

March 23, 2022

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**Re: Comments of the Vehicle Grid Integration Council to Resolution E-5192:
Approval, with Modifications, of Pacific Gas and Electric Company Vehicle
Grid Integration Pilots in Compliance with Decision 20-12-029**

Dear Sir or Madam:

Pursuant to the provisions of General Order 96-B and the Comment Letter accompanying Draft Resolution E-5192 (“Draft Resolution”), the Vehicle Grid Integration Council (“VGIC”) respectfully comments on the proposed approval of three of the four pilots filed for approval in Advice Letter 6259-E of Pacific Gas and Electric Company (“PG&E”), *Request for Approval of PG&E’s VGI Pilots in Compliance with Decision 20-12-029* (“Advice Letter”) on July 15, 2021.

The proposed approval of the vehicle-to-grid (“V2G”) residential and commercial pilots (pilots #1 and #2) and vehicle-to-microgrid (“V2M”) Public Safety Power Shutoff pilot (pilot #3), with modifications, represents the culmination of diligent work from stakeholders, including the three major investor-owned utilities (“IOUs”), and offers a critical foundation for the future of bidirectional electric vehicle (“EV”) and EV supply equipment (“EVSE”) capabilities. In particular, VGIC appreciates PG&E’s good faith efforts and flexibility during the two VGI pilots workshops and feedback period that preceded the Advice Letter filing. VGIC is pleased to see the Draft Resolution build on PG&E’s efforts to advance VGI. The Draft Resolution takes significant steps to strengthen the proposed pilots and, as noted in VGIC’s August 2020 Response to the Advice Letter, the proposed VGI pilots are both necessary and not duplicative of existing pilots.

Based on these factors, VGIC largely supports the Draft Resolution as proposed and believes it is aligned with the Commission’s intent per Ordering Paragraphs (“OP”) 13, 14, and 15 of Decision (“D.”) 20-12-029. These pilots are an important stepping stone toward the suite of full-scale VGI programs needed to achieve the decarbonization goals embedded in Executive Order N-79-20, SB 350, ARB’s in-progress 2022 Climate Change Scoping Plan, and SB 100. Moreover, these pilots should be approved expeditiously to ensure swift and efficient execution in support of California’s pressing near- and mid-term reliability and resiliency needs. However, in these comments VGIC highlights several critical areas that could benefit from additional clarifications or revisions before final implementation by PG&E. Specifically, VGIC recommends the below revisions to the Draft Resolution. To reiterate, VGIC supports the Draft Resolution, and we advise against delaying approval of pilots #1, #2, and #3.

- Pilot #2 Charger Incentives: Allowing light-duty vehicles to apply for participation in Pilot #2 merits a tiered incentive approach offering higher incentives for high-powered bidirectional chargers. To support the expansion of Pilot #2 to include a wider set of vehicle types, the Commission should utilize unallocated or otherwise leftover portions of the authorized VGI Pilots funding.
- Requirements for Dynamic Rate Design: The dynamic rate structures for the residential and commercial pilots should differ, however, PG&E should not be given the option to propose an alternative rate design as proposed in Section 11.2.
- Vendor Qualification Process: The Draft Resolution should direct PG&E to detail a vendor qualification process consistent with PG&E's stated goals "to partner with as many technology providers as possible." PG&E should seek to institute a fair and competitive process to leverage pilot partners.
- Clarification of ELRP Requirement: The Draft Resolution should clarify whether Pilot #1 customers may choose which ELRP group to participate in, or whether they will be placed into a specific group by PG&E.
- Knowledge Sharing: Section 16.1 appropriately directs PG&E to report on communication standards in interim and final VGI pilots reporting.

VGIC believes these issues can be resolved through modest revisions to the Draft Resolution and that most of the contents of the Draft Resolution are ready for Commission adoption. In considering the Draft Resolution, it is important for the Commission to recognize that the proposed pilots are not intended to demonstrate the technical readiness of specific VGI *technologies*. Many of the underlying technical issues are now well understood. Instead, PG&E's proposals are geared towards piloting programmatic approaches for harnessing VGI technologies at a larger scale, including experimenting with customer incentive levels, marketing, education, outreach, and acquisition. The VGI pilots are notably an opportunity to explore coordination across the power and transportation sectors, and the structures needed to advance different business models for industry stakeholders, including technology and service providers. With this in mind, VGIC stresses the criticality of ensuring any data and takeaways from the VGI pilots are accurately, transparently, and fairly represented in interim and final reporting.

Finally, VGIC respectfully reiterates its request that adoption of the Draft Resolution and subsequent implementation of VGI pilots not be unduly delayed due to the issues raised herein. VGIC offers its time and resources to Energy Division staff, Commissioners, PG&E, and other stakeholders to support addressing each issue in a timely manner.

