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California Energy Commission
Docket Office, MS-4
Re: Docket No. 21-DR-01
1516 Ninth Street
Sacramento, CA 95814-5512
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Re: *Southern California Edison Company's Comments on the California Energy Commission's Supply Side Demand Response Qualifying Capacity Working Group Report Docket No. 21-DR-01*

Dear Commissioners:

On December 5, 2022, the California Energy Commission (CEC) Staff issued the "Qualifying Capacity (QC) of Supply Side Demand Response (SSDR) Working Group Final Report ("Report"). As requested by the CEC Staff, SCE provides its written comments on the Report. SCE recommends against adopting the Report's proposed incentive-based approach to the Capacity Shortfall Penalty (CSP) framework, in part, because that proposed recommendation, in its current form, was never presented to working group stakeholders, nor have stakeholders or CEC Staff tested its methodology or process. SCE has supported a valuation methodology based upon Ex Post and Ex Ante capacities using a modified version of Load Impact Protocols (LIPs) that incorporates reporting under the slice-of-day framework. If the CEC decides to continue to recommend adopting a new incentive-based methodology, SCE emphasizes the importance of robust testing of new data and processes and of phasing-in the new methodology before transitioning to such a methodology. In addition, SCE has concerns about the Report's recommendation to transfer the review and approval of demand response (DR) QC and administration of penalties from the California Public Utilities Commission (CPUC) to the California Independent System Operator (CAISO). Finally, SCE is generally supportive of streamlining review of DR QC, eliminating any reporting requirements that are extraneous to QC determination, and applying the same adders to supply-side to load-modifying DR resources.

1. SCE Recommends Against the CEC's Proposed Incentive-Based Approach to the Capacity Shortfall Penalty (CSP) Framework

The Report recommends an incentive-based approach to the capacity shortfall framework.[1] As SCE stated in its October 2022 comments, SCE does not support a CPUC capacity penalty

[1] In the Report, the Capacity Shortfall Penalty (CSP) ($) has been updated to:

structure, even if it may incentivize performance. Penalties can be both an incentive and a disincentive. In this case, SCE is concerned that a penalty framework will disincentivize DR providers, who can take years to achieve the Committed Capacity (MW) and assess Demonstrated Capacity (MW) of their resources, from ever entering the wholesale market. Penalties can also have unintended consequences of limiting the capacity requested out of fear that the Ex-Post evaluation may show that the DR resource could not perform up to its requested capacity under the conditions during which it was called.

Thus, any DR capacity penalty structure must be tested through a trial period of at least three years for DR providers – both IOU and third-party. If results from the trial period show that the penalty works as intended, then the structure should be phased in gradually for other DR providers over a number of years.

It is also worthwhile to explore whether use-limited resources similar to DR are counted under a penalty framework. If there are no other use-limited resources that are subject to a CSP framework, then we should reconsider whether DR should be subject to that framework.

As a general matter, SCE understands that timeframes are frequently tight, but we would have preferred an earlier opportunity to review and provide feedback on the updated CSP structure with 5.8-percent adder applied to the effective capacity.

For all these reasons, SCE recommends that the CEC not move forward with its proposed incentive-based framework. However, if the proposal is adopted, SCE recommends that the framework be tested robustly and phased-in gradually.

2. SCE Supports Reporting Ex Ante Capability Profiles for DR Resources but Recommends Robust Testing before Fully Adopting the CEC's Proposed Methodology for Determining Ex Ante and Ex Post Capacities (MW)

The Report also recommends the Ex-Ante capability profile and Ex Post regression approach. The temperature-sensitive Ex-Ante capability profile for each DR resource, defined for each hour of the day for each month or grouping of months (e.g., winter and summer months), would have a defined shape. The Ex-Ante capability profile would be used to determine the Ex-Ante capacity (MW) under planning conditions or each hour of the CAISO 1-

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CSP = λ * Capacity Price ($/MW) * max[(Committed – Demonstrated Capacity, MW), 0], where λ is the relative intensity of the penalty and recommended to be equal to1. (When λ = 1, Committed Capacity (MW) is likely to be equal to Demonstrated Capacity (MW). In other words, CSP is calculated as the product of the Capacity Price and the maximum of two values, difference between Committed and Demonstrated Capacities (MW) and the value of zero. DR providers would never be compensated for performing more, but would be penalized for performing less, than the Committed capacity (MW).

in-2 system peak day for each month or grouping of months. The Ex-Post regression approach estimates the linear relationship between bid-normalized load impacts (BNLI)[2] and temperature change points that determine DR performance. Ex Post capacity (MW) is then determined by the intersection of the planning temperature used to define Ex Ante capacities (MW) and BNLI, along the estimated linear regression line. Any spillover effects such as precooling and snapback before and after events called, respectively, would also be shown.

SCE supports establishing an Ex Ante capability profile with a defined shape for each DR resource to account for either its weather-sensitivity or spillover effects before and after the event called. Not all DR resources are weather-sensitive.[3] Due to the myriad of factors that can determine shape of the DR resource, SCE is not in agreement with the proposed methodology to determine Ex Ante capacities (MW) from only the weather-sensitive profile type under planning conditions. In fact, the "DR Characteristics Discussion" section in Chapter 3 of the Report includes capability profile types beyond those of weather to model DR resources appropriately. However, the Report still puts forth that new capability profiles must be incremental to the default weather-sensitive capability profile, while recommending adoption of the default weather-sensitive capability profile with a stakeholder process to adopt more complex and diverse approaches, as needed. Similar to other IOU stakeholders, SCE finds use of the weather-sensitive capability profile as the default for determining Ex Ante capacities (MW) to be too prescriptive. The default is also unable to capture the decay of load impacts across event hours. For these reasons, SCE continues to support the current methodology of determining Ex Ante capacities (MW) using Load Impact Protocols (LIPs).

