

August 4, 2021

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Re: Response of the Vehicle-Grid Integration Council to Advice Letter 4542-E of Southern California Edison

Dear Sir or Madam:

Pursuant to the provisions of General Order 96-B, the Vehicle-Grid Integration Council (“VGIC”) hereby submits this response to the above-referenced Advice Letter 4542-E of Southern California Edison Company (“SCE”), *Request for Approval of Proposed Vehicle Grid Integration Pilots* (“Advice Letter”), submitted on July 15, 2021.

I. INTRODUCTION.

With the unanimous approval of Decision (“D.”) 20-12-029 on December 17, 2020, VGIC commended the Commission for implementing vehicle-grid integration (“VGI”) strategies pursuant to SB 676 and other VGI strategies deemed reasonable by the Commission. D. 20-12-029 (the “VGI Decision”) also strove to implement some of the primary recommendations and outcomes of the lengthy and resource-intensive VGI Working Group process, which produced a Final Report of the California Joint Agencies Vehicle-Grid Integration Working Group, as well as subsequent formal party comments on VGI issues. VGIC was generally pleased to see party recommendations referenced and adopted in D.20-12-029. VGIC was encouraged by Ordering Paragraphs (“OPs”) 13, 14, and 15 directing each investor-owned utility (“IOU”) to develop VGI pilots with stakeholder input.

Subsequently, each IOU, including SCE, presented high-level plans for VGI pilots pursuant to OP 14 during the March 16, 2021 VGI workshop. SCE sought feedback on its pilot concepts through that workshop discussion and subsequent calls with stakeholders, including several with VGIC. On June 4, 2021, a second VGI pilots workshop was held to share updated pilot concepts with additional detail, and feedback was solicited via an online survey. Stakeholders supported the timely identification of gaps in each pilot concept and recommended alternative approaches that may better support the goals of D. 20-12-029. VGIC appreciates the IOUs’ good faith efforts and flexibility during the workshop process and development of the proposals in their Advice Letters.

In reviewing SCE's Advice Letter, VGIC believes SCE's proposed VGI pilots represent a significant step toward more widespread VGI products and services which can benefit both EV and non-EV customers alike. It is also an encouraging reflection of stakeholder feedback provided over the last several years. VGIC is pleased to see that SCE remains open to various business models – an appropriate approach given the relatively nascent state of the market. Furthermore, the Advice Letter details proposals that we believe are necessary and not duplicative of other pilots and programs. The proposed VGI pilots are roughly consistent with the preliminary details shared previously by SCE.

Based on these factors, VGIC largely supports the Advice Letter as filed and believes it is generally aligned with the Commission's intent per OPs 13, 14, and 15. Moreover, these pilots are an important stepping stone toward the suite of full-scale VGI programs needed to cost-effectively decarbonize our economy as envisioned and required by Executive Order N-79-20, SB 350, ARB's in-progress 2022 Climate Change Scoping Plan, and SB 100. However, in this response, VGIC highlights several critical areas that could benefit from additional clarifications or revisions before final implementation by SCE. VGIC's primary concern is that the proposed VGI pilots, especially the Residential VGI pilot, would be used as an excuse to delay concurrent and parallel efforts to advance EV participation in demand response and resource adequacy programs until after the pilot is completed. Instead, we believe that the proposed VGI pilots can and should be pursued now, even while concurrent efforts seek to address remaining barriers in the demand response and resource adequacy programs. To this end, we strongly recommend that each pilot should include regular progress reports (e.g., every six months) that both provide preliminary findings and identify near term opportunities to scale each pilot effort, even prior to the pilot's conclusion. In addition, VGIC offers the following recommendations and conclusions:

- The unallocated portions of the previously authorized VGI pilot budget should be applied to 1) support an independent evaluator analysis of the pilot results on behalf of the Commission, and/or 2) to supplement PG&E's proposed pilot program activities at an increased scale.
- The proposed Residential VGI Pilot can and should be additive to (and not duplicative of) existing demand response programs implemented by SCE or currently available to EV customers. VGIC believes this is SCE's intent and additional clarifications in the Advice Letter can help ensure this.
- The proposed Residential VGI Pilot should be approved expeditiously to help mitigate California's pressing near- and mid-term reliability concerns, but should not preclude additional efforts to advance residential VGI before the conclusion of the pilot, for example through demand response or resource adequacy.
- The proposed Residential VGI Pilot timeline should remain flexible to allow for the potential incorporation of this approach into the upcoming demand response program cycle (including potential updates prior to the pilot's completion).

