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Filer:	Megan Myers
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849 East Stanley Blvd. #264
Livermore, CA 94550
Tel: 925.785.2878
Email: policy@cedmc.org

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California Efficiency + Demand Management Council Comments on Proposed Fourth Edition Demand Side Grid Support Program Guidelines

Case Number 22-RENEW-01

I. Introduction

The California Efficiency + Demand Management Council ("Council") appreciates this opportunity to provide written comments on the California Energy Commission's ("CEC's") proposed Fourth Edition revisions to the Demand Side Grid Support ("DSGS") program guidelines ("Draft Revised Guidelines") that were presented at the October 18, 2024 workshop.

The expansion of Option 3 to include exports by market-integrated customers is an excellent step toward engaging underutilized behind-the-meter ("BTM") energy storage. In addition, the Council greatly appreciates the creation of Option 4 as a device-level measurement pilot. This is a critical model because, if successful, it represents a simpler approach to DR participation. However, some elements require modification, particularly the penalty structure but also the incentive payments and pathway to Supply-Side DR participation. The Council also recommends 1) more time for Option 3 and 4 DSGS providers to provide their event day data, 2) inclusion of thermal energy storage as an Option 3 eligible technology, and 3) recommends that the upcoming DSGS program performance assessment include a cost-effectiveness analysis using the CPUC-approved demand response ("DR") cost-effectiveness methodology.

II. Council Comments on Option 3 Issues

The Council strongly supports revising Option 3 to recognize exports by customers already participating in a wholesale market-integrated program, in addition to non-market-integrated customers. Because the load curtailment of customers with BTM energy storage that are registered in a Proxy Demand Resource ("PDR") is only counted by the California Independent System Operator ("CAISO") up to a zero net load (i.e., a customer's energy storage output equals the premise load), no exports are currently counted in the CAISO market. Consequently, there is an estimated several hundred MW of stranded residential BTM energy storage that can provide significant value to the grid. This proposed expansion of Option 3 will hopefully capture some of this capacity.

III. Council Comments on Option 4 Issues

The Council greatly appreciates the introduction of Option 4, largely because it incorporates device-level measurement, a concept that is critical to expanding residential participation in distributed energy resources ("DER") because it avoids the need for customers to authorize their local investor-owned utility ("IOU") to share their meter data with third-party providers. This approach will simplify the customer enrollment process and reduce the burden on the IOUs. Option 4 would initially be open to smart thermostat-controlled heating, ventilation, and air conditioning ("HVAC") and heat pump heating/cooling units, but the CEC should seek to expand the eligible technologies as soon as is feasible. However, the penalty structure and required pathway to Supply Side DR participation is highly problematic, and the incentives are not commensurate with the penalty structure. The Council addresses these elements in detail below.

Penalty Structure: The proposed penalty structure would impose a double penalty for any shortfall below 100 percent performance. As a matter of principle, the Council strongly opposes any penalty structure for this Option because it is a pilot and, as such, the inevitable discouraging effect on participation will be counterproductive. The CEC should seek to attract as many participants as possible so as to generate a robust amount of data points for a future assessment. The Council also observes that none of the other three Options include a penalty structure, so it is unclear why this one would require it. Instead, Option 4 should have a pay-for-performance structure with no penalties.

Furthermore, the proposed penalty structure is entirely too punitive because it allows for no forecasting error by the DSGS provider. If the proposed penalty is ultimately adopted, the Council foresees that there would be very little participation because DSGS providers would see the risk of a penalty as outweighing the benefits of participating. Though the Council opposes a penalty structure, if there is to be one, the IOUs' respective Capacity Bidding Programs ("CBP") provide a good model for a suitable penalty structure that provides such a buffer.

Notwithstanding these concerns about the impact of a penalty structure on participation, any penalty structure should strike a fair balance with a program's incentives. The Council addresses the Option 4 incentives later in this section but in this context, the proposed penalty structure would create a significant imbalance with Option 4 incentives. To the Council's knowledge, the Option 4 penalty structure is more punitive than any other program in the State, so if the CEC is determined that there be a penalty structure, the incentives should be significantly greater.

Pathway for Supply-Side DR Participation: Option 4 would require that participating DSGS providers:

> "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. If the load flexibility VPP aggregator is not also a supply-side DR provider, the aggregator must provide a link to one or more partner DR providers that are enabled to dispatch the aggregator's devices in a supply-side DR aggregation."[1]

The Council is a strong supporter of market-integrated DR but requiring a "pathway" for participants to enroll in Supply-Side DR, when Option 4 is not itself a market-integrated program, is virtually guaranteed to discourage participation to come degree. It is well-documented that completing the data sharing agreement is often problematic for customers and, consequently, has historically resulted in a very high customer dropout rate for third-party providers. In fact, this is one of the major reasons why device-level measurement is such a promising model – it reduces the customer dropouts that sometimes occur when they attempt to navigate the data sharing authorization process. As a related issue, the Draft Revised Guidelines do not specify how this pathway requirement would be applied to a customer with an existing relationship with a DSGS provider. Some customers may not understand the differences between programs and would likely be confused about why they were being suddenly offered the option to complete the data sharing agreement. The optimal course of action would be the cleanest – simply eliminate this requirement. The CEC should also consider that some DSGS providers prefer not to directly participate in the CAISO market; for them, this pathway risks imposing an unnecessary financial burden associated with creating this functionality with no promise that it will lead to more market integrated DER resources. However, if the CEC is determined to retain this requirement, it should avoid being too prescriptive and allow each DSGS provider to develop an approach to meeting this requirement that will result in the least amount of customer confusion and friction.

