

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

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RESPONSE OF THE CALIFORNIA ENERGY STORAGE ALLIANCE

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RESPONSE OF THE CALIFORNIA ENERGY STORAGE ALLIANCE

In accordance with Rules of Practice and Procedure of the California Public Utilities Commission (“Commission”), the California Energy Storage Alliance (“CESA”) hereby submits this response on the *Administrative Law Judge’s Ruling Consolidating Proceedings and a Setting Prehearing Conference* (“Ruling”), issued by Administrative Law Judges (“ALJ”) Garrett Toy and Manisha Lakhanpal on May 25, 2022.

I. INTRODUCTION.

CESA is excited to see the next phase of Demand Response (“DR”) programs proposed by the three investor-owned utilities (“IOUs”). The Ruling acknowledges there will be a large amount of distributed energy resources (“DERs”) on the grid, for which the Commission has created a dedicated proceeding, Rulemaking (“R”) 20-06-017, to modernize the electric grid for a future of high DER penetration. This high DER future offers greater DR opportunities to California, and in order to meet California’s climate goals all available clean energy resources must be tapped, including a combination of both in-front-of-meter (“IFOM”) and behind-the-meter (“BTM”) resources, with rapid scale and unprecedented annual buildout rates such that one or the other alone

cannot meet these goals. At the same time, the Commission has now led a two-year-long Emergency Reliability proceeding, R.20-11-003, to bring additional capacity online for immediate reliability needs in Summers 2021 through 2023, with a large focus on enabling additional DR contributions from BTM resources, given that these resources can come online quickly to meet these urgent needs. Unlocking DR through all means possible is more important than ever, and will likely continue to be crucial through 2027.

II. BACKGROUND AND INTEREST IN THE PROCEEDING.

CESA is a 501c(6) membership-based advocacy group committed to advancing the role of energy storage in the electric power sector through policy development, education, outreach, and research in an effort to support a more affordable, efficient, reliable, safe, and sustainable electric power system for all Californians. With over 100 companies represented in the energy storage ecosystem, CESA has a direct interest in the proceeding in shaping the policies, procedures, and rules for demand response programs in the Application. Energy storage is often a critical resource and technology type included in DR portfolios and programs, where CESA's unique perspective will be important and cannot be fully represented by any other party or stakeholder. CESA also has been an active participant in related rulemakings, such as the proceedings for previous Demand Response Applications (A.17-01-012, *et al.*), Reliable Electric Service in Extreme Weather (R.20-11-003), Distributed Resource Planning (R.14-08-013, *et al.*), Integrated Distributed Energy Resources (R.14-10-003), Integrated Resource Planning and Procurement (R.20-05-003), and Resource Adequacy (R.21-10-002).

III. ISSUES TO BE CONSIDERED.

CESA is largely supportive of the programs and pilots proposed; however, in this response, we offer the following comments on the applications of Pacific Gas and Electric ("PG&E"), Southern California Edison ("SCE"), and San Diego Gas and Electric ("SDG&E").

A. New pilots should assess increased reliability from storage-backed DR.

Historically, DR has been considered a limited, variable resources dependent upon customers manually and voluntarily reducing electricity use during event calls. This has limited DR's ability to participate in the California Independent System Operator

(“CAISO”) real-time market and created higher startup and minimum load costs.¹ Additionally, due to the costs and impacts of limiting customer electric use, DR programs are prone to attrition and limitations on the duration, frequency, and total number of DR events called throughout the year to reduce the burden on customers.

