

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

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

Rulemaking 21-10-002
(Filed October 7, 2021)

**REPLY COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE ON
THE ADMINISTRATIVE LAW JUDGE'S RULING ON LOSS OF LOAD
EXPECTATION STUDY AND SUPPLY-SIDE DEMAND RESPONSE REPORT, AND
SETTING COMMENT SCHEDULE**

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In accordance with the Rules of Practice and Procedure of the California Public Utilities Commission (“Commission”), the California Energy Storage Alliance (“CESA”) hereby submits these reply comments on the *Administrative Law Judge’s Ruling on Loss of Load Expectation Study and Supply-Side Demand Response Report, and Setting Comment Schedule* (“LOLE/SSDR Ruling”), issued on February 18, 2022 by Administrative Law Judge (“ALJ”) Debbie Chiv. Our comments to the Loss of Load Expectation (“LOLE”) Study and Supply-Side Demand Response (“SSDR”) Report are included in different sections below.

In accordance with the *Administrative Law Judge’s Ruling Seeking Comments on the Future of Resource Adequacy Working Group Report and the Local Capacity Requirement Working Group Report* (“LCR Ruling”) on March 4, 2022 that set the comment schedule for the Local Capacity Requirement (“LCR”) Working Group Report and allowed for comments to this report to be combined with those sought in response to the earlier LOLE/SSDR Ruling, CESA also includes our reply comments on the LCR Working Group Report in a separate section below.

I. INTRODUCTION AND SUMMARY.

A wide range of issues are currently being assessed and evaluated as part of both the Implementation and Reform Tracks of the Resource Adequacy (“RA”) proceeding. The RA Program represents a critical means to ensure reliability through the contracting of needed resources, which are impacted by many of the proposals being considered here.

CESA appreciates the opportunity to reply to and provide feedback on the opening comments offered by parties to the LOLE Study. Similar to CESA, several parties expressed apprehension regarding the use of the LOLE Study for the purposes of establishing valuation approaches for preferred resources. In this context, our replies can be summarized as follows:

- The Western Power Trading Forum’s (“WPTF”) recommendation regarding storage and hybrid effective load carrying capability (“ELCC”) values should not be followed as ELCC approaches for these assets are not supported by statute or the record of this proceeding and the present study is methodologically flawed.
- The high variance of recent ELCC results underscores the need for further information, as well as the shortcomings of this approach.
- If the Commission adopts a Slice-of-Day (“SOD”) Reform that would continue to use ELCC, it should, *ad minimum*, recognize the differential in ELCC related to storage duration and hybrid configurations.

In addition to our reply comments above on the LOLE study, CESA provides our response to parties’ perspectives on the Demand Response (“DR”) Qualifying Capacity (“QC”) Working Group Report, prepared by the California Energy Commission (“CEC”). There appears to be some apprehension about the use of any one or combination of the alternative methods, or in some cases, the fact that there would be optionality when QC methods and values should be uniform and consistent. While it is true in the long term that QC methods should be uniform and consistent with the principles considered in the CEC’s working group processes, CESA views the optionality proposed for RA year 2023 to be smart and reasonable as means to bring incremental capacity online in the near term, with the sponsors of the alternative methods sufficiently detailing their merits and feasibility. With the majority of DR resources likely to opt to use the status quo Load Impact Protocol (“LIP”) method due to the time and resources already spent to these ends, the alternative methods would be incremental in nature and advance understanding of potential long-term methods. With this in mind, CESA provides the following reply comments:

- Storage-backed DR can easily justify claimed capacity because of the physical installed capacity of the DR resource, such that Energy Division validation can be simplified and streamlined.

- A level playing field should be established between utility and third-party DR programs, but if greater certainty of claimed QC is desired, CESA supports the CEC’s recommended higher penalty tiers.
- Approval of the California Energy and Demand Management Council (“CEDMC”) and California Large Energy Consumer Association (“CLECA”) interim QC method options is reasonable since the existence of the maximum cumulative capacity (“MCC”) buckets sufficiently addresses DR grid reliability in the context of other solar, wind, and storage resources.

II. REPLY COMMENTS ON LOSS OF LOAD EXPECTATION AND EFFECTIVE LOAD CARRYING CAPABILITY STUDY.

CESA reiterates our appreciation of the staff’s efforts to conduct a LOLE Study, but as highlighted by various parties, there are several critically flawed inputs and assumptions, as well as a need to provide greater transparency into how the study was conducted and how the model assumes energy storage operations. Our detailed responses are provided below.

A. WPTF’s recommendation regarding storage and hybrid ELCC values should not be followed as: (1) ELCC approaches for these assets are not supported by statute or the record of this proceeding; and (2) the present study is methodologically flawed.