- The proposed Residential VGI Pilot should be updated to include a subset of customers for V2B (or V2G) configurations to address a gap SCE identified in its recent Low Carbon Fuel Standard Holdback Credit Revenue Implementation Plan Advice Letter 4518-E.
- The proposed Medium Duty / Heavy Duty Pilot should allow pilot participants to choose an infrastructure ownership option, rather than presupposing that the participants would prefer utility-owned infrastructure.
- SCE should remain agnostic toward technology, standards, and business models.
- SCE should clarify that these VGI Pilots will not be implemented as part of Charge Ready 2, and therefore would not be subject to the same requirements that apply to participants of CR2 programs (e.g., separate service drop for the EV load).
- The Advice Letter appears to mistakenly describe the Medium Duty / Heavy Duty Pilot by reusing language from the Residential VGI Pilot.

VGIC believes these issues can be resolved through minor revisions to SCE’s Advice Letter and that most of the contents of the AL are ready for Commission approval. In considering SCE’s proposed approach, it is important for the Commission to recognize that the proposed pilots are not intended to demonstrate the technical readiness of a specific VGI *technologies*. Many of the technical issues are well understood. Instead, they are geared towards piloting programmatic approaches for harnessing VGI technologies, including experimenting with customer incentive levels, marketing, education, outreach, and acquisition. The VGI pilots are notably an opportunity to explore industry coordination and control architecture through the simultaneous advancement of different business models for industry stakeholders, including technology providers, aggregators, service providers, and other vendors. With this in mind, VGIC stresses the criticality of ensuring any data and takeaways from the VGI pilots are accurately and fairly represented in interim and final reporting.

VGIC thus respectfully requests that 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, SCE, and other stakeholders to support addressing each issue in a timely manner.

II. DISCUSSION.

- A. The unallocated portions of the previously authorized VGI pilot budget should be applied to 1) support an independent evaluator analysis of the pilot results on behalf of the Commission, and/or 2) to supplement PG&E’s proposed pilot program activities at an increased scale.**

In reviewing the Advice Letter and PG&E’s concurrent Advice Letter 6259-E *Request for Approval of PG&E’s VGI Pilots in Compliance with Decision 20-12-029*, VGIC notes the total

requested budget from the two IOUs is \$28.7 million. This is \$6.3 million less than the \$35 million authorized in OP 14 of the VGI Decision and is primarily the result of SDG&E's choice to not submit an Advice Letter. During the development of these proposed pilots, VGIC expressed concerns over SDG&E's preliminary pilot concept and recommended that the portion of funds assumed for SDG&E¹ be repurposed. While SDG&E did follow our suggestion to not move forward with its pilot concept, the use of the remaining \$6.3 million in authorized pilot funds is still yet to be determined.

VGIC recommends two potential uses for this funding. First, a portion of these funds could be used to support an independent consultant to evaluate the VGI pilots on behalf of the Commission. Second, the funding could be used to supplement SCE's current proposals to ensure they achieve sufficient scale to be meaningful. Both of these options are described below:

1) Independent Evaluation of VGI Pilots

Both SCE's Advice Letter and PG&E's concurrent Advice Letter 6259-E explain that each VGI pilot will be reported on annually through the VGI reporting required by OP 1 of D.20-12-029, and final reports on each VGI pilot will be produced upon pilot completion. The SCE Advice Letter explains the need to collect data to inform cost-benefit analyses and highlights this as a primary objective for each pilot. SCE notes "to determine net value as a metric, SCE will use the framework developed by the VGIWG," referencing the 2019-2020 VGI Working Group.² The 2019-2020 VGI Working Group effort was a significant stakeholder effort that utilized a rudimentary framework to roughly assess relative customer costs across VGI use cases, and separately assess system benefits across VGI use cases. It is important to note that the framework did not accomplish any of the following: (1) directly compare costs and benefits, (2) consider utility program costs of promoting VGI use cases, and (3) consider benefits across various stakeholders. The VGI WG Final Report critically states:

"Since the scoring of use case costs and the ease and risk of implementation was relative, meaning that costs could not be compared with benefits, the Working Group was unable to arrive at any quantitative assessment of "net value"."³

As such, VGIC requests that SCE provide more detail on if and how it intends to modify this framework to achieve an assessment of "net value." Furthermore, the informal framework utilized by VGI WG participants assessed benefits and costs, but it is unclear from the Final Report if this is from the perspective of a customer, the grid, the program administrator, etc. VGIC believes that

¹ 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.

