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California Efficiency + Demand Management Council and Leapfrog Power, Inc. Comments on Draft Supply Side Demand Response Working Group Report

I. Introduction

The California Efficiency + Demand Management Council (“Council”) and Leapfrog Power, Inc. (“Leap”) appreciate this opportunity to comment on the California Energy Commission’s (“CEC”) *Qualifying Capacity of Supply Side Demand Response Working Group Final Report* (“Draft Report”), issued on December 5, 2022 in CEC Docket #21-DR-01. The Council and Leap greatly appreciate the time and effort of the CEC Staff as well as the support of the CEC Commissioners in taking on this task, as requested by the California Public Utilities Commission (“CPUC”) in D.22-06-050.

The Council and Leap greatly appreciate the Draft Report’s recognition of the severe burden and barrier caused by the Demand Response (“DR”) Load Impact Protocols (“LIPs”) and it is critical that a DR counting methodology be approved that eliminates the significant barriers to DR provider entry into the Resource Adequacy (“RA”) market. The Council and Leap support the Draft Report’s general approach as outlined by its recommendations, but some elements could be highly detrimental to DR. Specifically, the Council’s and Leap’s support for a penalty mechanism is conditioned on it not being married to a LIP-based methodology; also, the recommended penalty mechanism is too harsh and could have a strong chilling effect on DR participation. In addition, the recommended alternative Bid Normalized Load Impact (“BNLI”) proposal is highly problematic because it was never vetted through the Working Group process and would provide a strong deterrent to partial dispatches. Including

takeback effects on DR Qualifying Capacity (“QC”) values is premature and should be addressed only once the final Slice-of-Day (“SoD”) framework is approved by the CPUC. Finally, the Council and Leap do not believe that the Draft Report adequately supports (nor sufficiently explains) its proposal for applying the forced outage element of the Planning Reserve Margin (“PRM”) adder.

II. General Comments and Recommendations

The Council and Leap appreciate the complexity of the issues examined by the Working Group and do not take lightly the difficulty faced by CEC Staff in developing the Draft Report. However, for the Final Report to provide the maximum amount of utility when it is submitted by the CEC into the California Public Utilities Commission’s (“CPUC”) Resource Adequacy (“RA”) proceeding, it is critical that the CEC’s recommendations be clear and as comprehensive as possible so as to eliminate as any potential ambiguity. To that end, the Council and Leap highlight areas needing clarification throughout these comments.

As a general principle, the Council and Leap also respectfully recommend that the CEC err on the side of simplicity when developing its DR QC counting proposal and avoid allowing the “perfect to be the enemy of the good.” As the Council and Leap discuss further below, there are instances where a simpler approach would reduce the administrative burden without sacrificing an appreciable amount of accuracy. To the CEC Staff’s great credit, they clearly recognize the importance of an easier, cheaper, and less burdensome DR QC process;¹ however, it should be careful not to reverse any of the progress it stands to make by adding unnecessary complication when the associated benefits may not be commensurate.

Finally, as an initial specific recommendation, the Council and Leap recommend that the CEC specify that its recommendations apply to both investor-owned utilities (“IOU”) and third-party DR providers (“DR providers”). This was not completely clear in the Draft Report and it is critical that the scope of its recommendations be unequivocal.

III. Recommended Corrections and Clarifications

In this section, the Council and Leap highlight the instances of greatest consequence in the Draft Report where correction or clarification is needed.

¹ Draft Report at pp. 27 and 36.

- The Council’s proposed penalty structure is described as being adapted from PG&E’s current Capacity Bidding Program (“CBP”).² In actuality, it is adopted from the CBP penalty structure that PG&E has proposed in its 2024-2027 DR program application.³
- The Draft Report characterizes the first category of QC proposal as relying on “a rigorous ex ante analytical method” with the second category relying on a penalty structure.⁴ This characterization incorrectly implies that the first category of proposals produces more accurate results, which has not been demonstrated. The first category of proposals relies on the Load Impact Protocols (“LIPs”) which are a set of reporting guidelines, not a prescriptive analytical approach. Though the LIPs, in their current form, require a broad array of analyses, many of them are not needed to determine QC values. No evidence was presented to the Working Group that demonstrated that analysis performed under the LIPs is, by definition, more accurate than analysis performed outside the analytical parameters of the LIPs.
- The Draft Report recommends that OhmConnect’s proposal for providing supporting data be used as a starting point, at least in 2025.⁵ It is unclear what exactly the Draft Report is recommending in this instance because the OhmConnect proposal, which is a streamlined version of the LIPs, is a completely different approach than that recommended by the CEC. It would be far more appropriate to define reporting requirements from scratch (perhaps while using the LIPs as a source of ideas) than adapt any version of the LIPs to the CEC’s proposal. The Council’s proposal for supporting data is far more compatible with the CEC proposal because the proposed supporting data is far simpler than what the Draft Report appears to recommend; in addition, other data types can be added to the list proposed by the Council.