WPTF argued that adopting both the refreshed ELCC values for wind and solar resources and the newly established ELCC values for storage and hybrid resources for 2023 would be consistent with a “no regrets” approach.¹ CESA strongly disagrees with this characterization due to the flawed assumptions used in the LOLE Study and the lack of support for these modifications within both applicable statute and the record of the present and the prior RA proceedings.

First, as American Clean Power – California (“ACP-CA”) explains, the statutory framework does not direct applying the ELCC to actual Net Qualifying Capacity (“NQC”) determinations for energy storage resources.² ACP underscores that Public Utilities Code Section 399 explicitly instructs the Commission to determine the ELCC for wind and solar

¹ WPTF Opening Comments at 3.

² ACP-CA Opening Comments at 5.

resources for the purposes of the RA program, but it makes no mention of energy storage.³ Thus, current statute does not include any provisions that would necessitate such a modification for RA year 2023, especially considering the Commission’s stated intent to move towards a reformed RA framework by RA year 2024.

When considering the record of the present and prior RA proceedings, CESA would again contend that it does not support the application of ELCC for energy storage and hybrid assets. First, as CESA noted in opening comments, the Commission decisions that directed ED to perform the LOLE Study, Decision (“D.”) 20-06-031 and D.21-06-029, did not mention the calculation of ELCC values for energy storage or hybrid assets. Second, in D.20-06-031, the most recent Commission decision in which the Commission addressed the possibility of using ELCC for the purposes of valuing energy storage, the Commission underscored significant concerns with the use this methodology to evaluate dispatchable assets. In particular, the Commission highlighted that it is unclear how effective ELCC values would be if studies assume a certain pattern of bidding and dispatch, but resources subsequently bid and dispatch in a substantially different manner.⁴

Finally, even if statute or the record of recent RA proceedings supported the establishment of ELCC values for storage and hybrid assets, the LOLE Study is fundamentally flawed, and the values reported should not be used to determine reliability contributions under the RA framework. Several parties echoed, for example, how the LOLE Study employs overly conservative assumptions regarding the import capability of the CAISO system year-round.⁵ Moreover, Southern California Edison (“SCE”) explained that ED artificially “assumed a high penetration of variable and use-limited resources and removed Diablo Canyon and some cogeneration resources from the system in order to surface LOLE events” despite acknowledging that doing this “results in lower average

³ *Ibid.*

⁴ *Decision Adopting Local Capacity Obligations for 2021-2023, Adopting Flexible Capacity Obligations for 2021, and Refining the Resource Adequacy Program*, D.20-06-031, issued under Rulemaking (“R.”) 19-11-009 on June 30, 2020, at 36-37.

⁵ See California Community Choice Association (“CalCCA”) Opening Comments, at 5; CLECA Opening Comments at 16; Independent Energy Producers (“IEP”) Opening Comments, at 2; and SCE Opening Comments at 7.

ELCC values [for variable and use-limited resources] due to saturation effects.”⁶ As a result, the LOLE Study is, overall, an inadequate source for ELCC values and the Commission should refrain from following WPTF’s recommendation to adopt the reported values for hybrid and energy storage assets.

B. The high variance of recent ELCC results underscores the need for further information, as well as the shortcomings of this approach.

Several parties observed the drastic differences between the ELCC values reported in the LOLE Study compared to those included in the study conducted for the purposes of mid-term reliability (“MTR”) procurement.⁷ CESA agrees with these parties, while recognizing that apples-to-apples comparisons between these two analyses are complex, as they report results with different granularities. Overall, this level of variance demonstrates that more information is warranted, particularly regarding the way in which the models attribute diversity benefits, as noted by the California Independent System Operator (“CAISO”), Union of Concerned Scientists (“UCS”) and IEP.⁸

Furthermore, the high variance of these values, along with the significant administrative burden associated with calculating them, reveals the potential shortcomings of an ELCC-based approach, as noted by CLECA.⁹ CESA considers that, as the grid moves towards relying mostly on energy- and use-limited assets, the signals sent by an ELCC construct will not incent the development and retention of necessary assets since the volatile nature of the resulting values would further complicate project development financing on the supplier side and burden RA portfolio management on the load-serving entity (“LSE”) side.

⁶ SCE Opening Comments at 7.

⁷ See IEP Opening Comments at 6; SCE Opening Comments at 5-6; and CLECA Opening Comments at 18.

⁸ CAISO Opening Comments at 8; UCS Opening Comments at 4; and IEP Opening Comments at 6.

⁹ CLECA Opening Comments at 18.

C. If the Commission adopts an SOD Reform that would continue to use ELCC, it should, *ad minimum*, recognize the differential in ELCC related to storage duration and hybrid configurations.