I. DISCUSSION.

- A. Pilot #2 Charger Incentives: Allowing light-duty vehicles to apply for participation in Pilot #2 merits a tiered incentive approach offering higher incentives for high-powered bidirectional chargers. To support the expansion of Pilot #2 to include a wider set of vehicle types, the Commission should utilize unallocated or otherwise leftover portions of the authorized VGI Pilots funding.**

The Draft Resolution states that “PG&E may expand the scope of the commercial fleets pilot in response to stakeholder comments as proposed in PG&E’s November 18, 2021 data response.”¹ Specifically, VGIC reiterates its support for expanding Pilot #2 to include light-duty vehicles at commercial sites. Without this expansion, a clear gap in funding and program design would emerge and hamstringing a significant segment of the EV/VGI market. Excluding light-duty EVs from the commercial pilot risks overlooking light duty fleet and workplace charging use cases, which is a major market segment. Moreover, light duty V2X at a commercial site can be readily scaled up as it has been demonstrated at multiple customer sites across the country and in some cases the benefits fully offset the monthly vehicle total cost of ownership.

The proposed expansion to additional vehicle types would expand the set of bidirectional EVSE that would be used in Pilot #2, and bidirectional EVSE for light-duty and medium/heavy-duty vehicles are highly differentiated in their cost. The proposed enrollment incentive, which will help offset the costs of these EVSE, should therefore be differentiated based on the size of that bidirectional EVSE. VGIC recommends a higher incentive be offered to high-powered bidirectional EVSE compared to level 2 bidirectional EVSE. To support higher incentive levels for high-powered EVSE, VGIC recommends the proposed \$500,000 enrollment budget for Pilot #2 and the \$2.3 million budget originally proposed for Pilot #4.

VGIC notes the use of a significant portion of the previously authorized VGI Pilots is yet to be determined. Specifically, there is a \$6.3 million gap between the \$35 million authorized in OP 14 of D.20-12-029 and the \$29 million ultimately requested by PG&E and Southern California Edison Company.² If PG&E adequately justifies the customer enrollment budget per Draft Resolution Section 10 and/or chooses to refile for approval of Pilot #4 per Draft Resolution Section 8, VGIC recommends the Commission explore the possibility of using the \$6.3 million in authorized, unused VGI pilots funding to support higher incentive levels for high-power bidirectional chargers.

¹ Draft Resolution at 23.

² D.20-12-029, OP 14 states “The large electrical corporations shall identify any non-ratepayer potential funding sources and shall not request, in their combined applications, more than \$35 million.” In the March 16, 2021 and June 4, 2021 workshops, each IOU proposed VGI pilot budgets roughly proportionate to their load share. However, it is VGIC’s understanding that this was the preliminary assumed use and that funding need not necessarily be allocated according to load share. The \$6.3 million in authorized VGI pilots funding that was not ultimately requested by San Diego Gas & Electric Company, therefore, could and should be allocated for use in other VGI pilots.

B. Requirements for Dynamic Rate Design: The dynamic rate structures for the residential and commercial pilots should differ, however, PG&E should not be given the option to propose an alternative rate design as proposed in Section 11.2.

Section 11 appropriately directs PG&E to propose a dynamic rate structure based on the PG&E Commercial Electric Vehicle day-ahead hourly real time pricing Pilot rate plus a distribution component. VGIC strongly supports the use of PG&E’s Commercial Electric Vehicle day-ahead hourly real time pricing rate. PG&E itself proposed the rate in October 2020 and the Commission has since determined that “it is reasonable to require PG&E to offer its DAHRTP rate to all customers that have enrolled, or are eligible to enroll, in its existing BEV schedules.”³ However, some differentiation may be needed in the case of residential customers. VGIC notes that the pending PG&E General Rate Case (“GRC”) settlement includes a dynamic rate designed for residential customers. While the underlying design and methodology is similar to PG&E’s DAHRTP rate, the revenue neutral adders differ between the two rates. VGIC recommends the rate structure filed for the commercial V2X pilot be based on the DAHRTP rate while the rate structure filed for the residential V2X pilot be based on the pending PG&E GRC settlement residential dynamic rate design. Importantly, each rate structure incorporates (1) a day-ahead, real-time energy component based on the CAISO LMP and (2) a revenue-neutral adder designed specifically for that customer class.

VGIC also supports the incorporation of a distribution component and agrees with the Draft Resolution that the PG&E and Valley Clean Energy (“VCE”) Dynamic Rate Pilot for Agricultural Pumping design, as directed by D.21-12-015, offers a model to support the development of this distribution component.⁴ The PG&E and VCE Dynamic Rate Pilot approach or another novel distribution component design is the exact appropriate type of rate component to test out in PG&E’s pilots consistent with the intent of OP 13, 14, and 15 of D.20-12-029.

With this in mind, VGIC questions whether the provision in Section 11.2 that would allow PG&E to propose an alternative rate design is necessary. If PG&E were to propose an alternative dynamic rate structure, this could result in duplicative work for PG&E, the Commission, and other stakeholders, which VGIC believes may further delay the implementation of pilots #1 and #2. Moreover, the intent of the VGI pilots is to pilot program and rate design that could reach full-scale implementation in the mid- and long-term. As such, it is important to incorporate the approved and pending structures into PG&E’s pilots so that full-scale VGI programs and policies will be consistent with rate options that are on track to be offered to a wider set of customers. In the case of the commercial DAHRTP, PG&E intends to offer the option to eligible commercial customers in 2023.⁵

³ D.21-11-017 *Decision Authorizing Pacific Gas and Electric Company to Implement an Optional Day-Ahead Real Time Rate for Commercial Electric Vehicle Customers*, issued November 19, 2021 in Application 20-10-011. Conclusion of Law 1.