SCE also continues to support the current methodology used to determine Ex Post capacities (MW) using either a control group as a baseline or individual regressions to estimate reference load for DR program participants who do not have a control group. The recommendation to determine Ex Post capacity (MW) from planning weather conditions, using the estimated linear relationship between BNLI and temperature change points that determine DR performance, contains several limitations, particularly when the number of events called is limited for a DR resource. To produce statistically significant and unbiased estimates of the relationship between BNLI and temperature, there must be an adequate number of events to produce BNLI. With only a handful of events and hence BNLI, the estimates of the relationship between BNLI and temperature from linear regression analysis could be inaccurate. SCE again emphasizes the importance of robust testing and gradual phasing-in of any new incentive-based methodology.

3. SCE Recommends Against the CAISO Administering a Penalty Structure

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[2] BNLI (MW) = Max (Bid * [min (Delivered, Dispatched) / Dispatched], Delivered)

[3] Christensen Associates Energy Consulting (CAEC), LLC. "2021 Load Impact Evaluation of CA Statewide Base Interruptible Programs (BIP) for Non-residential Customers: Ex Post and Ex Ante Report." CALMAC Study ID SCE0448. April 01, 2022. pp. 6, 38, Appendix A.

CEC recommends that CAISO administer the CSP proposed in the Report, as well as review and approval of the requested DR QC for upcoming RA Compliance Years. The CEC's rationale underlying this recommendation is that CAISO has jurisdiction of all DR resources, including those contracted by Community Choice Aggregators (CCA). While this may be the case, this Report was requested by the CPUC for its RA program. Shifting the jurisdiction of administrative responsibility for DR QC for the CPUC RA program to the CAISO may not be appropriate.

While SCE supports exemption of the resource from RAAIM, it does not fully agree with the reasons and proposed outcomes of placing supply-side DR resources on supply plans. DR does not behave and should not be thought to behave as a generation resource. The capacity requested by DR varies over the course of event hours and is very much dependent on decisions and behaviors of DR participants during events. For this reason, capacity offered by DR should be thought of more as load that can be reduced, if needed, or non-firm load. Given the load-modifying nature of DR, we should carefully consider whether it is appropriate to treat such resources as supply-side rather than load-modifying and penalize their performances, even though they are dependent on decisions and behaviors of participants.

4. SCE Supports Eliminating Certain Reporting Requirements and Streamlining the Process for Approving Requested QC with Caveats

The CEC recommends that each DR provider submit capability profiles for each hour and month for which it is requesting QC for its DR resources. Each DR provider should also provide a slice-of-day (SoD) summary table of Ex Ante capacities (MW), determined from the capability profiles, by hour and month. SCE is supportive of these recommendations because they conform to modification of LIPs to accommodate reporting of DR capacity under the CPUC-adopted SoD framework. SCE also supports the CEC's recommendation to complete the QC valuation process by June 1, although extension up to July 1 would be given during the first few years of implementing the new methodology for DR QC determination. SCE is not opposed to streamlining the QC valuation process by approving: (1) demonstrated DR QC values that are at least 90-percent of its committed capacity for all hours and month and (2) requested DR QC values that are no more than 25-percent above demonstrated capacity for the same hour and month from the previous year. However, it is crucial that the thresholds be considered before implementation and evaluated over time to ensure that they continue to serve the intended purposes.

The CEC also recommends eliminating reporting requirements that are not directly relevant to QC determination and distinguishing protocols that would apply to third-party DR providers, supply-side DR resources such as Base Interruptible Program (BIP) and Agricultural & Pumping Interruptible (API), and load-modifying DR programs such as Critical Peak Pricing (CPP) from the other protocols in LIPs. While SCE does not oppose eliminating protocols thought to be

unnecessary to determining QC, it would be helpful to stakeholders if the CEC provided suggestions for protocols thought to be extraneous to QC determination.

5. SCE Supports Applying the Same Adders for Supply-side DR Resources as Those for Load-modifying DR Resources.

The Report recommends eliminating all components of the Planning Reserve Margin (PRM), except for the Forced Outage Adder. The Forced Outage Adder should be applied as a multiplier of 1.058 to the effective capacity, rather than being grossed up a credit and sent to the CAISO. The Distribution (DLF) and Transmission (TLF) Loss Factors should be included in the QC values and grossed up as a credit sent to CAISO, respectively. However, the current value of TLF requires further study before being eliminated or kept at the status quo level.

SCE is generally supportive of these recommendations but cautions that whichever adder is retained and applied to supply-side DR resources needs to be retained and applied to load-modifying DR resources as well, so that forecasted load would align with forecasted capacity (MW) available.

SCE appreciates your consideration of these comments. Please do not hesitate to contact me at (626) 302-0905 or Dawn.Anaiscourt@sce.com or contact Dhaval Dagli at (626) 302 4840 or dhaval.dagli@sce.com with any questions or concerns you may have. We are available to discuss these matters further at your convenience.

Very truly yours,

/s/

Dawn Anaiscourt