DR enabled by the discharge of an energy storage device mitigates historic issues by providing both load reduction and exports without the customer inconvenience experienced with other load control measures. Therefore, customers can participate in DR events with minimal or no change to their electricity usage, thus allowing storage-backed DR resources to be dispatched more frequently, and perhaps for longer periods, than traditional DR. For example, PG&E conducted a VPP study within its DR Emerging Technologies (“DRET”) pilot, partnering with Tesla to enroll residential battery storage systems in a Virtual Power Plant (“VPP”). The study showed that over 92% of customers responded to event calls, with most events having a response of over 95%, and that storage-backed DR could be dispatched for three consecutive days at different times and deliver consistent positive load impacts.²

Another benefit of storage-backed DR is that it is a more flexible resource, available to be called on at different times to meet grid needs. PG&E found that during the three consecutive calls in the VPP study, they could vary the event start time without impacting response.³ While all of these calls were during peak time-of-use (“TOU”) periods, it does show the potential for customers to respond to varied dispatch schedules. CESA suggests that the IOUs explore unique event window or dispatch schedules, such as moving windows during seasons, increasing consecutive dispatch, or exploring sequential or staggered dispatch of customers to achieve longer durations of load reduction.

Given these results, CESA believes that all of the IOUs should continue to assess and leverage the additional value that can be provided by storage-backed DR. The IOUs should also look to further assess the value for exports from storage and/or vehicle-to-grid

¹ Report on system and market conditions, issues and performance: August and September 2020 (“DMM Report”) published by the CAISO Department of Market Monitoring on November 24, 2020 at 33 and 56.

² DR Emerging technology (DRET) Tesla Battery Study Results published by PG&E at 22.

³ Ibid. at Figure 16.

(“V2G”) and unique dispatch schedules. This can be done through pilots, including the continuation of PG&E’s DRET, SCE’s Mass Market DR (“MMDR”) and Dynamic Rate pilots, and SDG&E’s Emerging Technology-DR (“ET-DR”). CESA is particularly supportive of SDG&E’s proposed Battery Storage DR pilot, which should provide valuable insight into the operations and responses of residential storage-backed DR. However, CESA urges the IOUs to begin to incorporate lessons learned as soon as possible into standard DR programs or perhaps new programs that can fully take advantage of the resource. We offer our Enhanced Storage-Backed DR Program proposal from the Emergency Reliability proceeding (R.20-03-011) as inspiration for a storage-based program.⁴

B. The issue of sub-metering pathways should be explicitly considered in scope and pathways developed for incorporation into all DR programs.

As highlighted above, device-backed DR, particularly, storage-backed DR, is an important resource to enable larger and more consistent DR portfolios. However, if DR becomes fundamentally not about customers reducing electric usage, but instead about the dispatch of a device, then DR programs and/or the CAISO market should directly measure the output of the device. This is done in recognition that any incremental storage discharge or reduction in EV charging, air-conditioning use, water heating, or other device-controlled loads would have otherwise been electricity consumption from the grid.

Sub-metering offers a way to measure the DR contributions of devices, including energy storage and EVSE, more accurately. Sub-metering creates more accurate baselines of typical storage or device performance, with easier calculations for incremental load reduction above what is typically used on non-event days. Additionally, accurate sub-meters already exist, with ANSI standards available for non-residential systems and evidence of accuracy for existing residential sub-meters.⁵

⁴ See CESA’s proposed ESB-DR program in the *Opening Testimony of Jin Noh* submitted on September 1, 2021 in R.20-11-003 at p.56-71.

⁵ See DR Emerging technology (DRET) Tesla Battery Study Results published by PG&E at 2: “Load impacts estimated using household-level smart meter data were similar to those calculated using battery end-use data, with less than a 1% difference between the impacts on average.”

Recognizing this, the CAISO already has sub-metered measurement and performance settlement using the Metered Generator Output (“MGO”) methodology, and, last year, the Commission allowed for submetering to be used in the Emergency Load Reduction Program (“ELRP”) for groups A.4, VPPs, and A.5, Vehicle Grid Integration (“VGI”) Aggregations. CESA supports the continued use of sub-metering in the ELRP but urges the IOUs to incorporate sub-metering in all other DR programs, including the Base Interruptible Program (“BIP”), Capacity Bidding Program (“CBP”), Automated DR (“Auto-DR”), and other pilots. Given the availability of existing models, such as the CAISO MGO and ELRP, CESA believes that sub-metering can be enabled by this round of DR funding, particularly for 2024-2027.