As expressed above and in opening comments, CESA reiterates our view that the Commission should *not* value energy storage resources or hybrid (*i.e.*, paired) assets using an ELCC methodology. That being said, CESA agrees with Pacific Gas & Electric’s (“PG&E”) comments highlighting that, should an ELCC methodology be used to value energy storage and hybrid resources, the Commission should consider different modeled hybrid configurations and different storage durations for ELCC values and PRM accounting.¹⁰ CESA agrees, as the LOLE Study’s recommendation to utilize the same ELCC values for both battery storage (assumed to be 4-hour) and pumped hydro storage (“PHS”) represents a fundamental misunderstanding of how an ELCC methodology could be applied to dispatchable energy-limited assets. In fact, even parties that support the ELCC methodology like UCS noted that the application of one ELCC value to all storage resources (regardless of duration) is not appropriate.¹¹

Similarly, CESA requests that, if the Commission decides to adopt an ELCC methodology to value hybrid resources, it should consider the material impacts of different configurations on the ability of these resources to contribute to grid reliability. This should include not only if the resources are deemed as “hybrid” or “co-located” by the CAISO, but also their if and how much they are able to charge from the grid, and the manner in which they are paired.

In sum, the simplifications of ELCC outputs made in the LOLE Study do not incentivize the development of energy storage and hybrid resources with the right capabilities and configurations to best support the state’s RA needs. If the ELCC approach is unable to make these differentiations and do so with sufficient granularity and frequency,¹² CESA questions the value and merits in this approach to value grid reliability, no matter how robust the model is in theory. At the end of the, the RA framework must

¹⁰ PG&E Opening Comments at 7.

¹¹ UCS Opening Comments at 5.

¹² Further highlighting the limitations of the ELCC approach is the lack of regional ELCC values produced for out-of-state wind resources, as highlighted by several parties.

support one of the key tenants of the RA Program to ensure that LSEs contract for and secure the right resources needed to support grid reliability.

III. REPLY COMMENTS ON SUPPLY-SIDE DEMAND RESPONSE QUALIFYING CAPACITY WORKING GROUP REPORT.

In opening comments, CESA emphasized the contributions that can be made by DR resources, particularly DR that is supported by an energy storage device. Load management is a key tool that should be used as California works to achieve our climate goals, which will require significant amounts of electrification. Overall, adopting a long-term QC methodology that appropriately values DR resources within a SOD framework will require additional time and consideration, and CESA was glad to see all parties recommend continuation of the CEC-led working group to further discuss these issues.

In particular, CESA believes that the Incentive-based “PJM/NYISO” approach proposed by the CEC as an option for third-party demand response providers (“DRPs”), is a promising approach that will allow for flexibility when considering the attributes of different types of DR resources and portfolios. This approach will also allow for more rapid deployment of DR resources and could be adapted to value other behind-the-meter (“BTM”) resources. CESA also supports the Loss-of-Load Probability (“LOLP”) Weighted LIP method proposed by CLECA as an additional option for DRPs for RA year 2023. In these reply comments, CESA focuses on addressing criticisms of these methodologies made by parties in opening comments.

A. Storage-backed DR can easily justify claimed capacity because of the physical installed capacity of the DR resource, such that Energy Division validation can be simplified and streamlined.

Various parties commented on the implementation challenges for the Incentive-based “PJM/NYISO” approach, stating that, for example, “CEDMC’s proposal risks requiring staff to master new and possibly proprietary forecasting models in a very short time.”¹³ CESA agrees that it is important to consider the feasibility of implementation for the methodologies recommended by the CEC, particularly time and resources needed by

¹³ Public Advocates Office at the California Public Utilities Commission (“Cal Advocates”) Opening Comments at 26. *See also* CAISO Opening Comments at 5; SCE Opening Comments at 4.

Energy Division staff; however, the appeal of CEDMC's proposal is that it would provide DRPs with incentive to accurately claim capacity, especially if the penalties and performance thresholds are established at levels to avoid any opportunity for overestimation or gaming, such that there is less burden for Energy Division staff to validate claimed capacity amounts.

Notwithstanding perspectives on the sufficiency of these penalty structures and performance thresholds to incentivize accurate capacity, CESA believes that storage-backed DR presents a unique situation when applying CEDMC's proposal. In particular, CESA believes that validation of claimed capacity can be done in a simplified and streamlined manner, given that load reduction is supported by a physical resource with an easily measured capacity. In this way, there is less reliance on proprietary load modeling or complex considerations of direct customer response, such as customer fatigue or weather sensitivity. Though offered RA capacity will not necessarily equal the portfolio's installed BTM energy storage capacity, the burden on Energy Division staff can be incrementally less when validating whether evaluations of load limitations and the amounts of capacity available for load reduction versus reserved for customer needs and/or resiliency are appropriate.