IV. Draft Report Recommendations

1. Adopt an incentive-based approach: Support. The Council and Leap agree with the recommendation that the CPUC should transition away from the LIP process, and strongly support an incentive-based approach in concept as it is consistent with how other wholesale capacity markets in the United States treat DR capacity counting. However, this support is conditioned on the new DR counting method placing a far lighter burden on DR providers than

² Draft Report, at p. 14.

³ *California Efficiency + Demand Management Council Incentive-Based Method DR Counting Proposal*, September 27, 2022, at p. 8.

⁴ Draft Report, at p. 18.

⁵ *Id.*, at p. 37.

the burden imposed by the LIPs. The Council and Leap would not support an incentive-based approach if it were married with the LIPs because it would perpetuate the barriers created by the LIPs while adding risk in the form of potential penalties. Also, as discussed further below, an incentive-based approach will only be effective in reducing barriers to entry if the penalty structure and penalty threshold do not discourage it.

2. Adopt the capacity shortfall penalty incentive mechanism with forced outage adder: Do not support. The 94.5 percent penalty threshold is highly excessive and, to the Council's and Leap's knowledge, goes beyond any DR-related penalty threshold that has existed in California. The Draft Report also gives no consideration to the chilling effect that a 94.5 percent threshold would very likely have on DR provider participation in the Resource Adequacy ("RA") market, nor to the potential trickle-down effects in IOU DR programs. The Council and Leap are extremely concerned that this penalty mechanism would significantly reduce third-party DR participation in the RA market because DR providers would be exposed to a very high risk of being penalized. This would result in less frequent dispatch of DR resources, or of DR resources that were previously market-integrated migrating to Load Modifying or an otherwise out-of-market program to avoid penalties. This excessive penalty structure would also negatively impact IOU DR program participation due to the likely trickle-down effects as the IOUs would more than likely transfer the risk onto aggregators and customers in the form of harsher penalty structures than exist today.

The Draft Report characterizes the 94.5 percent penalty threshold as being "the most viable and capable of delivering high performance" for DR resources, but no evidence has ever been presented to support this statement, nor was there consideration during the Working Group of other "middle ground" penalty thresholds or penalty structures other than those proposed by CEC Staff and the Council. Though the use of an ex post weather normalization regression, as the Draft Report proposes, would enable a more accurate comparison of ex post performance to ex ante values, a 94.5 percent penalty threshold ignores the natural variability that is associated with customer load, which is recognized by the CPUC's designation of DR as a variable resource in D.21-06-029.

Furthermore, the penalty structure is highly problematic because it initiates penalty payments at very close to 100 percent performance which disregards the inherent variability of DR, and the slope of the line is so steep as to result in no payments for 50 percent performance. IOUs and DR providers will be penalized in response to even a very minor deviation from the committed QC value. The penalty curve is also far steeper than exists for DRAM or IOU DR programs today, and DR providers would owe significant money back for performance below 50%. This penalty is in addition to the potential claw back of capacity payments due to underperformance, putting small DR providers especially at severe financial risk for any under-delivery.

It is clear that the Working Group was unable to devote a sufficient amount of time to discussing penalty options. Therefore, the Council and Leap respectfully recommend that the Final Report adopt a penalty mechanism in concept while leaving it to the CPUC to develop the actual penalty structure in the RA proceeding. Consequently, this recommendation should be withdrawn.

3. Adopt the ex ante capability profile and ex post regression approach proposed by CEC staff: Support with caveats. The Council and Leap support this recommendation on the condition that the capability profile and ex post regression are simple enough so as to avoid the need for DR providers possessing a reasonable degree of sophistication to retain consultants. Also, how these two analyses are produced should not be subject to feedback by any parties other than the Energy Division (or the CEC in its role of assisting the Energy Division with reviewing them), as is currently the case with the LIP process in which parties can critique DR providers' draft evaluation plans and draft load impact evaluations. In addition, though it is not a requisite for the Council's and Leap's support, these analyses should be required of all DR, regardless of its purported weather variability (or lack thereof). This would hopefully avoid any future debates about the extent to which the temperature dependency of a DR portfolio constitutes "temperature-dependent" DR.