[1] Proposed DSGS Program Guidelines, Fourth Edition (with changes shown in underline-strikeout) ("Redlined Program Guidelines"), at p. 34.

Incentives: During the October 18 workshop, it was not clear on what basis CEC staff designed the Option 4 incentive structure, so the Council recommends using the IOUs' respective CBPs as a rough guide. The proposed Option 4 capacity payments are very low, especially, as stated above, when compared to the penalty structure. Using CBP, as a rough comparison, the Option 4 incentives are far lower than CBP incentives, especially for July-September. For example, the PG&E CBP capacity payments are $17.67/kW-month, $23.82/kW-month, and $14.92/kW-month for July through September, whereas the Option 4 capacity payments are $8.40, $9.00, and $9.60, respectively. Of note is that the PG&E CBP penalties do not take effect until performance falls below 60 percent. So, CBP offers higher payments and lower penalties. The Council concedes that CBP requires more frequent dispatch than what would likely occur under Option 4, but it is not clear why the incentives would be so low.

Customer Information Retention: Under Participant Enrollment, DSGS providers would be required to collect and maintain certain information in order to enroll customers in Option 4.[2] DSGS providers collect some of these data as a standard practice but requiring all of it be collected as a condition for enrollment could be problematic which could potentially inhibit participation. The Council recommends that providing this information to the CEC not be a condition of enrollment per se, but rather that the DSGS provider be able to provide this information when requested as part of an audit.

In addition, each participant in Option 4 would be required to acknowledge and agree that it meets the DSGS eligibility requirements and guidelines, is not enrolled in a conflicting program, is providing accurate and complete information, agrees to allow the CEC access to all documentation to verify compliance, and agrees to the Terms & Conditions.[3] The Council does not dispute the importance of these requirements but the enrollment process would be simpler if DSGS providers were responsible for attesting to the CEC that its customers meet these conditions. In turn, the DSGS provider can establish these conditions in the context of its own relationship with participants.

IV. Council Comments on Option 3 & 4 Data Requirements

The Draft Revised Guidelines specify that following Option 3 and Option 4 events, event data must be provided to the CEC three days and five days after an event, respectively.[4] This timeframe is far too compressed because DSGS providers typically cannot pull the data together and perform quality

[2] Redlined Program Guidelines, at p. 35.
[3] *Id*.
[4] *Id*., at p. 11.

control that quickly. Instead, the time frames should be 30 days following Option 3 and Option 4 events.

V. Council Comments on DSGS Program Effective Analyses

The Council strongly supports the CEC's intention to develop an assessment for each of the DSGS pilots and hopes that these assessments will provide valuable data and lessons learned that can be applied in the CPUC's Demand Response and Resource Adequacy proceedings as the opportunity arises.[5] During the October 18 workshop, CEC staff indicated that they would be using their own cost-effectiveness methodology to assess the DSGS pilots. Using a different methodology than the CPUC-approved DR cost-effectiveness methodology could result in an "apples-to-oranges" situation and complicate comparisons to existing CPUC-jurisdictional DR programs. To ensure the necessary comparability, any DSGS program cost-effectiveness analysis should include the CPUC-approved methodology in addition to CEC staff's methodology.

VI. Council Responses to CEC Staff Questions

1. What additional program modifications should be considered? Why?

The Council continues to recommend that thermal energy storage ("TES") be eligible for Option 3. Though it cannot export like conventional energy storage can, like conventional energy storage, it meets the Option 3 criterion of being a "standalone battery" and can meet all of the operational requirements that are applicable to it as a non-exporting resource.[6] Furthermore, though this is not an Option 3 criterion, TES qualifies as a Resource Adequacy ("RA") resource by receiving a Net Qualifying Capacity ("NQC") value through the CPUC's Load Impact Protocol ("LIP") process. With regard to thermal energy storage measurement, direct measurement of the dispatched thermal load is generally superior to counterfactual baselines because the electric load being displaced, typically at hotels, event venues, and even factories, is sometimes highly variable and is not correlated to weather. The dispatched thermal load can be easily translated into the electric load that was displaced through a standardized formula.

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[5] Redlined Program Guidelines, at p. 5.

[6] *Id*., at p. 26.

2. This season's experience with Option 3 indicates VPPs appear to include a variety of storage use cases with different discharge patterns. Should we switch from prescriptive to measured baseline for a more accurate determination of demonstrated capacity?

The Council reserves comment.

3. In the context of leveraging existing resources, how could we better understand what is an appropriate level of compensation for Option 3 that corresponds to the reliability value provided and stacks on top of the bill savings realized under customer's retail tariff (such as, net billing tariff, demand charges), while avoiding double compensation concerns?

The Council reserves comment.

4. Should there be an emergency-only construct similar to Option 4 for storage VPP, separate from current Option 3 design?

The Council reserves comment.

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

The Council reserves comment.

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

Option 4 capacity commitments should be made on a monthly basis because the underlying load of smart thermostats – space heating/cooling – is highly seasonal in nature. There may even be some (albeit likely less) seasonality in water heating load as well. Therefore, a monthly nomination will result in more accurate forecasts, something that will be especially critical if a penalty structure is ultimately adopted.

7. 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?

The proposed safeguards to prevent dual enrollment in Option 4 are generally adequate but one additional potential step is for CEC staff to cross-reference the Option 4 participants with customers registered in the CAISO's Demand Response Registration System ("DRRS"). Though this would not address potential dual participation in non-market-integrated programs (e.g., dynamic rate pilots), it would at least prevent dual participation by customers in RA DR programs.

VII. Conclusion

The Council reiterates its appreciation for the opportunity to comment on the Draft Revised Guidelines and CEC staff's consideration, and respectfully requests that its recommendations be adopted.