with the Commission and parties to maintain system reliability.

Respectfully submitted,

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¹⁴ Opening Legal and Policy Brief of the CAISO, p. 17.

¹⁵ Opening Testimony of Sunrun, p. 14.

¹⁶ Based on email confirmation received September, 23, 2021.