

DOCKETED

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California Energy Commission
Docket Unit, MS-4
Docket No. 21-DR-01
1516 Ninth Street
Sacramento, California 95814-5512

Re: CEC Docket: 21-DR-01

Dear California Energy Commission:

The California Large Energy Consumers Association (CLECA)¹ provides these comments on the Commission Report entitled Qualifying Capacity of Supply-Side Demand Response Working Group Final Report (Report) issued on December 5, 2022.

Summary of Concerns

1. Introduction

The working group (WG) process at the California Energy Commission (CEC) was requested by the California Public Utilities Commission (CPUC) to develop a methodology to establish a qualifying capacity value (QC) for supply-side demand response (DR) to be used for the 2025 resource adequacy (RA) compliance year. Ordering Paragraph 11 of the CPUC's Decision 22-06-050 requested the following from the CEC working group:

The California Energy Commission (CEC) Working Group is requested to continue to develop long-term recommendations for a new demand response (DR) qualifying capacity (QC) methodology, consistent with the Reform Track framework adopted in this decision. The CEC

¹ CLECA is an organization of large, high load factor industrial customers located throughout the state; the members are in the cement, steel, medical and industrial gas, pipeline, beverage, cold storage, and minerals processing industries, and share the fact that electricity costs comprise a significant portion of their costs of production. Some members are bundled customers, others are Direct Access (DA) customers, and some are served by Community Choice Aggregators (CCAs); a few members have onsite renewable generation. CLECA has been an active participant in Commission regulatory proceedings since the mid-1980s, and all CLECA members engage in Demand Response (DR) programs to both promote grid reliability and help mitigate the impact of the high cost of electricity in California on the competitiveness of manufacturing. CLECA members have participated in the Base Interruptible Program (BIP) and its predecessor interruptible and non-firm programs since the early 1980s. Thus, CLECA is knowledgeable about DR and very committed to it. CLECA strongly supports accurate determination of the capacity value of DR and incenting high levels of DR performance.

Working Group is requested to develop recommendations that consider the following issues for the 2025 Resource Adequacy (RA) year:

(a) Whether the proposals that are presented in the CEC's stakeholder process are reasonable and appropriate to determine the QC of DR resources;

(b) Whether the DR QC methodology reflects the contributions of DR resources to reliability;

(c) Whether the DR QC methodology is compatible with the new RA framework for the 2025 RA year and beyond;

(d) Whether the DR QC methodology is transparent and how it could be implemented in a time-efficient manner;

(e) Whether and to what extent alignment of DR measurement and verification methods in the operational space for the California Independent System Operator market settlement purposes with methods to determine DR QC in the planning space should be achieved, and if so, how; (f) Whether, and if so what, enhancements to intra-cycle adjustments to DR QC during the RA compliance year, as adopted in Decision 20-06-031, are feasible and appropriate to account for variability in the DR resource in the month-ahead and operational space; and

(g) Whether, and if so how, any changes to DR adders should be reflected in DR QC methodology.

The CEC Working Group is requested to submit recommendations into this proceeding by February 1, 2023, for consideration for the 2025 RA year.

In addition, and very relevant to item (c), is that the same decision adopted the 24-hourly Slice-of-Day framework for RA compliance for load-serving entities (LSEs). Under the RA Reform, the resource stack is not just at the time of the peak hour of each month, but instead a 24-hourly resource stack for a forecast of the worst day for each month. The RA Reform recognizes that the future resource mix is not predominantly made up of resources with a relatively constant capacity, but resources whose capacity has a shape during the day. For example, the typical solar photovoltaic output shape is a curve that peaks at the middle of the day, with zero output at night. While the base interruptible program (BIP) has a relatively flat load response due to the participation of many high load factor customers, there are many DR programs that have a shape where the load response varies by hour.

The CEC Staff posted nine principles for a DR QC counting methodology, which were the outcome of the efforts of the previous working group. The CEC Staff requested parties to rank each proposal on how well it responded to each principle. The proposals from CLECA and Demand Side Analytics had the highest rankings, with the CEC and the California Efficiency + Demand Management Council (Council) ranking the lowest. CLECA finds it surprising that the CEC’s recommendation is for a proposal that was not ranked the highest by participants. In addition, the CEC finding that “incentive-based approach is the only viable alternative”² is a surprise because financial incentives/penalties were never a part of a principle for measuring DR QC. Furthermore, the CEC staff did not mention its preference for incentive-based proposals. If it had, parties providing non-incentive-based proposals could have included incentives/penalties in their proposals.