⁴ D.21-12-015 *Phase 2 Decision Directing Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company to Take Actions to Prepare for Potential Extreme Weather in the Summers of 2022 and 2023*, issued December 6, 2021 in Rulemaking 20-11-003. Ordering Paragraphs 50 through 58.

⁵ *Id* at pages 32 and 41.

VGIC recommends that the Draft Resolution be revised to remove Section 11.2 offering PG&E an option to propose an alternative rate structure. If PG&E is unable to propose a dynamic rate structure that is based on its approved Commercial DAH RTP or pending residential dynamic rate pilot, plus a distribution component (e.g., based on the PG&E and VCE Dynamic Rate Pilot for Agricultural Pumping), the Commission should allow them the opportunity to request additional time to comply with Section 11.1, for example a 30-day extension.

C. Vendor Qualification Process: The Draft Resolution should direct PG&E to detail a vendor qualification process consistent with PG&E’s stated goals “to partner with as many technology providers as possible.” PG&E should seek to institute a fair and competitive process to leverage pilot partners.

Upon reviewing the Advice Letter, VGIC was encouraged by PG&E’s stated goal “to partner with as many technology providers as possible.”⁶ VGIC believes PG&E should seek to institute a fair and competitive process to leverage pilot partners. While we trust PG&E’s stated goal reflects an earnest effort to collaborate with industry partners to advance VGI solutions as they exist today, we respectfully request additional clarity on the process by which PG&E will engage with vendors. For example, for pilots #1 and #2, beyond the vendors that PG&E identifies, VGIC there are other solution providers that would be capable and eager to participate. The Draft Resolution should direct PG&E to detail in one of its upcoming advice letters the process for identifying and partnering with qualified vendors in addition to those already identified in the Advice Letter. VGIC supports PG&E’s intent to open pilot participation to the widest possible variety of potential vendors. VGIC offers itself as a resource to facilitate the development of an open vendor qualification and partnership process.

D. Clarification of ELRP Requirement: The Draft Resolution should clarify whether Pilot #1 customers may choose which ELRP group to participate in, or whether they will be placed into a specific group by PG&E.

Section 11 would require, for Pilot #1, that “PG&E must ensure that customers are enrolled in the Emergency Load Reduction Program (ELRP) during phase 1.”⁷ VGIC generally supports this requirement, but seeks additional clarity on whether customers will choose an ELRP customer group or be placed in one by PG&E. For example, ELRP Group A.5 is designed for VGI aggregations and may therefore be appropriate for this purpose. If customers were required to enroll in Group A.5, the Draft Resolution should clarify the relationship between the VGI aggregator, the pilot vendor/partner, and PG&E. While it may make sense for the pilot vendor/partner to be the ELRP VGI aggregator, this may place an additional *de facto* requirement on pilot vendors/partners to participate in ELRP as a VGI aggregator. Another applicable ELRP may be Group A.6, which would expand load reduction beyond EV/EVSE and to the customer site in general. This Group may also be appropriate. Given these considerations, VGIC recommends Pilot #1 customers be provided

⁶ Advice Letter Pilot #1 and Pilot #2 at Section V “Scale Up”, and Pilot #3 at Section IV “Pilot Proposal.”

⁷ Draft Resolution at 20.

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ample guidance from PG&E, pilot partners/vendors, and ELRP VGI aggregators (if applicable) to support their decision over which ELRP program to enroll in.

E. Knowledge Sharing: Section 16.1 appropriately directs PG&E to report on communication standards in interim and final VGI pilots reporting.

Section 16.1 requires PG&E to “prepare an update to the D.20-12-029 VGI reporting template to include both PG&E’s proposed metrics and additional metrics.”⁸ The Draft Resolution specifies:

“PG&E must report on adoption of communication standards by technology providers participating in the pilots. AL 6259-E notes that communication standards including ISO 15118-2018 and IEEE 2030.5 are not fully adopted in the marketplace and in some circumstances PG&E may need to use other standards such as Open ADR as an alternative. PG&E must report on these metrics in the interim and final VGI pilots evaluation and, to the extent that results are available, in routine VGI reporting. This reporting will provide transparency into implementation of V2X functionality and open standards that facilitate interoperability and consumer choice of service providers.”⁹

VGIC supports the intent to provide transparency into implementation of V2X functionality. As such, we agree with the language in Section 16.1, which appropriately balances the need for transparency with the nascent state of the market and currently limited adoption of specific communication standards for V2X.

II. CONCLUSION.

VGIC appreciates the opportunity to submit these comments to the Draft Resolution and looks forward to further collaboration with the Commission and stakeholders on this initiative.

Respectfully submitted,

/s/ Edward Burgess

Edward Burgess

Senior Policy Director

VEHICLE-GRID INTEGRATION COUNCIL

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⁸ Draft Resolution at 27.

⁹ *Ibid.*