B. A level playing field should be established between utility and third-party DR programs, but if greater certainty of claimed QC is desired, CESA supports the CEC's recommended higher penalty tiers.

In the report, the CEC recommended a penalty structure for the Incentive-based "PJM/NYISO" proposal that differs from CEDMC's original proposal. While the original proposal recommends a penalty structure based on the IOU Capacity Bidding Program ("CBP"), the CEC recommends including higher penalty tiers based on hybrid of the CBP and the Demand Response Auction Mechanism ("DRAM"). CESA agrees with CEDMC that, for third-party DR, performance thresholds and penalty structures based on the CBP will ensure parity between IOU and third-party programs. As highlighted by CEDMC, there is no reasoning given in the CEC report for "why the CBP penalty structure is apparently effective for the IOU CBP programs but would not be for third-party DR."¹⁴

¹⁴ CEDMC Opening Comments at 6.

Discussion of appropriate penalties for DR programs is an important topic, and it is worth discussing these penalties more generally to set appropriate levels for all DR, both in IOU programs and third-party portfolios.

However, CESA does believe that it is most prudent to adopt the Incentive-based PJM/NYISO approach for RA year 2023, thereby potentially allowing additional capacity to come online quickly, which is crucial given the emergency reliability needs for 2023. In this vein, higher penalties, as proposed by CEC, could provide the Commission and other stakeholders, such as CAISO, with greater assurances that contract capacity will not be overestimated. As such, if necessary to approve the Incentive-based PJM/NYISO approach for RA year 2023, CESA would support the hybrid penalty structure as proposed by the CEC.

Another criticism of CEDMC's proposal made by the CAISO is that the \$2,500/MW-year collateral payment is too low.¹⁵ CESA believes that this collateral amount is reasonable; however, follow-on discussions hosted by Energy Division or the CEC can also facilitate additional discussion on this issue to help set appropriate collateral amounts, if this poses a barrier to its adoption.

C. Approval of the CEDMC and CLECA interim QC method options is reasonable since the existence of the maximum cumulative capacity buckets sufficiently addresses demand response grid reliability in the context of other solar, wind, and storage resources.

Many parties raised concerns about the reliability of DR resources generally and how to ensure that QC methodologies produce accurate estimations of available capacity, especially one that accounts for the interactive effects with other energy-limited resources in the broader RA portfolio. To these ends, parties raised questions about whether there are appropriate incentives for accurate estimates using the CEDMC's PJM/NYISO proposal.

While CESA believes that penalties and performance thresholds, if properly structured, do incentivize accurate capacity estimation, we do want to highlight that there are protocols in place to prevent overreliance on energy-limited resources, rendering moot

¹⁵ CAISO Opening Comments at 5.

some of the concerns around interactive effects.¹⁶ Under the current RA framework, MCC buckets are in place to limit the amount of DR that can be used to meet RA obligations and will be in place for RA year 2023. By matching hourly availability of the resources in the most restrictive bucket (*i.e.*, Category DR) to a load value on the average load duration curve, the Commission already accounts for saturation effects even if the alternative methods proposed by CEDMC and CLECA are adopted in the interim. Whereas ELCC approaches capture these effects via derating of “nameplate” capacity of resource classes, the MCC buckets control for these effects with procurement limits, thus addressing these concerns in different ways.

MCC buckets will likely become obsolete under a future SOD framework, but its existence should give the Commission and the CAISO the appropriate level of assurance that system reliability will not be compromised, even if the alternative methods proposed by CEDMC and CLECA do not directly address interactive effects. In the meantime, in RA year 2023, these alternative methodologies can be tested on an interim basis and generate lessons learned from the initial bids, which can be considered in the development and adoption of a longer-term methodology for RA year 2024 and beyond.

IV. REPLY COMMENTS ON LOCAL CAPACITY REQUIREMENTS WORKING GROUP REPORT.

Given that all parties commenting on the LCR Working Group Report focused on how the CAISO should tackle study criteria and process questions in their stakeholder process and how broadly the various resource and transmission planning processes must be coordinated, CESA does not offer further reply comments. We support these comments and direct the Commission to consider our opening comments on how to encourage and coordinate with the CAISO.

V. CONCLUSION.

CESA appreciates the opportunity to submit these reply comments on the Rulings and looks forward to working with the Commission and stakeholders in this proceeding.

¹⁶ CAISO Opening Comments at 3; SCE Opening Comments at 2.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Jin Noh', written in a cursive style.

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