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Renew Home Comments on Proposed DSGS Guidelines, 4th Edition

Additional submitted attachment is included below.

Renew Home

October 30, 2024

California Energy Commission
Docket No. 22-RENEW-01

Submitted Electronically

RE: Comments on the California Energy Commission's Proposed Demand Side Grid Support Guidelines, Fourth Edition

Renew Home values the opportunity to provide comments on the California Energy Commission's (CEC) Proposed Demand Side Grid Support (DSGS) Guidelines, Fourth Edition.

Renew Home is an integrated technology provider for utility demand response programs and also provides third-party demand response through its wholly owned subsidiary, OhmConnect, Inc., OhmConnect provides Demand Response (DR) services to residential retail electric customers in California pursuant to Electric Rules 24 (Pacific Gas and Electric Company (PG&E) and Southern California Edison Company (SCE)) and 32 (San Diego Gas & Electric Company (SDG&E). OhmConnect's cost-free software service notifies households of impending DR events and rewards customers for their automated energy reductions using in-home smart devices. OhmConnect is registered to participate as a DRP in the wholesale electricity market operated by the California Independent System Operator Corporation (CAISO).

OhmConnect has participated in DSGS Options 2 and 3 in prior program years. Our comments primarily focus on the new DSGS Option 4 Emergency Load Flexibility Virtual Power Plant Pilot and respond to the questions posed at the end of the October 18, 2024 workshop. Renew Home looks forward to helping the CEC maximize the amount of load that can be reduced during times of grid stress to support the reliable provision of electricity to all California residents.

Respectfully submitted,

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Summary

There are hundreds of thousands of smart devices in California homes today that are not currently enrolled in a demand response program. The CEC has the opportunity to enable Californians to contribute to programs that harness those devices' load reductions during times of generation or transmission capacity limitations to support safe and reliable operation of the grid. Renew Home greatly appreciates the time and effort CEC staff invested in the development of the Option 4 Emergency Load Flexibility Virtual Power Plant Pilot. Unfortunately, the guidelines as written are unlikely to achieve enrollment in DSGS Option 4 at scale. Renew Home has a number of proposed modifications to the guidelines that are necessary to enable meaningful participation in the program and bring incremental capacity to the strategic reliability reserves.

Renew Home's recommendations are focused on Option 4 only and summarized below:

1. Remove the requirement to present the option to enroll in a market integrated program during DSGS enrollment.
    a. Give aggregators the discretion to determine how to offer enrollees the option to enroll in a market integrated program.
2. Strike the capacity commitment and penalty structure from the guidelines and pay incentives based on measured reductions only.
3. Require two-hour event performance and pay the same incentive per kW as the two-hour Option 3 variant.
4. Detail the information that will be included in the enrolled participation report.
5. Adopt the proposed thermostat runtime per kW impacts, which are reasonable.
6. Permit randomized control trials as an optional alternative to the 10-in-10/4-in-10 baselines for thermostat load impact measurements.
7. Require runtime data to be provided within 30 days after an event.
8. Clarify that aggregators are responsible for ensuring participant eligibility and access to all documentation.

Proposed Modifications

1. **Remove the requirement to present an option to enroll in a market integrated program during the DSGS enrollment. Instead, provide aggregators the discretion to determine how best to offer the option to enroll in a market integrated program during the DSGS season.**

The proposed guidelines require that aggregators provide a pathway for device owners to enroll in supply-side (market integrated) DR by including an optional step

to complete the data sharing agreement required for DR registration in the enrollment process and in the DSGS information or settings page. This requirement is unnecessary and overly prescriptive. If the final DSGS guidelines retain this requirement, Renew Home is unlikely to participate in Option 4.

The goal of Option 4 is to maximize the emergency capabilities of load reduction assets that are not currently operationalized, while still providing a pathway for market enrollment. The enrollment flow is not the best time or place to present that pathway. OhmConnect previously noted the high rate of failure to complete the click-through data authorization process leads to lost MWs of controllable load.[1] Creating additional steps, explaining the difference between the two programs, and offering up the click-through process will serve as a roadblock that will likely dramatically reduce customer enrollment. Mandating that DSGS participants have the option to market enroll will not benefit the DSGS program or improve market enrollments, it merely transposes the challenges of market integrated customer enrollment onto DSGS Option 4.

