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Comments of VGIC on DSGS 4th Guidelines

Additional submitted attachment is included below.

October 30, 2024

Email to: docket@energy.ca.gov
Docket Number: 22-RENEW-01
Subject: California Energy Commission Demand Side Grid Support Program Guidelines

RE: Comments of the Vehicle Grid Integration Council on Demand Side Grid Support Program Draft Guidelines, Fourth Edition

Dear Sir or Madam:

The Vehicle-Grid Integration Council (VGIC) appreciates the opportunity to provide comments on the Demand Side Grid Support (DSGS) Program Draft Guidelines, Fourth Edition, and the October 18, 2024, Workshop hosted by the California Energy Commission (CEC), which reviewed the proposed guidelines and program budget updates.

The DSGS program has achieved significant success in 2024, with over 500 MW of resources participating. VGIC appreciates the inclusion of bidirectional electric vehicles (EVs) in DSGS, as the program not only allows EV discharge (V2X) to provide emergency capacity and respond to extreme events, but it also establishes a foundation for future V2X programs in California. California already has 1.5 million EVs that can contribute to the Strategic Reliability Reserve, and with exponential growth expected, these EVs will support California's long-term clean energy needs.

VGIC commends the CEC's work to establish DSGS and its efforts last year to add EVs to Option 3. We believe the program's success should be maintained and, therefore, submit the following recommendations:

- The 100 kW minimum aggregation size should be maintained for EV resources.
- VGIC supports allowing aggregators to enroll aggregations from partner companies in DSGS.
- CEC should consider how to account for V1G load reduction within Option 4.

THE 100 KW MINIMUM AGGREGATION SIZE SHOULD BE MAINTAINED FOR EV RESOURCES.

VGIC opposes the proposal to increase the minimum aggregation size for V2X resources in Option 3. The Draft Guidelines suggest increasing the minimum aggregation size for all Option 3 resources from 100 kW to 500 kW, which would significantly reduce the number of V2X

resources able to participate in DSGS. We recommend that V2X aggregations retain a 100 kW minimum aggregation size.

Currently, many V2X portfolios developed by aggregators would struggle to meet a 500 kW minimum aggregation threshold. V2X remains a relatively nascent industry with many barriers, most notably the limited availability and high cost of bidirectional chargers and the associated enabling technologies. Bidirectional equipment is more costly than standard unidirectional chargers and requires additional investment for installation and interconnection. Furthermore, there are limited compensation programs to incentivize V2X installations. **DSGS is currently the only statewide program in California that compensates for energy from EV discharge and exports**, **and, therefore, is critical to supporting VGI market development and achieving the vision set forth in SB 676 (Bradford, 2019)**. Other California programs, such as the Emergency Load Reduction Program (ELRP), are available only for investor-owned utility customers, while others are limited to specific utilities or Community Choice Aggregators. These barriers have resulted in a low number of V2X installations in California and much smaller aggregations. Until V2X technology achieves broader deployment comparable to stationary energy storage, a 100 kW minimum aggregation size remains appropriate.

Additionally, maintaining stability in DSGS is essential so that participants can rely on and plan for engaging in the program. Customers and aggregators are currently making investment decisions with the understanding that current DSGS opportunities would be maintained and even increased in 2025. If the CEC changes program rules such that customers lose eligibility between years, or aggregators must adapt to new processes, many may shy away from the program due to increased uncertainty. Frequent rule changes can be particularly disruptive for smaller or early-stage participants who have limited resources to adapt quickly, which are precisely the participants engaging from the relatively nascent V2X community. These companies often invest significant time and capital upfront with the expectation of relatively stable program requirements. The CEC has developed a strong program with substantial participation. While minor adjustments and modifications to expand the program may be appropriate, the CEC should avoid changes that would force participants out of the program, such as increasing the minimum aggregation size, especially participants that are minimally supported yet are referenced as an important solution for meeting long-term reliability and multi-sectoral decarbonization goals.

VGIC SUPPORTS ALLOWING AGGREGATORS TO ENROLL AGGREGATIONS FROM PARTNER COMPANIES IN DSGS.

VGIC supports modifications that increase participation in DSGS, including allowing aggregators to enroll resources from partner companies. Some businesses may manage V2X or other resources suitable for DSGS but may not wish to act as formal DSGS participants. By enabling these businesses to partner with experienced aggregators who can integrate the resources

into the program, the CEC can expand participation. This is particularly relevant for V2X resources, where technology providers and EVSE service providers may manage the chargers, EVs, and customer interactions but lack the expertise to participate directly in DSGS. VGIC thus supports the clarification that allows partner aggregations to enroll in DSGS.