In the scope of these Applications, CESA therefore recommends the inclusion of sub-metering and any related issues to their implementation as a performance evaluation method across all DR programs included in the IOUs’ proposed portfolios.

C. Programs, especially residential programs, should have easy enrollment processes.

CESA would like to emphasize that all DR programs should strive to facilitate enrollment. Particularly for residential customers, long processes that require customers to find technical information about their account or meter or needs for wet signatures all discourage DR participation. To this end, CESA recommends that the IOUs review where existing and new DR program enrollment can be facilitated. One example of an overly burdensome enrollment process is in SDG&E’s CBP Residential Pilot, where customers need to find their own meter ID number and requires wet signatures. The previously mentioned PG&E DRET pilot with Tesla included a successful a one-click enrollment process which facilitated streamlined customer signup and participation.⁶ Given the success seen in this pilot, CESA recommends that PG&E and the other IOUs use this as an example for future enrollment design.

⁶ Ibid. at 10-11.

D. CESA supports the extension of ELRP through 2027 for all customer groups.

CESA has strongly supported the creation of the ELRP to address emergency reliability needs during the summer season. ELRP is importantly taking an “all hands on deck” approach, allowing for contributions from a variety of different customer groups: aggregations, single customers, residential, non-residential, customers with storage and EVs. Additionally, ELRP compensates for both load reduction and exports, recognizing that BTM exports provide important incremental value during these emergency events. CESA believes that the improvements made to the program in D.21-12-015 for Summers 2022 and 2023 will also encourage additional customer participation.

However, CESA re-iterates our suggestion that the Commission not only view the ELRP as solely an emergency “insurance policy” but as a resource that helps the state meet near- and mid-term procurement targets. As highlighted above, storage-backed, VGI, and VPP resources are particularly well positioned to support forward planning toward these targets if there are higher expectations to perform. There may be no penalties, but storage-backed resources will have every incentive to participate frequently if dispatched to get compensated for these services.

Given recent supply chain challenges, there have been growing concerns about California’s ability to meet electric load in the coming years. In response, Governor Newsom has sought to create a Strategic Reliability Reserve of 5,000 MW of both FOM and BTM resources; however, gaps in supply may remain. Given that tight grid conditions are now expected to be extended, it is important to maintain ELRP through 2027 in order to ensure that we have all resources available during upcoming emergencies.

To this end, CESA urges SCE to maintain all ELRP customer groups through 2027, in alignment with PG&E’s and SDG&E’s proposals. In testimony, SCE outlines a plan to “transition ELRP to an emergency reliability resource”⁷ in 2026 and 2027 for their directly enrolled customers (groups A.1, A.3, and A.6). However, as highlighted above, there is a need to leverage all possible resources in the near- and mid-term and aggregator subgroups,

⁷ SCE Exhibit 3 at p. 76, line 6.

particularly groups A.4 (VPPs) and A.5 (VGI aggregations) can provide additional value as device-backed resources.

In order to maximize value from these resources, all IOUs should keep compensation for exports, as well as load reduction, through 2027 in order to take advantage of all of the energy that can be offered by these resources. Additionally, all three IOUs should explore removing the annual dispatch limit, reducing the event trigger thresholds, or otherwise increasing the number of ELRP events for customers with energy storage in groups A.3- Rule 21 DERs and A.4 – VPPs. Customers could respond to 10-15 events per month, give that it is not expected for these customers to experience event fatigue and increased incentives derived can encourage additional participation provided alignment with TOU schedules.

IV. HEARINGS AND SCHEDULE.

CESA does not have a position time on whether evidentiary hearings will be needed at this time. However, CESA agrees that it is prudent to split the proceeding into two phases for an expedited resolution of 2023 funding and programs, while allowing for a more robust discussion of the long-term 2024-2027 programs. CESA looks forward to further discussing the schedule at the Prehearing Conference.

V. CONCLUSION.

CESA appreciates the opportunity to submit this response on the Application and looks forward to collaborating with the Commission and stakeholders in this proceeding.

Respectfully submitted,



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