In the below section 2, CLECA replicates the Report’s headings 1-17 verbatim, and offers its comments under these headings.

2. CLECA’s Reactions to the CEC’s Recommendations

1. Adopt an incentive-based approach.

CLECA does not support this recommendation. The Report finds a load impact protocols (LIP)-based analytical approach (as has been used for many years) to be unsustainable. It claims that the “QC results are variable in interpretation and expensive for both DR providers to produce and CPUC staff to review.”³ Moving to an incentive-based approach does resolve either the expense or the work for CPUC staff. The application of the CEC staff’s proposed bid normalization and regressions to account for weather variation could prove to be more expensive than a modified LIP process with reduced reporting requirements, which the Report also recommends. The CPUC has to approve DR QC, which is also used by the California Independent System Operator (CAISO), so the CPUC must have some assurance that the provided QC is reasonable. It is not clear that a QC value provided by a DR provider using any methodology it chooses, that cannot be confirmed until an after-the-fact assessment of performance that can lead to financial penalties, provides sufficient assurance for the CPUC to adopt a DR program’s QC.

² CEC Report at 48.

³ CEC Report at 48.

The CEC Staff claims that the CPUC Energy Division has recommended an incentive-based approach for determining QC.⁴ CLECA believes that this statement is misleading. In R. 19-11-009, Energy Division suggested that the CAISO find an alternative to RAAIM for utility DR programs, since DR is a variable resource like wind and solar. The CPUC did not direct that any alternative be an incentive-based one. Indeed, nowhere in the tasks for the working group that the CPUC asked the CEC to create is there mention of an incentive-based mechanism.⁵

2. [Adopt the capacity shortfall penalty incentive mechanism with forced outage adder.](#)

The Report recommends a 5.8 percent adder to effective capacity, which is intended to allow a DR provider to have some underperformance without receiving a penalty.⁶ CLECA does not support this recommendation due to the linkage to a penalty mechanism. If a penalty/incentive proposal were to be implemented, the CEC recommendation would not be consistent with treatment of other use limited supply side resources such as wind and solar, which are not subject to penalties or incentives for capacity. No resource can be expected to be always available.

3. [Adopt the *ex ante* capability profile and *ex post* regression approach proposed by CEC staff](#)”.

CLECA does not support this recommendation. The *ex ante* capability profile for Slice-of-Day must be hourly for each month for the load conditions for the worst day forecast in the month. Other weather conditions are not strictly required for the Slice-of-Day RA framework. The CEC proposal does account for the hour of the day and the temperature, which is similar to the time-temperature matrix described by Demand Side Analytics (DSA). Either would be useful for *ex post* performance analysis.

CLECA does not support the *ex post* regression approach proposed by CEC staff because of its reliance on settlement baselines, which are not the best measure of performance. For more details see the response to recommendation 11 below.

⁴ CEC Report at 27-28 (CEC “Staff notes this idea did not originate with CEC staff but has been recommended independently by CPUC Energy Division staff and California ISO Department of Market Monitoring staff”).

⁵ D. 21-06-029 at 35-36, and OP 11; see also D. 22-06-050 at 40-41, and OP 11.

⁶ CEC Report at 48. Per the CEC Report, the 5.8 percent adder is based upon the allowance in the CAISO’s Resource Adequacy Availability Incentive Mechanism.

4. Require Resources to show takeback.

CLECA supports this recommendation, if takeback means spillover. We had recommended that if spillover effects are significant and impact load outside of a DR call, then they should be included in the hourly load impacts. CLECA's recommendation was more detailed to address pre-cooling, snapback, and persistence of load decreases after an event which occurs for industrial load processes.

