

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

Order Instituting Rulemaking to Oversee the
Resource Adequacy Program, Consider
Program Refinements, and Establish Annual
Local and Flexible Procurement Obligations
for the 2019 and 2020 Compliance Years

Rulemaking 17-09-020
(Filed September 28, 2017)

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

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I. Introduction

The California Independent System Operator Corporation (CAISO) hereby provides reply comments on the *Proposed Decision Adopting Local Capacity Obligations for 2020-2022, Adopting Flexible Capacity Obligations for 2020, and Refining the Resource Adequacy Program* (Proposed Decision), issued in this proceeding on May 24, 2019. The CAISO appreciates this opportunity to provide reply comments.

II. Discussion

In these reply comments, the CAISO:

- Supports parties' request to further validate the effective load carrying capacity (ELCC) methodology calculation and allocation of diversity benefits;
- Supports including the impact of behind-the-meter photovoltaic in the ELCC methodology;
- Clarifies that there is significant evidence in the record to inform availability-limited resource procurement;
- Continues to recommend using the ELCC methodology to value demand response resources; and
- Opposes Pacific Gas & Electric Company's (PG&E's) request to establish seasonal local resource adequacy requirements.

A. The Commission should not include storage diversity benefits in future effective load carrying capacity values until such benefits are validated.

The CAISO shares other parties' concerns regarding the calculation and allocation of

diversity benefits in the effective load carrying capacity (ELCC) methodology. The CAISO agrees with parties that the Energy Division’s methodology to calculate and allocate storage diversity benefits to solar is arbitrary, has not been validated through actual resource performance, and is not fully understood and vetted by parties.¹ The Commission should adopt the proposed ELCC values as an interim step for the 2020 resource adequacy compliance because the ELCC values currently in place conflict with operational reality and put the system at greater reliability risk.² On a more practical matter, the Energy Division did not provide solar ELCC values without the arbitrary storage allocation so these values should be provided in the next phase of this proceeding. In addition, the CAISO notes that the Center for Energy Efficiency and Renewable Technologies (CEERT) echoes many of the CAISO’s fundamental concerns regarding the ELCC methodology. Specifically, CEERT notes that it is incorrect to develop qualifying capacity values based on the assumption that each resource has “a discrete capacity value independent of all other resources.”³

B. The Commission should consider behind-the-meter photovoltaic in future effective load carrying capacity values.

The CAISO agrees with parties that the Proposed Decision should be modified to include consideration of behind-the-meter photovoltaic (BTM PV) in ELCC values in the workshop on ELCC methodologies to be convened by Energy Division.⁴ As the CAISO noted in prior comments, there are different methodologies to consider BTM PV, but it is critical that it is explicitly considered in the resource adequacy framework so that capacity is not overstated, leading to operational shortfalls.⁵

The CAISO disagrees with Sunrun Inc.’s (Sunrun’s) characterization that BTM PV in the Goleta/Moorpark sub-area analysis sets an example for how system-wide ELCC values should be calculated.⁶ ELCC values depend on specific load shapes and resource mixes and the needs in a local sub-area pocket cannot be applied to the Commission’s determination for system-wide

¹ Calpine Corporation *Opening Comments on Proposed Decision*, June 13, 2019, p. 4; NRG Energy, Inc. *Comments on Proposed Decision*, June 13, 2019, p. 2 (NRG Comments); Southern California Edison Company *Opening Comments on Proposed Decision*, June 13, 2019, p. 5 (SCE Comments).

² California Energy Storage Alliance *Comments on Proposed Decision*, June 13, 2019, p. 4; NRG Comments, p. 2.

³ CEERT, *Opening Comments on Proposed Decision*, June 13, 2019, p. 5.

⁴ SCE Comments, p. 5; San Diego Gas and Electric Company, *Comments on Proposed Decision*, June 13, 2019, p. 9.

⁵ See for example: http://www.caiso.com/Documents/Mar7_2018_Comments-ResourceAdequacyProposals_R17-09-020.pdf

⁶ Sunrun *Opening Comments on Proposed Decision*, June 13, 2019, p. 9.

capacity needs.