The Draft Report appears to be silent on the level of granularity at which ex ante QC values would be determined and ex post performance assessed. Presumably, this would be at the program-level for IOUs as is currently the case today. For DR providers, QC values should be determined and assessed at the portfolio level because their portfolios tend to be much smaller

than most of the IOUs', often by an order of magnitude. For smaller portfolios, the accuracy of regression analyses at the contract level can be diminished by the relative absence of data points. In instances when a DR provider's portfolio-level performance warrants a penalty, the payment could be allocated among its counter-parties on a pro rata basis.

4. Require resources to show takeback: Do not support. It is premature to include takeback in a new DR counting method because 1) it introduces unnecessary complications to a new methodology, and 2) there are many outstanding questions on how takeback would be accounted for that are dependent on the final rules governing DR within the SoD framework. Specifically, the hourly nature of the SoD framework greatly complicates how spillover effects would be accounted for. Estimating spillover effects is relatively straightforward under the current peak-day framework in which DR QC values are based on forecast performance within a fixed, five-hour window. This could change dramatically under the SoD framework, especially if DR resources are allowed to provide RA capacity for varying numbers of hourly slices throughout the 24-slice "worst day". More specifically, a DR resource may have a different magnitude of spillover effect depending on how many slices it is serving. For example, a DR resource that can provide 10 MW of RA capacity for six consecutive hourly slices may have 2 MW of increased load in the hour immediately preceding and following a six-hour dispatch to reflect pre-cooling and snapback. However, if the same resource is only contracted for two consecutive hourly slices, the spillover effects may be lower than 2 MW because less pre-cooling and snapback would occur.

Using the same scenario, if the 10 MW DR resource can deliver its capacity any time within a 12-hour period, the spillover effects may be different depending on the time of day the resource is contracted to be available. For example, less pre-cooling and snapback are needed in the late morning when it tends to be cooler compared to the late afternoon when temperatures tend to peak.

The Council understands the importance of spillover effects in resource planning and operations, but there has not been sufficient vetting of proposals nor clarity on calculations within the

context of the new RA paradigm. Accounting for snapback should be delayed until the rules surrounding DR in the SoD framework are finalized.

5. Require DR providers to submit capability profiles and “slice-of-day” table to summarize QC values: Support. Reasonably sophisticated DR providers will be able to generate these profiles and associated tables; in addition, this would conform with the expected requirements under the SoD framework.
6. Eliminate unnecessary reporting requirements for QC determination: Support with caveat. Superfluous reporting requirements and the associated costs have been a significant barrier and burden to DR providers under the LIPs. OhmConnect’s proposal would not be an appropriate starting point for the CEC Staff proposal. Reporting requirements should be aligned with the CEC’s proposal and the reporting needs of the SoD framework with no “nice to have” elements that are otherwise unnecessary for reporting the QC reporting process.
7. Plan to produce final QC numbers by June 1 preceding the RA compliance year: Support. A June 1 due date for final QC numbers will help ensure that DR providers can fairly participate in LSE RA solicitations. In addition, this will better inform LSEs of their respective DR RA allocations in their year-ahead RA procurement processes.
8. Adopt streamlined QC approval criteria: Support. This is a reasonable recommendation to reduce the load on Energy Division staff as well as IOUs and DR providers. The CEC Staff’s proposed thresholds could be reassessed periodically and adjusted as necessary.
9. The California ISO should implement the proposed penalty mechanism and exempt DR from the RAAIM: Support. The Council and Leap support DR exemption from the RAAIM if a penalty structure is adopted as part of a new DR counting methodology. It would be unfair to subject DR providers to multiple RA penalty structures, especially when conventional resources are not subject to dual penalties.