5. Require DR providers to submit capability profiles and "slice-of-day" table to summarize QC values.

This appears to overlap recommendation regarding *ex ante* profiles. It makes sense to develop a table of hourly profiles for each month based upon the worst day weather conditions used for Slice-of-Day. However, the Report's recommendation ignores the fact that the profile of DR performance for many programs is dependent on the hours the event is called, because customer fatigue can occur over the event period. For example, if a DR program is called from 5-7 pm, the load reduction for 5-6 pm may be 5 MW, and only 3 MW for 6-7 pm. But if that same program is called from 7-8 pm, the load impacts are shifted back by one hour. DR programs may need to have several tables (profiles) based upon the call assumption. The LSE will then select which call assumption best fits its overall portfolio. CLECA supports modification of this recommendation to allow for multiple tables based on different call assumptions.

6. Eliminate unnecessary reporting requirements for QC determination.

CLECA supports the concept of streamlining of the existing process which includes any reduction in reporting, as proposed by OhmConnect. However, the CPUC Energy Division is the client of the DR reports, so they must be involved in the process which includes the timeline for approving QC values.

7. Plan to produce final QC numbers by June 1 preceding the RA compliance year. It would be desirable to have the numbers this early, if feasible.

8. Adopt streamlined QC approval criteria.

The Report recommends that the CPUC Energy Division waive its review process and approve requested QC values for all hours and months when the DR provider has demonstrated at least 90% of its committed capacity, and is requesting no more than a 25 percent increase for each month and hour.

There is lack of detail on the proposal, and it is unclear if it is implementable. For example, as written, if a single hour in one month was outside the tolerance, then the CPUC would not waive its detailed review process. CLECA supports an expedited approval process if the DR program is unchanged, and it is found to deliver its QC using the current *ex post* analysis from the LIP process.

9. The California ISO should implement the proposed penalty mechanism and exempt DR from the RAAIM.

The Report proposes that the CAISO approve the QC for DR, instead of the CPUC. CLECA does not support this recommendation, for the reasons detailed below. The Report further proposes that the CAISO manage the CEC's proposed shortfall penalty. In addition, the Report recommends that DR be exempt from Resource Adequacy Availability Incentive Mechanism (RAAIM). The Report offers no explanation of why DR's QC should be determined by the CAISO while that of other resources would continue to be determined by the CPUC. Per the CAISO tariff,⁷ it is the local regulatory authority that determines the QC of a resource, not the CAISO. Both of the Report's proposed changes would shift determination of the QC of RA from the CPUC to the Federal Energy Regulatory Commission (FERC).

CLECA does not support moving the determination of the QC of DR, or any other resource, to the CAISO. The determination of QC is an important component of the RA program, and should remain with the CPUC. The Report's proposal to have CAISO manage DR's QC for DR, but not for other resources, would result in different treatment without any justification. Regarding the exemption from RAAIM, the CPUC has already determined that DR should be exempt from RAAIM, but the CAISO has not supported the CPUC on this issue. The CPUC must maintain its jurisdiction over development of the QC and any related incentive/penalty mechanism, should the CPUC decide to implement an incentive/penalty mechanism for DR. Finally, the Report quoted the CAISO comment that "penalties under the CEDMC proposal are simply inadequate incentives for [DR providers] to perform to their QC values in real-time".⁸ If the CAISO is not supportive of incentive-based QC, then why would it want to manage the penalties?

10. Consider phase-in of incentive-based approach over time.

If an incentive/penalty-based approach is adopted, a phase-in is reasonable.

11. Require DR providers to use the same baseline for settlement and *ex post* evaluation unless an alternative is more accurate but unable to be used for settlement.

The CAISO has recognized the problems of its baseline approach to settle DR performance. For weather-sensitive programs that are called during extreme weather events, a comparable day in that month does not exist. As a result, adjustments must be made to the baselines. Use of outputs from the CAISO settlement process would also be constrained by the

⁷ CAISO Tariff Section 40.4.1.

⁸ CEC Report at 26. [CAISO Comments on DR Working Group Proposals](#) at 6-7.

CAISO settlement timeline. The use a baseline for settlement to measure *ex post* performance should not be the default, but an option. Its accuracy should also be tested.

