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

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| 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 |
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# OPENING COMMENTS OF OHMCONNECT, INC. ON THE CALIFORNIA ENERGY COMMISSION'S SUPPLY SIDE DEMAND RESPONSE REPORT

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# OPENING COMMENTS OF OHMCONNECT, INC. ON THE CALIFORNIA ENERGY COMMISSION'S SUPPLY SIDE DEMAND RESPONSE REPORT

## I. INTRODUCTION

Pursuant to the February 15, 2023 Administrative Law Judge's Ruling on Comment Schedule For California Energy Commission's Supply-Side Demand Response Report ("February 15 Ruling"), OhmConnect, Inc. ("OhmConnect") hereby submits these opening comments on the California Energy Commission ("CEC") Qualifying Capacity of Supply-Side Demand Response Working Group Final Report ("CEC Report") entered into the record on February 24, 2023 via the Administrative Law Judge's Ruling on the Corrected Version of California Energy Commission's Report. As requested by the February 15 Ruling, OhmConnect provides comments on each recommendation included in the CEC Report.

First, the Commission should adopt the top-line conclusion in the CEC Report that moving from a rigorous up-front analytical effort to an incentive-based approach is now appropriate. Given the extensive up-front cost and effort required to produce the Load Impact Protocols ("LIPs") analysis, as well as the fact that the outputs of the resulting report are rarely, if ever, approved by Energy Division as modeled—at least for third-party demand response providers ("DRPs")—the value of this massive up-front analytical effort appears to be limited.

Second, the Commission should follow the CEC's recommendation to eliminate unnecessary reporting requirements and substantially shorten the process for qualifying capacity

("QC") review and approval. Streamlining the QC process was the primary impetus behind OhmConnect's own QC proposal.

Finally, the Commission should refine the proposed penalty structure in the CEC Report further. While a more flexible up-front QC process should be paired with back-end penalties for under-delivery, the proposed structure is overly complex, unreasonably punitive on relatively small amounts of under-delivery, and would be difficult to implement. Parties should instead consider a fixed $/MW penalty. The Commission should develop a penalty structure by instructing parties to put forward concrete proposals for its design in a subsequent RA proceeding.

## II. COMMENTS

### A. CEC REPORT RECOMMENDATIONS

#### 1. Apply a consistent QC framework and methodology across DR resources.

The Commission must adopt this recommendation. The greatest benefit of the CEC's proposed approach is the introduction of a standardized performance evaluation methodology that can be applied across programs. While some portions of the LIPs may need to be retained for the investor-owned utilities ("IOUs") to the extent that these are necessary for purposes other than Resource Adequacy capacity valuation, the CEC's proposed *ex post* methodology, and any resulting penalties, should be equally applied to all DR providers.

#### 2. Adopt an incentive-based approach.

The Commission should move to an incentive-based approach. Given the extensive up-front cost and effort required to produce the LIP analysis, as well as the fact that the outputs of the resulting report are rarely, if ever, approved by Energy Division as modeled, the value of this massive up-front analytical effort appears to be limited.

### 3. Adopt the capacity shortfall penalty incentive mechanism with forced outage adder.

The Commission should ensure that up-front flexibility is paired with penalties for under-delivery and that the penalty be centrally administered. Moreover, penalties should "increase[] steadily with underperformance " and "account[ ] for the fundamental variability of DR and provide[ ] the same affordances for forced outages and other forms of underperformance granted to all resources under the RAAIM "[1] The proposed penalty design, however, requires further development.

As a threshold issue, administration of the penalty structure should not impact the contractual relationship between the DRP and the load serving entity ("LSE"). Therefore, it appears that the CEC is *not* proposing that, in lieu of making payments to their counterparties, LSEs route capacity payments to the Commission to administer. An approach where the DRP is not paid directly by the LSE is not workable and would present significant legal and financial challenges. Rather, it appears the CEC envisions a "clawback" to be paid to the Commission in the case of a deficiency in demonstrated capacity following the end of the delivery year. The Commission should clarify this point.

Even if the relationship between the DRP and LSE remains unaltered, the CEC's proposal—which calculates penalties based on the proportion of contracted capacity delivered and contract prices—presents a number of unnecessary complexities and operational challenges.[2]

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[1] CEC Report, at 47.

[2] OhmConnect's comments respond to the CEC's original penalty proposal, which would levy penalties based on the proportion of the DRP's committed capacity that was delivered. The final CEC Report additionally states that the capacity shortfall penalty "can be implemented in terms of cost ($) where contract prices are known, such as for the DR Auction Mechanism, or in terms of capacity (MW) where they are not." CEC Report, at 47-48. It is unclear what this means as implementation of the capacity shortfall penalty in terms of capacity (MW) would still require the assignment of a dollar value to that shortfall.