² Advice Letter Appendix A 31, Appendix B at 25, and Appendix C at 26.

³ *Final Report of the California Joint Agencies Vehicle-Grid Integration Working Group*. June 30, 2020. <https://gridworks.org/wp-content/uploads/2020/07/VGI-Working-Group-Final-Report-6.30.20.pdf> at 27.

customers should be able to make their own assessments on their costs and benefits, and that the SCE may not be well situated to fully understand the full range of customer costs and benefits, which may be hard to quantify. VGIC strongly recommends that the focus of cost-benefit analysis focus primarily on the cost-benefit ratio of the piloted program itself and the net benefit it can provide to the grid and ratepayers.

Overall, VGIC is generally supportive of these data collection efforts and agrees that in the long-term, full-scale programs should demonstrate reasonable cost-effectiveness. As such, the results of the VGI pilots are of great significance to VGI stakeholders and indeed could impact the future availability of VGI as a critical tool for both managing costs and enhancing the reliability of California's energy system.

The IOUs have expressed plans to coordinate on the development of an RFP for a third-party evaluator to assess IOUs' VGI efforts pursuant to OP 23. While this appears to be a sensible approach, in addition to this, VGIC strongly recommends that the CPUC hire its own consultant to serve as an independent evaluator on behalf of other non-utility stakeholders. This would be similar in nature to how the Commission has approached the Distribution Investment Deferral Framework process.⁴ A share of the unallocated portions of the \$35 million in authorized VGI pilot funding could be used for this purpose. Furthermore, VGIC recommends the third-party evaluation process include a Technical Review Committee that could help oversee the evaluation process conducted by the IOUs' evaluator. This Committee could be open to participation by the IOUs, the CPUC's hired consultant, and other key industry stakeholders.

This is especially critical with regards to any cost-benefit analysis done as part of this evaluation. In the event that the IOUs' evaluator determines that a pilot is not cost-effective or worth scaling into a larger program, then it is critical that other perspectives be included in the process. This is necessary to (a) verify the appropriateness of the evaluator's methodology and findings, (b) ensure appropriate context is provided on any limitations of the pilot as they were executed, and (c) ensure the evaluation fully captures steps that could improve future cost effectiveness.

This Technical Review Committee structure would also have the added benefit of providing a forum to share preliminary data and technical information prior to the completion of each pilot, thereby creating an opportunity to inform other policy developments.⁵ This is especially critical as VGIC's primary concern is that the proposed VGI pilots may delay concurrent efforts to advance VGI. In party comments on Implementation of VGI Strategies and SB 676, several parties cautioned about the risks of being trapped in "pilot valley." Additional VGI efforts, including increased EV participation in demand response programs, unlocking resource adequacy value streams for EVs,

⁴ As part of the Distribution Investment Deferral Framework, the three major IOUs produce a Grid Needs Assessment (GNA) and a Distribution Deferral Opportunity Report (DDOR). An Independent Evaluator has access to the relevant grid data and runs their own simulations to validate the IOUs' findings and provide additional feedback for the IOUs and non-utility stakeholders. *See* the Distribution Resource Planning proceeding R. 14-08-013.

⁵ For example, preliminary results from the VGI pilots could critically inform the development of transportation electrification plans, EV rate design, demand response applications, high DER OIR, microgrids and resiliency proceeding, streamlining interconnection of DERs proceeding, SGIP, NEM, and other DER policies.

and creating targeted programs to support V2G must not be put on hold until after the pilot is completed. VGIC strongly recommends the CPUC's hired consultant and Technical Review Committee ensure preliminary data and technical information is shared with relevant stakeholders contributing to these other policy development efforts.

2) Supplemental funding for PG&E's proposed VGI Pilots

In addition to supporting the evaluation process, some of the remaining funds could be used to supplement PG&E's proposed pilot budgets, thereby increasing the scale and level of effort that can be supported. VGIC believes that PG&E's pilots are ambitious in the sense that they each attempt to tackle multiple objectives using a limited budget. Thus, additional funding may be useful to ensure that all of these objectives are met.

