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RE: Draft Resolution E-5167. Approves, with modifications, the requests from Pacific Gas & Electric Company (“PG&E”), Southern California Edison Company (“SCE”), and San Diego Gas & Electric Company (“SDG&E”) to establish new Electric Vehicle (“EV”) Infrastructure Rules and associated Memorandum Accounts, pursuant to Assembly Bill (“AB”) 841 (Ting, 2020).

Dear Sir or Madam,

Pursuant to Rule 14.5 of the Rules of Practice and Procedure of the California Public Utilities Commission (“Commission”) and the Comment Letter accompanying Draft Resolution E-5167 (“Draft Resolution”), the Vehicle Grid Integration Council (“VGIC”) respectfully comments on the proposed approval of the new EV Infrastructure Rules.

I. OVERVIEW

VGIC appreciates the opportunity to provide comments on the proposed approval of the new EV Infrastructure Rules. While the Draft Resolution is encouraging, and VGIC is generally supportive of its adoption, we believe it can and should be modified to strengthen the proposed approach to load management. As written, the Draft Resolution provides no meaningful assurance that load management solutions will be maximized to ensure EV infrastructure is deployed cost effectively and minimizes the burden on ratepayers. VGIC is concerned that the Draft Resolution does not adequately support meaningful, voluntary load management solutions that could benefit both EV and non-EV customers alike. With this in mind, VGIC strongly urges that the Commission modify the Draft Resolution to direct clear and detailed next steps to advance VGI strategies, including Automated Load Management (“ALM”), within the EV Infrastructure Rules that align with the intent and directions of D.20-12-029. VGIC’s comments are summarized below:

- Unless the Commission establishes a new method for incentivizing customers to pursue ALM solutions (if the customer is willing and able based on their charging needs), it will essentially be abandoning one of its best tools for managing EV infrastructure costs and minimizing ratepayer burden.
- There is broad alignment on this issue, and VGIC addresses other parties’ positions on VGIC’s proposed ALM approach.

- VGIC strongly recommends the Commission establish a robust follow-up process to this resolution for developing and implementing ALM solutions as a means to manage EV infrastructure costs going forward
- VGIC recommends the Commission modify the draft resolution to acknowledge and define Automated Load Management
- It is critical that the EV infrastructure rules do not arbitrarily push customers toward requiring a separate service or meter, as separating EV from site load obstructs implementation of VGI strategies per D.20-12-029
- VGIC proposes specific language changes to the Draft Resolution provided in an Appendix to these comments.

II. BACKGROUND

On January 15, 2021, the Commission issued an Assigned Commissioner’s Ruling (“ACR”) regarding the implementation of AB 841. On that same day, VGIC served joint comments on ALM workshop questions with Environmental Defense Fund, Enel X, Nuvve, Siemens, Greenlots, Advanced Energy Economy, and Natural Resources Defense Council.¹ On January 29, 2021 the Commission hosted the Automated Load Management solutions workshop that the IOUs participated in, as directed by D.20-12-029, which included presentations and proposals from several stakeholders including VGIC. On February 5, 2021 and February 19, 2021, VGIC and other parties submitted opening and reply comments addressing fundamental issues related to the implementation of AB 841. Subsequently, on February 26, 2021, PG&E, SCE, and SDG&E (collectively, the “IOUs”), filed Advice Letters 6102-E, 4429-E, and 3705-E requesting approval of proposed EV Infrastructure Rules and AB 841 Memorandum Accounts. On March 18, 2021, VGIC filed a response to each Advice Letter that highlighted the lack of compliance with Ordering Paragraph (“OP”) 5 of Decision (“D.”) 20-12-029. On June 16, VGIC sent a letter on behalf of a broad coalition of VGI stakeholders to the Commission and Energy Division staff recommending key next steps to enable ALM.²

Under the proposed new EV Infrastructure rules (which do not consider ALM in accordance with OP 5 D.20-12-029), California ratepayers are poised to start spending hundreds of millions of dollars on new EV infrastructure, without sufficient time for the Commission to consider options for managing these costs. We believe ALM is a critical solution in this regard and could be broadly integrated into future EV infrastructure deployment. However, this must be

¹ Joint Comments on ALM Workshop Questions

² VGI stakeholder letter re Enabling ALM to the CPUC, signed by Advanced Energy Economy, AMPLY Power, Inc., California Energy Storage Alliance, Enel X North America, Inc., Greenlots, Mobility House, Nuvve, Powerflex, Siemens, VGIC, and Veloce Energy. June 16, 2021.