C. Contrary to the Joint DR Parties’ assertion, there is significant evidence in the record to inform availability-limited resource procurement.

The Proposed Decision acknowledges the potential reliability issues associated with availability-limited resources and commits to addressing these issues collaboratively with the CAISO. The Joint DR Parties assert that the record in this proceeding does not provide specific needs “as to the duration of a contingency event in a particular local capacity area” and, as a result, it is “premature to make statements as to the ability for availability limited resources to meet a particular local need.”⁷ Although the CAISO did not request that the Commission establish any specific requirements for availability-limited resources in this proceeding, the CAISO notes that it provided significant details regarding local capacity area resource duration requirements in the 2020 Local Capacity Technical Study (2020 LCR Study).

Contrary to the Joint DR Parties assertions, the 2020 LCR Study provides projected peak day load profiles for specific local capacity areas and sub-areas. The peak day load profiles provide hourly projected loads in each local area over the course of the peak day. In addition to the 24-hour peak day load profiles, the CAISO plotted the maximum transmission capability into the local area based on N-1-1 contingency event. The resulting graph provides a detailed representation of the hourly generation needs within the local capacity area during peak load events. The 2020 LCR Study provides critical, detailed information that should inform local resource adequacy requirements and LSE procurement going forward.

D. The Commission must evaluate demand response resources under an ELCC methodology to inform demand response’s contribution to reliability and its ability to reduce greenhouse gas emissions.

The Joint DR parties state that their “proposals have focus[ed] on facilitating the growth and procurement of clean [demand response] resources that are needed for the Commission to achieve the State’s carbon emission reduction goals by, among other things, ensuring the appropriate valuation of [demand response] resources and allowing distributed, behind-the-meter resources to play a larger role in meeting grid needs.”⁸ The CAISO agrees with the Joint DR Parties that the Commission must ensure appropriate valuation for demand response resources to

⁷ Joint DR Parties, *Opening Comments on Proposed Decision*, June 13, 2019, p. 7 (Joint DR Parties Comments)

⁸ Joint DR Parties Comments, pp. 1-2 (internal quotes and citation omitted).

help achieve the State's carbon emission reduction goals. Understanding demand response's effectiveness at offsetting greenhouse gas (GHG) emitting generating resources is key to understanding its value. The proper way to assess this value is to study how effective demand response is at offsetting load that would otherwise be served by traditional GHG emitting resources. To achieve this goal, the Commission should begin assessing demand response under an ELCC methodology to better understand the load carrying capability of demand response resources. Focusing on load carrying capability will allow the Commission to assess demand response resources' contribution to reliability and their ability to displace carbon emitting resources. The more load (megawatt-hours) that demand response can offset, the fewer GHG emitting resources that are needed to serve load.

The existing load impact protocols have certain utility for evaluating demand response value, but the load impact protocols are narrowly focused on assessing peak load reduction capability, *i.e.*, megawatt capability at peak, versus the ability to offset megawatt-hours and reduce GHG. The load impact protocols do not fully inform overall contribution to reliability or ability to reduce GHG. Thus, the CAISO recommends that the Commission begin evaluating demand response under an ELCC method to reduce the GHG footprint of California's generation fleet.

E. The Commission should reject PG&E's proposal to establish seasonal local resource adequacy requirements

The CAISO opposes PG&E's proposal to seasonally adjust local resource adequacy requirement because PG&E has not presented sufficient justification or rigorous analysis to justify establishing seasonal local requirements. As the CAISO has noted in prior comments, adopting seasonal local resource adequacy requirements would present serious implementation challenges, and would radically affect the local resource adequacy process, while providing, at best, only minimal benefits.⁹

III. Conclusion

The CAISO appreciates the opportunity to provide reply comments on the Proposed Decision and looks forward to working with the Commission to further refine the resource

⁹ See California Independent System Operator Corporation, *Track 3 Proposal Comments*, March 22, 2019, <http://www.caiso.com/Documents/Mar22-2019-Comment-Track3Proposal-ELCC-ResourceAdequacyProgram-R17-09-020.pdf>

adequacy program to optimally meet reliability and state policy goals.

Respectfully submitted,

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