Renew Home recognizes that DSGS is a temporary program and the CEC is concerned with maximizing resource adequacy (RA) assets. Resource adequacy as a program offers the greatest benefit to the grid and, as OhmConnect stated in its February 5, 2024 comments in this docket, "the market integration of DR customers is, and continues to be, the most lucrative path for aggregators and participants."[2] DR aggregators are already incentivized to market enroll customers. Renew Home is happy to provide evidence of the variety of ways we try to market enroll customers, which should satisfy the CEC's desire to provide customers a pathway to market enrollment without imposing a requirement within the Option 4 guidelines. We recommend that providers have the discretion to offer participants the option to enroll in a market-integrated program during the DSGS season.

2. **Design Option 4 as "pay for measured reductions" and strike the capacity commitment and penalty structure from the guidelines.**

The proposed penalty structure is inconsistent with the language and intent of AB 209 and AB 205, which established the DSGS program. Specifically, AB 209 states that "the Commission shall allocate monies to develop a new statewide program that provides incentives to reduce customer net load during extreme events with upfront capacity commitment and for per-unit reductions in net load" (AB 209 Section 15 25792 (b)). The law does not require or allow the CEC to impose financial disincentives or penalties.

[1] 22-RENEW-01 OhmConnect Comments filed February 5, 2024.
[2] Id.

Beyond the plain reading of the statute, which disallows penalties for underperformance, Renew Home also argues that the imposition of penalties would likely undermine the success of the program. Aggregators' nominations of capacity will take into account three things: 1) the assigned static per kW values for low and high speed thermostat runtime categories, 2) the penalty structure for which capacity payment is reduced by double the shortfall, and 3) the weather sensitive nature of thermostat run times and the inability of aggregators to predict weather on a year-ahead or month-ahead timeframe. The guidelines present competing signals to inform capacity nominations. Since events are called for an EEA Watch or EEA, aggregators would try to estimate their load reduction impact for elevated temperatures. But aggregators must also minimize the risk of a season without an EEA Watch or EEA for which their demonstrated capacity may be tested on a day with relatively cooler temperatures, or if an EEA is called for a transmission related emergency during mild temperatures. A mild test event day could inappropriately result in penalties. Aggregators will have a strong incentive to under-nominate with these requirements and nominations will not resemble a "true" capacity value.

Further, the punitive aspect of the nomination and penalty structure of Option 4 is not counterbalanced by the potential upside for over performance. The penalty is asymmetrical; capacity incentives will be reduced by two times the percentage shortfall below 100 percent performance, whereas 100-110% capacity is paid as performed, and anything over 110% of demonstrated capacity is capped at 110%. This structure will likely result in the under compensation of load reductions provided during times of grid stress. A penalty structure for Option 4 is a needlessly punitive construct for a pilot program that is in addition to, and not a replacement of, resource adequacy. In lieu of the nomination and penalty framework, the CEC should pay capacity incentives based on the performance of the aggregation during real or test events and utilize the suggested monthly participation reports to understand the level of participation in Option 4 – as envisioned by AB 209.

The number of participating thermostats will be provided in the below proposed participation report (similar to the requirements for the other options). Instead of a nomination, providers could provide monthly estimates of capacity on the participation report and the CEC will have the enrollment information prior to the beginning of the month.

3. **Modify Option 4 to a two-hour event duration and provide the same incentive as the two-hour Option 3 variant, including the 30% bonus that applies to the other options, to maintain inter-program equity.**

Although the DSGS Guidelines do not explain the underlying reasoning, the capacity prices for Option 4 are considerably lower than the capacity prices for either Option 2

or Option 3. Table 1 below shows a comparison of Option 4, Option 3 (2-hour), and Option 2.

Table 1. Capacity Incentive Comparison

	$/kW		
Month	Option 4	Option 3 (2-hour)	Option 2 (all days)
May	$4.50	$6.75	$9.00
June	$4.65	$6.98	$9.30
July	$8.40	$12.60	$16.80
August	$9.00	$13.50	$18.00
September	$9.60	$14.40	$19.20
October	$5.25	$7.88	$10.50
Season Total	$41.40	$62.11	$82.80
% of Option 2	50%	75%	100%
Bonus Applied	$41.40	$80.74	$107.64
% of Option 2	38%	75%	100%

Source: Proposed DSGS Guidelines, Fourth Edition and Renew Home analysis.

Option 4 incentives are 50% less than Option 2 and the two-hour variant of Option 3 is 75% of the Option 2 incentive. The disparity in capacity incentives for Option 4 is further amplified by the exclusion of the 30% bonus and the inclusion of a performance penalty that is not applied to Option 3 nominations. Per kW capacity prices should be valued equitably and be relatively technology neutral.