B. The proposed Residential VGI Pilot is additive to and not duplicative of existing demand response programs implemented by SCE or currently available to EV customers.

VGIC supports SCE's proposed Residential VIG demand response pilot program. In doing so, VGIC is cognizant that there are other existing utility-administered demand response constructs that may be able to support EV participation, such as the Capacity Bidding Program and the Demand Response Auction Mechanism. As such, we understand that there may be some concern that SCE's proposal is somehow duplicative of or would "crowd out" other existing participation options. While VGIC is wary of these concerns, we believe SCE's proposal is sufficiently distinct from existing DR options that it warrants approval by the Commission at this time. There are several reasons why this is true. First, EV participation in existing demand response has been limited to date, suggesting that the existing DR constructs are not necessarily conducive to meaningful participation. Second, traditional DR models are generally focused on commercial and industrial building loads, whereas residential EVs represent a fundamentally different underlying load and customer type with unique features. Among these unique features are the ability to provide V2B and V2G capabilities, which most traditional DR resources cannot. SCE has expressed some interest in considering V2B and V2G as a subset of the Residential pilot. Third, within the traditional DR framework, there is still a significant gap in knowledge regarding EV baseline loads and unresolved issues regarding submetering protocols. Resolving both of these issues will be necessary in order for EVs to meaningfully participate in traditional DR frameworks, whereas the proposed pilots could present a near term pathway to allowing this participation. Fourth, VGIC supports an approach to conducting these VGI pilots such that they can be seamlessly "on-ramped" into utility DR portfolios. For example, we are hopeful that SCE can develop this pilot into a scaled up VGI program in its 2023-2027 DR portfolio, or that preliminary findings from the pilot can be leveraged to modify existing DR pathways to expand participation of EVs. Fifth, in light of Governor Newsom's July 30, 2021 Proclamation of a State of Emergency, it appears that there is broad support for new approaches to

supporting California’s reliability challenges.⁶ Rejecting a promising DR option that has substantial momentum and could significantly bolster grid reliability seems unwise at this time.

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C. The proposed Residential VGI Pilot should be approved expeditiously to help mitigate California’s pressing near- and mid-term reliability concerns, but should not preclude additional efforts to advance residential VGI before the conclusion of the pilot, for example through demand response or resource adequacy.

The proposed Residential VGI Pilot is a promising candidate to be scaled to full program implementation in the near-term. While existing pathways do exist for EV customers to participate in utility demand response (“DR”) programs, participation is currently limited because the unique needs of EV customers have not yet informed updates to these DR pathways. VGIC believes ironing out the unique attributes of large-scale VGI through a pilot is a prudent and necessary step to advancing large-scale VGI. Specifically, the pilot aims to resolve baselining issues that have surfaced in the past, as EV load is unlike traditional end-use electric loads. EV load can be peaky and relatively large (e.g., a single EV can double a residential customer’s load), yet inherently flexible without considerable incremental investments in retrofits or new equipment (e.g., especially compared to cooling and industrial loads). Therefore, it is important for baselines to be established for the myriad of VGI customer types to unlock VGI to support grid reliability.

Furthermore, the marketing of VGI to mass-scale customers is an under-explored domain in California and SCE’s anticipated 8,000 customer target would offer a strong and diverse customer base across which to pilot ME&O strategies. Specifically, various types of arrangements with third-party providers -- including automotive OEMs who are relative newcomers to the power sector -- should be explored, including using vehicle telematics and EVSE submetering to coordinate on charging signals, user interface, and settlement.

VGIC notes that EVs can also be used in bidirectional configuration under existing interconnection Rule 21⁷, an application which currently has no feasible compensation pathway under existing DR or other pathways.⁸ These bidirectional configurations, which could be leveraged to provide V2H/V2B backup power, bill management, or V2G value streams, should be supported

⁶ Governor Gavin Newsom, Executive Department, State of California. *Proclamation of a State of Emergency*. July 30, 2021. <https://www.gov.ca.gov/wp-content/uploads/2021/07/Energy-Emergency-Proc-7-30-21.pdf>

⁷ Bidirectional EV supply equipment can interconnect under Rule 21. The IOUs have also developed a pathway for V2G Alternating Current (“V2G AC”) pilots to interconnect.