Based on the language of this recommendation, it appears that the Draft Report may be recommending the CAISO be responsible for assessing DR QC values and administering penalties. If this is indeed the case, with due respect to the CAISO, the Council and Leap have strong concerns about it making the determination of DR QC values because it does not have jurisdiction over RA valuation of resources, pursuant to State law. California Public Utilities Code, Section 380(a) states that “[t]he [CPUC], in consultation with the Independent System Operator, shall establish resource adequacy requirements for all load-serving entities.” Section 380 also states that the CPUC shall “[e]stablish new or maintain existing demand response products and tariffs that facilitate the economic dispatch and use of demand response that can either meet or reduce an electrical corporation’s resource adequacy requirements, as determined by the commission.” The CPUC should maintain the responsibility of QC valuation. With this said, the Council and Leap have no strong position on what entity would administer penalties, but it is not clear that the CAISO has any interest in doing so, nor is it clear whether they have jurisdiction to issue capacity-related penalties.

10. Consider phase-in of incentive-based approach over time: Support. This recommendation is reasonable, especially if the CPUC adopts the CEC’s recommended penalty structure which the Council and Leap suspect could result in heavy penalties if deployed too quickly. In fact, the penalty mechanism should be phased in over a two-year period, rather than over one year, to allow time for evaluating its feasibility. More specifically, there would likely be a lag following Year 1 of the phase-in period during which the penalty mechanism could be assessed. The CPUC would then need an opportunity to approve any necessary modifications in Year 2 in time for them to be incorporated into the following RA year contracts.
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: Support. The Council and Leap support this recommendation to avoid potential “cherry picking” of baselines.
12. Adopt bid normalization for load impacts in ex post capacity valuation: Do not support. The alternative BNLI proposal is highly problematic and was not discussed by the Working Group. It would effectively force IOUs and DR providers to dispatch more DR than scheduled during

partial dispatches to avoid the risk of being subject to a catastrophic derating of their performance. For example, under the alternative BNLI, a 100 MW DR resource dispatched for 50 MW would be rated at 100 MW for 50 MW performance but only 49.9 MW for a 49.9 MW dispatch. This would act as a strong deterrent to partial dispatches, thereby incentivizing IOUs and DR providers to submit higher bids to ensure full dispatches. CEC Staff may have developed this alternative BNLI proposal to avoid motivating partial dispatches, but it will most likely reduce the number of dispatches overall. Because stakeholders were not provided an opportunity to provide feedback during the Working Group, CEC Staff should replace this recommendation with its original BNLI proposal in the Final Report.

13. Reduce the threshold required for midyear QC update: Support. This proposed modification to the mid-year QC update is necessary because it would better allow smaller DR providers (including new entrants) for whom a 10 MW change constitutes far more than 20% of their portfolio. However, the Council and Leap continue to recommend lowering the threshold to 50 percent below the current threshold, which would translate to either 5 MW or a 10 percent change.

14. Eliminate the components of the PRM adder associated with operating reserves and load forecast error: Do not support. The Draft Report incorrectly states that CLECA was the only stakeholder to argue in support of retaining the entire PRM Adder.⁶ In fact, the Council argued in favor of it as well. The Council's primary argument was that retaining the entire PRM Adder is entirely logical for Load Modifying DR because it reduces the RA requirement; therefore, it makes little sense to discount the PRM Adder for Supply Side DR when the only difference between the two types of DR is how they are dispatched.⁷ That the Draft Report does not address this question is problematic because it is not clear that CEC Staff has fully considered the implications of differing valuations between Supply Side and Load Modifying DR. The Draft Report should be modified to recommend retaining the entire PRM Adder.

⁶ Draft Report, at p. 45.

⁷ *California Efficiency + Demand Management Council Comments on Supply Side Demand Response Working Group Phase 2 Proposals*, October 17, 2022, at p. 11.

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

Neutral. It is not completely clear what the Draft Report is proposing but, as the Council and Leap understand it, the forced outage adder would not be reflected in a higher QC value of a DR resource, nor would it act as a credit to the RA requirement. Instead, it would simply allow performance above 100 percent of the QC value to be recognized for the purpose of receiving a bonus. If this is the intent of the Draft Report, the Council and Leap strongly disagree because it does not reflect the added value DR provides in the form of avoided forced outages. However, if this understanding is incorrect, the Final Report should provide a significantly clearer explanation of what is intended, including a numerical example.

16. Maintain the distribution loss factor adder in QC values: Support. As the Draft Report indicated, there was unanimous support for this.

17. Update transmission loss factors and include the adder as a credit: Support. In an ideal world, the CAISO settlement process would include a mechanism to gross up transmission losses in Settlement Quality Meter Data (“SQMD”) just as it currently does for distribution losses, which would allow them to be added to the QC value.

V. Conclusion

The Council and Leap appreciate this opportunity to comment on the Draft Report.