

June 17, 2022

CPUC Energy Division Tariff Unit
505 Van Ness Avenue
San Francisco, California 94102
EDTariffUnit@cpuc.ca.gov

Re: Protest of the Vehicle Grid Integration Council to Advice Letter 6609-E of Pacific Gas and Electric Company

Dear Sir or Madam:

Pursuant to the provisions of General Order 96-B, the Vehicle Grid Integration Council (“VGIC”) hereby submits this Protest to the above-referenced Advice Letter 6609-E of Pacific Gas and Electric Company, (“PG&E”), *Modifications to PG&E’s Form 79-1174-02 (“Rule 21 Generator Interconnection Application”) Attachments to Incorporate an Exception Option to the Latest Smart Inverter Requirements for Interconnections Participating in the Emergency Load Reduction Program* submitted on May 31, 2022.

I. INTRODUCTION.

Decision (“D.”) 21-12-015 details several critical updates to the Emergency Load Reduction Program (“ELRP”) pilot, including expanding ELRP to include customer group A.5 for Electric Vehicle (“EV”)/Vehicle-Grid Integration (“VGI”) Aggregations. Notably, under D.21-12-015, customers may seek to interconnect Vehicle-to-Grid (“V2G”) Direct Current (“DC”) devices (i.e., where the inverter is in the charger) certified to UL 1741 – but not smart inverter supplements or functions – for the purposes of participating in ELRP. PG&E then filed Advice Letter (“AL”) 6543-E which, effective May 1, 2022, modified its Rule 21 tariff to accommodate the ELRP smart inverter exemption detailed as in D.21-12-015. In AL 6609-E, PG&E now requests to modify its Rule 21 Interconnection Application Form to accommodate customer requests to interconnect V2G DC devices that are exempt from UL 1741 SA or any future smart inverter supplements that may be required under Rule 21.

VGIC appreciates PG&E’s efforts to update the interconnection application to align with the smart inverter exemption as detailed in D.21-12-015 and AL 6543-E. Streamlined and clear processes for customer enrollment in ELRP, including during interconnection, is critical to supporting grid reliability, providing additional value for customers, and developing the broader VGI industry. However, in reviewing AL 6609-E, VGIC believes elements of PG&E’s proposed form are not well aligned with other Commission directions related to Rule 21. Specifically, the requirement that applicants provide the vehicle make, model, and year is inappropriate for both V2G DC and V2G Alternating Current (“AC”) (i.e., inverter is onboard the vehicle) configurations. VGIC thus

submits this Protest with this deficiency in mind and believes it can be remedied through the following changes:

- The following items should be removed from the form:
 - “Please provide Electric Vehicle details”
 - “Vehicle Make”
 - “Vehicle Model”
 - “EV Year”
- PG&E should continue to attend relevant meetings at Standards Development Organizations (“SDOs”), per D.20-09-035, to ensure any future proposed form revisions are in closer alignment with ongoing standards development work.

II. INTERCONNECTION OF V2G DC SYSTEMS

VGIC reiterates its appreciation and support for incorporating the ELRP smart inverter exemption into PG&E’s Interconnection Application Form rather than continuing to manage those requests “manually.”¹ However, customers seeking interconnection for V2G DC EV supply equipment (“EVSE”) should not be required to provide the vehicle make, model, and year, as suggested by the AL 6609-E. The device seeking interconnection is the EVSE, not the vehicle, and vehicle characteristics are not referenced anywhere in PG&E’s Rule 21. Moreover, the Commission has found explicitly in D.20-09-035 that “The existing Rule 21 tariff allows for V2G DC EVSE systems to be interconnected if the EVSE meets all Rule 21 requirements,” which clarifies that the EVSE is the relevant device for interconnection, not the EV.² Additionally, multiple vehicles may be discharging through a single interconnected V2G DC EVSE. Lastly, the exporting vehicle(s) may change over time as fleets or owners replace older vehicles with newer models, or the exporting capabilities of a given vehicle may change due to over-the-air (“OTA”) software updates. With this in mind, requiring vehicle make, model, and year information would not be useful to the utility (as it is the EVSE that must meet Rule 21 requirements), could be confusing to customers, and may lead to perceived limitations that do not exist (i.e., that customers need to re-apply for interconnection if the vehicle changes).

III. INTERCONNECTION OF V2G AC SYSTEMS.

VGIC commends PG&E for its attempt to future-proof its Interconnection Application Form by accommodating V2G AC systems. Currently, V2G AC pilots can seek interconnection under a temporary pathway as detailed in Resolution E-5196 approving Joint Advice Letters SDG&E

¹ Advice Letter 6609-E at 2.

² D.20-09-035 Finding of Fact 197.