⁸ SCE and PG&E have indicated through supplementary advice letters that they intend to enroll Rule 21 exporting DERs in the new Emergency Load Reduction Program. However, it is unlikely that the infrequent nature of ELRP events and the low ELRP compensation rate would meaningfully support a business case for V2G configurations.

to a limited extent through SCE’s proposed pilot.⁹ VGIC details this recommendation further in Section II.E below.

Given the incoming wave of VGI technology deployment, it is important that IOUs, VGI providers, and other stakeholders use SCE’s proposed Residential VGI pilot as a forum to surface and resolve key issues. The proposed VGI pilot framework is ideal for this learning process, which has garnered significant attention and investment from the EV stakeholder community. Any delay of this approach could present a setback for mass-market deployment of VGI solutions for several years.

Furthermore, California is facing immediate reliability concerns in the face of increased extreme weather events and planned fossil fuel generating capacity retirements. The \$8.04 million Residential VGI pilot can provide critical load reduction from ever-growing EV load to help mitigate summer peaks. VGIC believes the proposed pilot constitutes a prudent approach to advancing VGI and failing to approve such a pilot would be a risky strategy at a time when California needs an all-of-the-above approach to reign in reliability concerns.

With this in mind, VGIC reiterates that the Residential VGI Pilot implementation should not preclude additional efforts to advance residential VGI before the conclusion of the pilot, for example through demand response or resource adequacy policy forums. To the extent an all-of-the-above approach is needed – as indicated by Governor’s Newsom July 30th Emergency Proclamation – SCE, the Commission, Energy Division staff, and all other EV stakeholders should continue to advance the participation of EVs in demand response programs and other VGI strategies concurrent with pilot implementation. The VGI pilots should be viewed as a source of data to inform policy development, rather than a clock by which stakeholders must sit idly while awaiting final results to further advance VGI.

D. The proposed Residential VGI Pilot implementation timeline should remain flexible to allow for the potential incorporation of this approach into the upcoming demand response program cycle .

VGIC supports SCE’s proposed pilot planning and execution timeline because it closely tracks the timeline for the next DR application cycle. Key issues should be resolved through this pilot in advance of full scale program implementation. Moreover, VGIC supports the ultimate ramp-up of this pilot in a full-scale DR program which we anticipate could included in the 2023-2027 DR cycle. However, we also recognize the possibility that the development and implementation of a

⁹ This depends on the results of the proposed RFI, but VGIC believes it is likely to be found cost-effective on a programmatic level.

full-scale DR program would not be possible until after SCE has filed its DR portfolio application in November 2021. As such, we encourage SCE and the Commission to consider options for “on-ramping” EV related DR programs (such as those similar to SCE’s pilot) after the initial application has been filed.

E. The proposed Residential VGI Pilot should include a subset of customers with V2B/V2G configurations. This could also compensate for gaps in the recent LCFS Holdback Credit Revenue Implementation Plan Advice Letter 4518-E.

VGIC commends SCE for proposing a large-scale pilot focused on considering multiple aggregator business models, technologies, control architectures, and value stacking, and that directs a large majority of funds to experimental customer incentives. VGIC believes that enabling bidirectional VGI¹⁰ offers a clear value stacking opportunity, and notes that while V1G price signals have been tested with customers before, for example via SDG&E’s PYD VGI Rate, a bidirectional price signal has never been offered to EV customers in California.¹¹ VGIC strongly recommends that SCE’s implementation of the Residential VGI pilot target a subset of customers (e.g., 500 customers) for bidirectional configurations. This will allow for the direct comparison of pilot performance (both resource availability and customer acquisition/experience) between V1G and bidirectional customers.

By way of background, SCE recently filed its Low Carbon Fuel Standard (LCFS) holdback credit revenue implementation plan Advice Letter 4518-E, which explains that mid-term resiliency projects using V2B or V2G activities to leverage EVs as a resiliency energy source is a “longer-term opportunity.”¹² In Advice Letter 4518-E SCE states, “As part of the recent VGI decision, the IOUs will be proposing pilots and studies to help inform some of the questions in [the V2B and V2G] space and may consider utilizing LCFS holdback credit proceeds for appropriate activities.”¹³ VGIC

¹⁰ Referred to as V2B, V2H, V2X, V2M, or V2G depending on the configuration.