First, the proposed penalty structure calculates a "net payment." This works well when the contracting entity and penalty administrator are the same (*e.g.*, the IOU in the Demand Response Auction Mechanism). The "net payment" methodology, however, presents some complexities when the DRP is fully paid by multiple counterparties and a central administrator is calculating a "clawback" or "penalty." The CEC Report does not specify how its proposed net payment methodology would be converted to a pure penalty calculation.

A second and related point is that the capacity price negotiated between each LSE and DRP is different and is typically not public information. The legality and enforceability of disclosure of individual contract price information is unclear. Moreover, because the CEC correctly proposes that performance is assessed at the program level (e.g., for all System RA contracts in aggregate) and *not* at the contract level in order to have the best dataset for analysis, it is unclear what price the penalty calculation would ultimately reflect.

Finally, because each MW of capacity is valued differently depending on the counterparties and the negotiated price, the same MW shortfall can have wildly different financial repercussions. A smaller absolute MW shortfall could have a bigger financial cost than a much bigger absolute MW shortfall, even at the same contract price, depending on the proportion of the total RA position that this shortfall represents.

A simple example of this possible outcome is provided in Table 1 below. This example takes two DRPs, one with a 100 MW position and 50% delivery and another with a 5 MW position and 25% delivery. The DRP that under-delivers by 50 MW (or 50% of its total contract value) is simply foregoing all of its contract revenue, while the DRP that under-delivers by a much smaller 3.75 MW (or 25%) must *pay* $50,000. This would be a wrongheaded outcome because the absolute magnitude of the shortfall is most important in terms of system reliability.

A proportionality-based structure also disincentivizes new market entrants because relatively small absolute shortfalls can have disastrous financial consequences for small providers.

**Table 1: Drawbacks of the Proposed Penalty Structure**

| Contracted | Demonstrated | Shortfall | Contract Price | Net Payment |
|---|---|---|---|---|
| 5 MW | 1.25 MW | 3.75 MW | $20/kW | ($50,000) |
| 100 MW | 50 MW | 50 MW | $20/kW | $0 |

The Commission should adopt a more standardized approach that avoids these issues and enables more straightforward administration of the penalty structure for under-delivery. All DR providers should face the same fixed dollar-value penalty per MW of under-delivery. This penalty should be large enough to provide a real incentive for accurate capacity valuation and potentially be dynamic. For example, the penalty structure can reflect the prevailing RA capacity prices in each month or hour/month (or some higher version thereof). It can also scale with the magnitude of under-delivery. In this way, the suppliers with the largest shortfalls—these presenting the biggest potential risk to reliability—will appropriately experience the largest financial penalties.

A fixed penalty structure has precedent in the CAISO's Capacity Procurement Mechanism, which has a tariff-specified price that applies to all providers. It also reflects the manner in which capacity shortfall penalties in NYISO are determined—these are based on the ICAP clearing price in the spot auction for that month, which is common to all suppliers in a given capacity zone. The specific penalty structure ($/MW penalty and any multipliers) should be discussed and adopted within the next phase of the RA proceeding.

**4. Adopt the ex ante capability profile and ex post regression approach proposed by CEC staff.**

The Commission should adopt this recommendation.

**5. Require resources to show takeback.**

While the Commission should require resources to show takeback in *ex post* calculations, it should not include takeback in QC counting at this time because inclusion of negative QC values will incentivize DR programs to minimize spillover effects. In practice, this will discourage the type of load shift, such as pre-cooling, that California should be *encouraging.* Moreover, spillover effects are often relatively minor—they do not reflect the near one-to-one relationship of storage charging and discharging—so the benefit of the incremental precision will likely be dwarfed by the cost of the added complexity. Spillover effects should be measured and their inclusion in QC determined at a later date.

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

The Commission should adopt this recommendation.

**7. Reduce reporting requirements for QC determination.**

The Commission should adopt this recommendation. However, the CEC Report does not provide sufficient guidance regarding the data and additional information that demand response program administrators will need to provide for both the *ex ante* and *ex post* analyses and by when. If this proposal is adopted by the Commission, the CEC, in collaboration with the Commission, should produce a brief guide to clarify reporting requirements and timeline.

**8. Plan to produce final QC numbers by June 1 preceding the RA compliance year.**

The Commission must adopt this recommendation. In the event the June 1st deadline is not achievable, it is reasonable to "allow flexibility if needed to produce values by July 1, particularly during the first few years of transition."[3]

[3] CEC Report, at 48.