CEC SHOULD CONSIDER HOW TO ACCOUNT FOR V1G LOAD REDUCTION WITHIN OPTION 4.

The CEC should consider how to account for unidirectional or "V1G" load reduction within the new Option 4: Emergency Load Flexibility Virtual Power Plant. As California experiences consistent growth in EV deployment, using every tool in the toolkit will be critical to enable EV load flexibility. EVs are different from other loads, they are:

- "**New**: Doubling every 2-3 years
- **High Powered**: L2 chargers often >8 kW
- **Flexible**: Drivers typically charge for 2 hrs during 10 hr plug-in session
- **Mobile**: Home charging common (~80%) and public charging impacts commercial class
- **Hyperconnected**: ~85+% of EV customers have capable vehicles or chargers"[1]

Current residential EV charging behavior in California is generally aligned with TOU periods.[2] However, additional load reduction is still available from residential customers. For example, in Pacific Gas and Electric's evPulse (Resilient Charging Pilot), the utility achieved an average 0.81 kW capacity reduction per EV.[3] While this capacity reduction is below the 8 kW L2 charging rate noted above, it still offers immense potential load reduction, if enabled, given the scale and pace of EV charging load growth. With nearly 2 million EVs already sold in California, and millions more expected to achieve California's Advanced Clean Cars II, Advanced Clean Fleets, and Advanced Clean Trucks rules, VGIC urges the CEC to consider opening Option 4 up to residential V1G load reduction, in addition to smart thermostat and water heaters. It would be a mistake to overlook the V1G load reduction potential, as even if it is only a fraction of the average nameplate EV charger rating, it is still, in aggregate, a meaningful opportunity to support the goals of the Demand Side Grid Support program.

Additionally, there are very few initiatives that seek grid support from these customers beyond TOU rates, so offering DSGS Option 4 to V1G aggregations would fill an important gap in VGI

[1] SEPA State of Managed Charging 2024. Pg 8. https://sepapower.org/resource/state-of-managed-charging-in-2024/
[2] See, for example, *PG&E Vehicle-Grid Integration Strategies Semi-Annual Report for 2023*. March 15, 2024. Pg 26-30. https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M527/K737/527737436.PDF.
[3] SEPA State of Managed Charging 2024. Pg 8. https://sepapower.org/resource/state-of-managed-charging-in-2024/

programming. While dynamic rates are being piloted, only two residential charging customers have enrolled in this approach.[4] The investor-owned utilities' (IOU) Emergency Load Reduction Program does allow for residential EV charging aggregations to enroll and meet the emergency demand response needs of these IOUs. However, this offering is limited to customers of IOUs.

Regarding non-residential V1G load reduction, VGIC notes significant charging still occurs on-peak, even though TOU price signals are currently in place for these customers:[5]

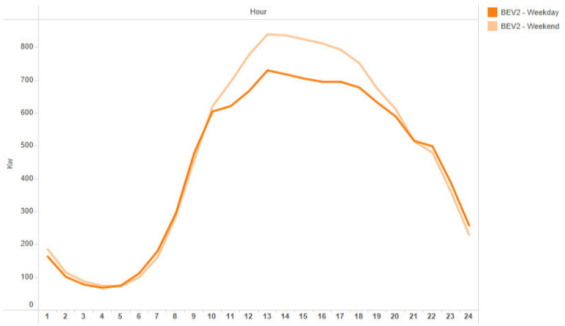

Figure 2. Average Load Profile for BEV-2 Customer by Weekday and Weekend (2023)

With this in mind, VGIC respectfully requests the CEC staff continue collaborating with stakeholders to develop DSGS enhancements that promote greater EV participation, including in unidirectional or "V1G" mode for both residential and non-residential customers.

CONCLUSION.

VGIC appreciates the opportunity to provide these comments and looks forward to collaborating with the CEC and other stakeholders in this docket.

Respectfully submitted,
/s/ Zach Woogen
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[4] *PG&E Q3 2024 Program Advisory Council Meeting.* October 23, 2024. Pg 32.
[5] *PG&E Vehicle-Grid Integration Strategies Semi-Annual Report for 2023.* March 15, 2024. Pg 26-30. https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M527/K737/527737436.PDF.