¹¹ See, for example, *Power Your Drive Research Report*. April 16, 2021.

<https://www.sdge.com/sites/default/files/regulatory/SDG&E%20FINAL%20Power%20Your%20Drive%20Research%20Report%20April%202021.pdf>. Note SCE and PG&E have indicated through supplementary advice letters that they intend to enroll Rule 21 exporting DERs in the new Emergency Load Reduction Program. However, it is unlikely that the infrequent nature of ELRP events and the low ELRP compensation rate would meaningfully support a business case for V2G configurations.

¹² *Southern California Edison Company’s Request for an Exemption to Public Utilities Code Section 851 and Implementation Plan for Programs and Projects Funded with Low Carbon Fuel Standard Holdback Residential Base Charging Credit and Electric Forklift Credit Proceeds*. June 15, 2021. https://library.sce.com/content/dam/sce-doelib/public/regulatory/filings/pending/electric/ELECTRIC_4518-E.pdf at 68.

¹³ *Southern California Edison Company’s Request for an Exemption to Public Utilities Code Section 851 and Implementation Plan for Programs and Projects Funded with Low Carbon Fuel Standard Holdback Residential Base Charging Credit and Electric Forklift Credit Proceeds*. June 15, 2021. https://library.sce.com/content/dam/sce-doelib/public/regulatory/filings/pending/electric/ELECTRIC_4518-E.pdf at 68.

submitted a response on July 5, 2021, contesting the assertion that V2B and V2G activities are “longer-term,” and recommending that SCE accelerate the use of LCFS holdback credit revenue for V2B and V2G activities,¹⁴ rather than place unspent parts of the 20% annual LFS holdback proceeds into a reserve fund for later use.¹⁵ On July 13, 2021, SCE circulated its Reply to Party Responses to Advice Letter 4518-E.¹⁶ In Reply to VGIC’s recommendation that LCFS holdback credit revenue be used to support a more expansive portfolio of V2B deployments in the immediate future, SCE indicated they would direct LCFS holdback credit revenue to support VGI pilots.¹⁷ This is confirmed in its VGI Pilots Advice Letter, as SCE states:

“SCE will use its LCFS holdback credit revenues, if available, to help SCE offset relevant VGI pilot costs that SCE would otherwise seek to recover from customers. SCE will not recover from customers any of the costs covered by its LCFS holdback credit revenues.”¹⁸

While SCE plainly addresses the use of LCFS holdback credit revenue to offset customer costs, it does not explain specifically how the LCFS holdback credit revenues would meaningfully support expanded piloting of bidirectional applications in the present Advice Letter addressing VGI Pilots. VGIC believes use of both VGI pilot funds and LCFS holdback revenue to support V2B applications is consistent with OP 1 of D. 20-12-027 (the “LCFS Holdback Revenue Decision”) and the Commission’s adoption of backup power as a VGI strategy. As such, we recommend that the SCE VGI Pilot proposal be revised to sufficiently address how LCFS holdback credit revenues – beyond those specified in Advice Letter 4518-E – could be used to supplement SCE’s V2B pilot proposals in support of resiliency.

SCE’s VGI Pilots Advice Letter does contain proposals for MD/HD and DER VGI Pilots that leverage bidirectional VGI, however, the target customer segments, pilot objectives, and proposed budget for these pilots differ from the proposed Residential VGI Pilot. One solution to addressing some of the current gaps in SCE’s proposal would be to apply LCFS resilience funding to supplement the residential DR pilot such that V2B solutions were included as a subset of the overall pilot. It would be a missed opportunity if the incentive structures, customer ME&O, and other program design set to be piloted are limited to V1G applications. VGIC recommends that SCE take steps to clarify its intent to incorporate bidirectionality in the Residential VGI pilot, including

¹⁴ Note Advice Letter 4518-E does propose to provide limited funding for a V2B project with Baldwin Park Unified School District project. *See* Advice Letter 4518-E at 67.

¹⁵ *Response of the Vehicle-Grid Integration Council to Advice Letter 4518-E of Southern California Edison*. July 5, 2021.