12. Adopt bid normalization for load impacts in *ex post* capacity valuation.

CLECA does not support the use of bid data to measure performance for capacity determination. However, the CEC staff's bid normalization proposal is also problematic because it would unfairly devalue DR when partial or regional dispatches occur, and it has not been tested on a range of DR programs. Both the originally proposed and the alternate bid normalization formulas (the latter of which was never reviewed in the working group process) can severely undervalue DR programs, because both could base the entire program's capacity determination upon the results of very few customer dispatches. For example, take a 100 MW DR program spread unevenly across three subLAPs. Due to a regional event, the CAISO dispatches 5 MW in only one subLAP, but that customer's load was already down due to pre-planned shutdown. The formula would determine the performance of the 100 MW entire program based upon one customer's reduced performance in one subLAP.

13. Reduce the threshold required for midyear QC update.

The Report recommends allowing mid-year QC updates if either 10 MW or 20 percent difference occurs. Because the amount of DR programs varies considerably, the threshold should be 20% difference on a program basis.

14. Eliminate the components of the PRM adder associated with operating reserves and load forecast error.

D.21-06-029 adopted a reduction in the PRM adder from 15% to 9% by removing the 6% in the PRM for forced outages. However, it left open the issue of how the remaining 9% should be addressed, and asked the CEC Working Group to address this issue.

CLECA supports retention of the entire 15% PRM adder, on the grounds that capacity requirements are determined as peak load plus the PRM. Reducing load thus eliminates the incremental PRM associated with that load. For planning, DR is treated as a load modifier because it is non-firm load. Not treating supply-side DR in the same way for planning purposes results in treating load-modifying and supply-side DR differently, although they both effectively create an additional capacity margin by reducing load.

CLECA does not support eliminating the 6% share of the 15% PRM for operating reserves. If load is reduced, the need for operating reserves is similarly reduced. The CAISO should be able to distinguish non-firm load as DR for planning purposes. In operations, the operators should be informed of how much load is non-firm and can be shed if needed. This certainly applies to reliability demand response resources.

Should the DR load no longer be grossed up for the load forecast variation and forced outage rate, then the counting approach for DR needs modification to prevent discriminatory treatment of DR, despite its being a preferred resource. Currently, the LIP use the expected load reduction during a 1-in-2 weather event. However, the likelihood of DR being called during such conditions is very unlikely. Since the reliability standard is 1 day in ten years, the expected DR during a 1-in-10-year weather event should be utilized. Some DR programs such as air-conditioning cycling are highly weather-sensitive and counting them at 1-in-2 weather conditions would significantly undercount their contribution to reliability. By understating DR's capability during a reliability event, the lost value would be met by less preferred resources to meet the RA targets.

Currently, thermal resources have no reduction in QC due to forced outage rates.⁹ DR's QC is based upon historical performance, which includes non-performance (which is like a forced outage). This leads to inequitable treatment of DR as well. Therefore, a DR QC value should be based upon all customers responding to a DR event which would be more comparable to other supply-side resources.

15. Convert the forced outage adder to a multiplier applied in the effective capacity formula.

CLECA has no comment.

16. Maintain the distribution loss factor adder in QC values.

CLECA supports the Report's recommendation.

17. Update transmission loss factors and include the adder as a credit.

CLECA supports the Report's recommendation. However, it should be noted that retail load is grossed up to the transmission level for CAISO energy settlement. If these transmission gross-up factors need refinement for DR capacity credits, then they also need refinement for CAISO energy settlement.

⁹ There is a proposal to derate thermal resources using turbines for ambient air temperature and there is another proposal to derate the QC for forced outage rate, but neither has been adopted by the CPUC.

3. Items that should be corrected or clarified

a. The summary of CLECA's proposal is incomplete

CLECA submitted a proposal of 10 pages, yet the CEC attempts to summarize the proposal in five short paragraphs. At the July 14, 2022 working group meeting, CLECA provided clarity to the group that the CPUC Slice-of-Day RA framework will require a profile of hourly capacity value. CLECA also noted that the CPUC will need to approve a monthly QC that will be used by the CAISO for its RA program. CLECA provided examples of its proposals for both hourly capacity values and calculating monthly QC values. CLECA's proposal is the only one that addresses the calculation of monthly QC for the CAISO. However, the summary provides no discussion of the monthly QC. The CEC should include the examples provided in CLECA's proposal in the summary contained in the final Report.