**9. Adopt streamlined QC approval criteria.**

The Commission should adopt this recommendation.

**10. The CPUC should implement the proposed penalty mechanism and the California ISO should exempt DR from the RAAIM.**

The Commission should generally adopt this recommendation. Any penalty structure should be centrally administered to remove the burden of a potentially complex exercise from LSEs that may not have the resources to administer it independently.

**11. Phase in the incentive-based approach over time.**

The Commission should adopt this recommendation as long as the requirements are abundantly clear prior to and during the phase in period.

**12. 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 Commission should adopt this recommendation.

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

The Commission should adopt this recommendation. Limiting the application of BNLI to dispatches above some reasonable proportion of a DRP's total RA position makes sense because it avoids an outcome whereby a DRP calls only very small events to demonstrate a much higher capacity value. The CEC's proposal to include only dispatches representing at least 20 percent of the full quantity bid in the demonstrated capacity calculation is sensible. The Commission may also consider a lower threshold, such as 10 percent. Anything below 10 percent should not be included.

**14. Reduce the threshold required for midyear QC update.**

OhmConnect has no comment on this recommendation at this time.

### 15. Eliminate the components of the PRM associated with operating reserves and load forecast error.

The Commission should review differences between the valuation of load modifying and supply side demand response programs prior to eliminating adjustments from supply side DR *only*. The rationale for adopting this recommendation for one form of DR and not the other is not clear.

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

If the Commission finds it reasonable to remove the PRM in its entirety, converting the forced outage component to a multiplier applied in the effective capacity formula is sensible and should be adopted.

### 17. Maintain the distribution loss factor adder in QC values.

The Commission should adopt this recommendation.

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

The Commission should adopt this recommendation.

## B. QC PROPOSALS FROM OTHER PARTIES

### 1. OhmConnect's Simplified LIP

The Commission should adopt the CEC's recommendations as outlined in the CEC Report. If the Commission retains the LIPs as the basis for QC, however, it should then adopt the OhmConnect proposal to simplify the underlying exercise. OhmConnect's proposal eliminates several existing LIP requirements that are not useful for the determination of RA QC to make the process shorter and less costly. All other existing outputs remain the same. The adoption of the Simplified LIP proposal is essential if any new complexity is added to the QC process to align with the 24-hour RA framework.

### 2. CLECA's Slice-of-Day Counting Proposal

If the LIPs are retained as the basis for QC, the Commission should adopt CLECA's proposal together with the Simplified LIPs. CLECA correctly notes that the LIPs already provide the necessary outputs to align with the 24-hour RA framework. As such, CLECA does not propose complex new processes and calculations to adapt the outputs to slice-of-day. CLECA's proposal to allow a DR program's operational (and therefore RA) window to vary rather than be fixed to 4-9 pm is sensible.

### 3. DSA's Slice-of-Day Counting Proposal

The Commission should reject DSA's proposal on the grounds that it would add too much complexity on top of an already unreasonably long and complex process and create the possibility that the extra outputs would be rendered useless if the Commission did not approve the *ex ante* values as modeled. DSA proposes to retain the existing LIP exercise, but add four new required outputs: 1) the slice-of-day load impact table, 2) a time-temperature matrix, 3) performance alignment matrix, and 4) bid-alignment matrix. These new outputs add too much complexity and cost to an already burdensome exercise. Only (1) appears to be directly helpful for the 24 hour framework; the other outputs are interesting, but are not essential.

A more problematic issue is that the Commission typically does not approve third-party DRPs' *ex ante* values as modeled. In such cases, the extra outputs would be largely useless, unless modified by Energy Division Staff to match their various assumptions and adjustments, and aligned with the final QC value. It is unclear whether Energy Division Staff would have the resources to perform such an exercise for every DRP whose QC values it modified.

### 4. CEDMC Incentive-Based Proposal

Of the two proposals that combine up-front flexibility with back-end penalties, the Commission should adopt the CEC's proposal. While CEDMC's proposed elimination of the

complexity associated with the LIPs is welcome, OhmConnect is concerned that the proposed application of the *ex post* calculations and assessment of penalties leaves the process vulnerable to the same criticisms that have been levied with respect to the Demand Response Auction Mechanism.

## III. CONCLUSION

For the reasons discussed above, the Commission should generally adopt the recommendations made in the CEC Report, except with some revisions made to the penalty proposal.

Respectfully submitted,

By: _____/s_____

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