<https://static1.squarespace.com/static/5dcde7af8ed96b403d8aeb70/t/60e5c5ce89a2b31fee8890f0/1625671118584/2021-07-05+VGIC%27s+Response+to+SCE+LCFS+Holdback+Implementation+Plan.pdf>

¹⁶ *Reply to Party Response to Advice 4518-E, Southern California Edison Company’s Request for an Exemption to Public Utilities Code Section 851 and Implementation Plan for Programs and Projects Funded with Low Carbon Fuel Standard Holdback Residential Base Charging Credit and Electric Forklift Credit Proceeds*. July 13, 2021.

¹⁷ *Id.* at 3.

¹⁸ Advice Letter Appendix A at 21, Appendix B at 14, and Appendix C at 15.

replacing references to the “V1G Pilot” with the more configuration-agnostic “Residential VGI Pilot” name.¹⁹

F. The proposed MD/HD Pilot should allow pilot participants to choose an infrastructure ownership option, rather than presupposing that the participants would prefer utility-owned infrastructure.

VGIC is generally supportive of the proposed MD/HD pilot and its targeting of non-transit and non-school bus MD/HD operators. In the Pilot Proposal section on IOU ownership of infrastructure, SCE proposes to own the infrastructure from the service meter to the EV chargers and from the battery to the building to provide resiliency services. The Advice Letter notes:

“Utility-ownership is important to overcome potential participation barriers for customers, minimizing the effort need by them on labor such as developing infrastructure requirements, searching for contractors, negotiations, and contract development. As a one-stop-shop for these services, it is anticipated that it will be easier to find participants in the MD/HD Pilot.”²⁰

VGIC believes that it is important to remove barriers for customers, but recommends SCE modify the proposed MD/HD Pilot to allow pilot participants to choose an infrastructure ownership option, rather than presupposing that the participants would prefer utility-owned infrastructure. Vehicle duty cycles, vehicle dwell times, building load, and other customer needs vary between different customer types, and perhaps more so across different commercial customers in the MD/HD sector. Therefore, VGIC recommends that a better approach to make it easier for SCE to find participants is to provide customers with various options for infrastructure ownership, ranging from fully customer-owned, to partially utility-owned, to fully utility-owned.

G. SCE should remain agnostic toward technology, standards, and business models.

In Section IV(A)(iii) of each pilot,²¹ SCE lists the technologies to be used. VGIC believes that SCE should use a range of pathways and technologies that are available in the EV market, not all of which are listed in the Advice Letter. VGIC recommends SCE remain agnostic toward technology, standards, and business models in recognition of the nascent state of the VGI market, and the need to simultaneously explore different communication and control architectures.

¹⁹ See, for example, Advice Letter at 17 for an instance when both titles are used to describe the Residential VGI Pilot.

²⁰ MD/HD Pilot at page 15.

²¹ Advice Letter Appendix A at 12, Appendix B at 8, and Appendix C at 9.

H. SCE should clarify that the proposed VGI pilots will not be implemented as part of Charge Ready 2, and therefore would not be subject to the requirement that each customer receive a separate service drop for EV load.

The Advice Letter suggests but does not explicitly state that the VGI pilots will be implemented and marketed to customers as a standalone effort. VGIC respectfully request SCE confirm this is the case, and specifically clarify that the proposed VGI pilots will not be implemented as part of Charge Ready 2. VGIC is concerned that, if implemented as part of Charge Ready 2, the VGI pilots would be subject to the provisions of Charge Ready 2 that place EV load on a separate service drop, which would significantly hinder the ability to leverage these EVs for VGI applications, thereby undercutting the core purpose of the VGI pilots. As such, VGIC recommends SCE clarify that the proposed VGI pilots will not be implemented as part of Charge Ready 2, and therefore would not be subject to the requirement that each customer receive a separate service drop for EV load.

I. The Advice Letter appears to mistakenly describe the MD/HD Pilot by reusing language from the Residential VGI Pilot.

VGIC appreciates SCE's detailed Advice Letter and overall adherence to the Energy Division's standardized advice letter template. However, we note that there appears to be several sections of the MD/HD Pilot description where SCE may have inadvertently copied language from the Residential VGI Pilot. For example, the Timeline sections of each pilot appear to be identical. In other instances, such as the "definitions for budget items" for the MD/HD pilot, SCE lists costs for aggregators. However, the proposed MD/HD pilot does not explain how aggregators would be used. VGIC recommends SCE closely review the document against its internal proposal and address these copy errors.

III. CONCLUSION.

VGIC appreciates the opportunity to submit this response to SCE's Advice Letter. We look 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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