4. **The CEC should add a subheading to detail the information that will be included in the enrolled participation report for Option 4.**

Chapter 2(D)(1) includes subheadings for the enrolled participation reports for all other options but does not include one for Option 4. Below is proposed language for Option 4:

Chapter 2(D)(1)(f) Enrolled Participation Report for Incentive Option 4

- The UDC service territory, partner company (if applicable), type of device, and estimated capacity (kW) for each aggregation participating in the DSGS Program. DSGS providers should submit no more than one entry for each combination of UDC and partner company. In agreement with the

demonstrated capacity calculation, estimated capacity is the average estimated load reduction expected from the aggregation of the two-highest LMP hours and the with the shoulder hours weighted at 0.5 of the expected reduction.

- Information on each participating site, including a unique identification number, partner company (if applicable), customer class, service account address, UDC, number of devices installed at each site.
- Indication that the DSGS provider or its partner has remote control (for example, API control) over each participant device, is not controlling the device for a conflicting program, and has no knowledge or awareness that each customer is enrolled or participating in a conflicting program, to the best of the provider's knowledge.

5. **The proposed thermostat run time per kW impacts are reasonable.**

Run time-based estimates of hourly load shall use an assumed connected load of 2.5 kW for full or high speed and 1.25 kW for partial or low speed. These values seem reasonable but may be a little low depending on the geography/climate of participants. There may be ways to provide more accurate values based on home size, historic meter data and other variables. These values should be updated in the future once more data are available to develop better estimates.

6. **Offer a randomized control trial as an optional alternative to the 10-in-10/4-in-10 baselines for thermostat load impact measurements.**

The thermostat load impact measurement utilizes a 10-in-10 baseline for non-holiday weekday (or 4-in-10 for weekend/holiday day) energy consumption. The guidelines should also permit the utilization of randomized control trials to serve as the basis for calculating load reductions because they eliminate several sources of bias that are inherent in the baseline methodologies, including weather.

7. **Require run time data to be provided within 30 days after an event.**

Chapter 2(D)(4) states that Option 4 providers must provide device load or run time data for all devices within 5 days after a program event or test event (p. 11). Five days is insufficient time to collect, review for quality, and format the data for hundreds of thousands of devices.

8. **Clarify that aggregators are responsible for ensuring participant eligibility and access to all documentation.**

Renew Home recommends that Chapter 6(B) is edited to reflect:

Load flexibility VPP aggregators must collect and maintain the following information to enroll eligible participants under Incentive Option 4…Acknowledgement and agreement from the ~~participant~~ aggregator that:
o The participant meets the eligibility requirements of the DSGS Guidelines and is not enrolled or participating in a conflicting program to the best of their knowledge.
o The ~~participant~~ aggregator will allow the CEC access to all documentation to verify compliance with the program and program performance.
o The information submitted is accurate and complete.
o The participant ~~agrees to the terms and conditions of the program~~ consents to allow the aggregator to facilitate their enrollment in the program.

Workshop Questions & Answers

Renew Home answers selected questions that were posed at the conclusion of the October 18, 2024 workshop below:

Are there modifications we should consider to the design of Option 2 to maximize its value as a strategic reliability reserve?

Renew Home recognizes that the intent of the current design of Option 2 is to reward aggregators for providing capacity that is incremental to resource adequacy capacity commitments during times of grid need. Option 2 attempts to strike a balance between ensuring the reliability and availability of existing resource adequacy commitments while providing an incentive for additional megawatts that show up during high LMP hours. However, the events that result in the demonstration of incremental capacity are largely weather dependent and not guaranteed. An uncertain incentive does not provide a strong market signal for aggregators to develop additional capacity. While well intentioned, Option 2 is not presently designed to maximize its value as a strategic reliability reserve. To provide greater certainty to providers, we respectfully suggest the CEC consider using quarterly test events as a means of determining payment to DRPs during mild summers when no extreme weather event triggers Option 2 payments.

Should Option 4 capacity commitments be made on a monthly or annual basis?

As described in detail above, Renew Home opposes the proposed nomination and penalty construct for Option 4 because it does not take into consideration weather sensitivity. The CEC will be able to review the quantity of devices enrolled in Option 4 on a monthly basis through the enrolled participation report.

Are there sufficient safeguards in place to help prevent dual enrollment issues under the proposed Option 4? If not, what other measures should the CEC consider?

Yes, there are sufficient safeguards in place to help prevent dual enrollment issues under the proposed Option 4. As OhmConnect noted in its February 5, 2024 comments in this docket, dual enrollment of devices is a low risk for both the CEC and aggregators and cited the low enrollment of residential customers in DR programs. OhmConnect estimated that "...2-5% of all residential customers participate in load-modifying or market integrated IOU DR programs, with a comparably low percentage participating in third-party market integrated DR."[3]

[3] Id.