<https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M347/K953/347953769.PDF>

3774-E, SCE 4510-E, and PG&E 6209-E (“Joint V2G Interconnection Advice Letter”). Therefore, VGIC understands PG&E’s intent to incorporate V2G AC systems into the Interconnection Application Form. However, the Joint V2G Interconnection Advice Letter does not list vehicle make, model, or year as necessary information that customers must provide as part of their interconnection application.³ Moreover, in a 2021 V2G AC workshop, PG&E detailed the following implementation process for V2G AC pilots, which does not indicate that customers must provide vehicle make, model, and year in their interconnection application:

Implementation Process- PGE

Customer Application Process	Customer Application Submittal	PG&E Application Review	Interconnection Agreement/PTO
1. Prepare Interconnection Request Package <ul style="list-style-type: none"> Identify projects as “Pilot” in the application form ex. “Customer Name - V2G-AC Pilot Project” Prepare Accurate and inclusive SLD (Service panel, EVSE, relays connection, etc.) Prepare 3-line diagrams showing all PTs and CT connections to relay Prepare Elementary Diagrams for relay and relevant Breaker Prepare relay Settings that align with requested generating facility operating mode <ul style="list-style-type: none"> Non-export options shall follow the limitation of Rule 21 section G and voltage and Frequency setting as outlined in R21 section H 	2. Submit the Interconnection Request Package <ul style="list-style-type: none"> Enter “Customer Name - V2G-AC Pilot Project” under Project name in ACE-IT portal Submit all info that has been prepared as part of the “Customer Application Preparation” Under the inverter listing section – utilize “Enter Manufacturer Not in List” option and then manually enter equipment info Ensure that inverter rating info is accurate and verify that it is consistent with the SLD Be responsive and timely on request for clarification to deficiency requests <p style="text-align: center;">ACE-IT Link: www.EGI-PGE.com</p>	3. Review Interconnection Request and all information provided <ul style="list-style-type: none"> Will determine if additional info/clarification is required through deficiencies notifications to the applicant via E-mail Will apply/review project against the applicable Rule 21 screens Will review and accept generating info documentation (SLD, relay settings, etc.) Will inform applicant of approval of documentation 	4. Interconnection Agreement Execution, Field Verifications and PTO <ul style="list-style-type: none"> Customer to execute applicable Interconnection agreements and provide relevant documentation Customer to provide Authority Having Jurisdiction (AHJ) final sign-off Customer to provide required Pre-Parallel Inspection (PPI) documents (All As-builts drawings, completed G5-1 Form, Field relay test report, relay settings files, etc.) PG&E to complete field verification/confirmation of equipment performance Issue Permission to Operate



AL 6609-E does not provide any justification for adding vehicle make, model, and year to the Interconnection Application Form. Moreover, as noted in Section II above, increased use of OTA updates suggests that a vehicle’s make, model, and year may not determine export capability and, therefore, will not be the most relevant information for interconnection purposes.

Meanwhile, SDOs are actively working to enable a permanent V2G AC interconnection pathway (i.e., to replace the temporary V2G AC pilots interconnection pathway that uses relays), for example, by developing UL 1741 SC in alignment with SAE J3072. As VGIC understands, in addition to the relevant standards, stakeholders are still considering interactions with Rule 21, the interconnection process, and related issues identified in the V2G AC Subgroup. For example, Rule

³ Joint Advice Letter SDG&E 3774-E, SCE 4510-E, PG&E 6209-E at 6. <https://tariff.sdge.com/tm2/pdf/3774-E.pdf>

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21 does not currently reference the applicable V2G AC standards that could facilitate full-scale V2G AC interconnection (including the in-development UL 741 SC). Stakeholders have not yet concluded precisely how the Interconnection Application Form may need to be revised. VGIC is concerned that PG&E's good faith attempt to prepare for a permanent V2G AC interconnection pathway may inadvertently create regulatory and process headwinds that could delay implementation once V2G AC systems are incorporated into the Rule 21 process following the completion of necessary standards development and stakeholder work.

Therefore, until the relevant standards and related issues are fully resolved, it is inappropriate to require that the vehicle make, model, and year be provided on Interconnection Application Forms. VGIC recommends PG&E remove the below phrases from the form, as it is not yet clear that this information will be needed for V2G AC interconnection (additionally, they are not relevant for V2G DC EVSE, as detailed above in Section II):

- "Please provide Electric Vehicle details"
- "Vehicle Make"
- "Vehicle Model"
- "EV Year"

Lastly, to ensure any future requested updates to the Interconnection Application Form or related interconnection processes are better aligned with ongoing standards development work, VGIC strongly encourages PG&E to attend relevant SDO meetings as required under D.20-09-035.⁴ In these early stages of V2G market development, PG&E and other utilities *must* remain closely engaged with standards development efforts to avoid prematurely implementing confusing, unnecessary, or unsupportive processes.

IV. **CONCLUSION.**

VGIC appreciates the opportunity to submit this Protest to the AL 6609-E. We look forward to collaborating with stakeholders on this important initiative.

Respectfully submitted,

/s/ Zach Woogen

Zach Woogen
Policy Specialist
Vehicle Grid Integration Council

⁴ D.20-09-035 at Conclusion of Law 76, Ordering Paragraph 54.
<https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M347/K953/347953769.PDF>

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cc: Sidney Bob Dietz II c/o Megan Lawson, PG&E (PGETariffs@pge.com)
Service list of R.20-11-003 and R.17-07-007.