In addition, CLECA provided details on the PRM, transmission, and distribution adders. However, the Report does not discuss this, except for a vague reference to CLECA's perspective of additional items as presented elsewhere. The Report should provide the explanations CLECA provided to justify the continuation of the adders.

b. There are items under CLECA's proposal description that should be removed

There are discussions not related to CLECA's proposal that are included in the summary. The material beginning on page 10, second paragraph (beginning with "the five proposals submitted..."), and continuing onto page 11, should be removed as it is not related to CLECA's proposal.

a. The report should be clear which stakeholders support various issues

The Report should be accurate when stating which stakeholders support various issues or proposal elements. Unfortunately, there are instances where the Report is not clear, and the reader may incorrectly conclude there was universal support when that was not the case. For example, on page 36, the report states "stakeholders expressed the desire for a methodology requiring little or no external support from consultants." In CLECA's opinion, that conclusion does not have universal support. While some third-party DR program providers expressed that opinion, it not clear the utilities share the same viewpoint. Indeed, both CLECA and the utilities' proposals included continued use of the hourly output from the LIP. The Report needs to clarify which stakeholders support a particular view. On pages 31, 32, 33, 37, and 39 the discussion of which stakeholders supported which aspects of the proposals needs improvement.

4. CEC Staff's review of the 2022 LIP process suffers from selection bias

In the Report, the CEC staff notes that it worked with the CPUC staff in 2022 to review the LIP process for third-party programs. However, the CEC staff admitted that it had not reviewed the utilities' LIP filings.¹⁰ The Report further states that this allowed the CEC staff to appreciate the undertaking of the LIP process, including the role of the Energy Division. However, the only conclusions the CEC staff could draw could be for third party providers, because the CEC staff never reviewed the work of the utilities' providers. As a result, the Report's conclusion is subject to selection bias in concluding that the current LIP are unworkable and cannot be modified. The only conclusion that could be made is that the LIP are unworkable for third-party programs. It is possible that a LIP-based approach is still the best fit for utility DR providers.

5. No Change in Responsibilities of Energy Division

The Report concludes that the Energy Division should not take on the risk of assessing QC value in the following statement:

CEC staff has also observed that the current process makes Energy Division staff accountable for correctly assessing DR capacity, rather than the DR providers themselves. CEC staff believes that DR providers, rather than state agency staff, should be accountable for correctly forecasting the capacity values of their own resources.¹¹

The CPUC already takes on this risk in managing an RA program and determining the QC of all resources. The Energy Division calculates the effective load carrying capability for wind and solar resources, which is the basis for their QC. The Report does not clearly state why the CPUC should stop determining DR QC but continue to perform the function for all other resources.

6. Summary of CLECA Comments on the Report and Conclusion

The CEC staff proposal would leverage bid data for regressions to develop hourly QCs. It also includes a penalty mechanism. CLECA has several concerns about the proposal. First, it would leverage historical bidding patterns which may not be reflective of when DR may be used in the future, due to the rapidly changing grid. In addition, there are complications where many bids occur during non-reliability events, and the bids offered in the market may be skewed to

¹⁰ Report at 3.

¹¹ Report at 27.

insure they are not dispatched during non-reliability events and use up a valuable use limitation. Second, at the workshop many parties did not fully understand the CEC's proposal, particularly its use of bid data and the complexity of the regression analysis. Third, the proposal has not been properly vetted using historical data and has not been compared to the LIP to determine if it is superior. This should be a major concern for anyone proposing to adopt it. No results were provided to the Working Group demonstrating its viability. Finally, the proposal seems to be overly focused on operational needs, rather than a planning exercise to determine sufficient resource capacity.

In terms of the nine principles, the CEC proposal ranked between the Council proposal, and the CLECA and Supply Side Analytics proposals. Its strength is that it is designed to develop hourly profile results which are compatible with the Slice-of-Day RA Reform. In addition, if bids are correlated with system need, they would reflect the historical need patterns in the results. However, if the future dispatch period changes over time, which is likely, then the use of historical bidding data becomes a weakness, as program usage would change. While the Report suggests otherwise, the proposal would also require the use of consultants, to which the third-party DR providers object. Lastly, it is unclear if the cost to perform the regressions and the rest of the CEC-proposed analysis would be more or less expensive than the current LIP.

For the above reasons, CLECA does not support the CEC staff proposal.