<https://static1.squarespace.com/static/5dcde7af8ed96b403d8aeb70/t/60d2dbd25b043e4141b16164/1624431572513/Enabling+ALM+-+Stakeholder+Letter+to+CPUC.pdf>

done thoughtfully so that it does not present an added burden to potential EV customers, and instead maximizes benefit to both EV and non-EV customers alike.

III. UNLESS THE COMMISSION ESTABLISHES A NEW METHOD FOR INCENTIVIZING CUSTOMERS TO PURSUE ALM SOLUTIONS (WHERE AND WHEN IT MAKES SENSE), IT WILL ESSENTIALLY BE ABANDONING ONE OF ITS BEST TOOLS FOR MANAGING EV INFRASTRUCTURE COSTS

ALM can be defined broadly as a system designed to manage charging capacity strategically among multiple electric vehicle supply equipment (“EVSE”) at a site. ALM is one of the best tools available for the IOUs (under the Commission’s oversight) to manage utility distribution system costs related to EV charging infrastructure buildout. ALM can support more charging ports for the same amount of dollars, thus stretching investment dollars further and faster towards meeting California’s transportation electrification goals. ALM can allow chargers to be deployed across a broader set of locations where there may be physical limitations. It can also help avoid distribution system costs altogether when installing new charging stations. Given the scale of investment needed to meet California’s TE goals, it’s critical for the Commission to explore all options for helping to manage these costs for the benefit of ratepayers. PG&E has successfully shown that significant savings from ALM solutions in many cases arise from utility-side distribution system upgrades, rather than customer-side costs.³

The Draft Resolution notes that AEE, SDG&E, and NRDC all argued that customers will still have an incentive to pursue ALM to manage costs behind-the-meter make-ready costs. However, it is VGIC’s understanding from conversations with utilities that the savings from avoiding in-front-of-the-meter costs (e.g., deferred transformer upgrades) are in fact the largest and most significant potential benefit of ALM.

Meanwhile, the Draft Resolution seeks to remove customer cost responsibility for these types of distribution system upgrades, for at least 2 years and potentially longer. VGIC supports this as a means to remove customer barriers to transportation electrification. However, this also has the unintended consequence of disincentivizing ALM, which VGIC does not support and needs to be addressed in the final Resolution. By implementing AB 841 through the approach proposed in the Draft Resolution (which VGIC generally supports), the Commission will be eliminating a large portion of the rationale for customers to pursue ALM, which would otherwise benefit all ratepayers. This deficiency can and should be addressed through targeted modifications to the Draft Resolution language.

To its credit, PG&E has expressed its intent to scale up its use of ALM solutions through TE programs, however the details of this remain to be seen. Additionally, it is not clear how PG&E would pursue ALM outside of TE programs (i.e., under the proposed new EV

³ See PG&E’s Panel presentation at the January 29, 2021 workshop on ALM pursuant to D. 20-12-029. See also Appendix D of D2012029, <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M356/K212/356212163.pdf>

Infrastructure Rule). Meanwhile, SCE and SDG&E have recently demonstrated through advice letter processes an unwillingness to meaningfully support incremental ALM solutions through their TE programs that could help manage utility-side distribution system costs.⁴ Notably, this unwillingness came *after* OP 5 of D.20-12-029 directed SCE, SDG&E, and PG&E to meaningfully incorporate ALM into all future rules and tariffs in accordance with Finding of Fact (“FOF”) 13 and Conclusion of Law (“COL”) 18 of D.20-12-029:

“SCE, SDG&E, and PG&E shall, each, in all of its future applications for TE programs, or rule or tariff to support TE infrastructure installation:

identify how it will deploy customer-side ALM at host sites through such programs, rule, and/or tariff where appropriate because this technology will support TE installation at equal or lesser costs than hardware-based electrical capacity while meeting TE charging needs; and

describe its standard evaluation criteria to determine host sites where ALM would benefit ratepayers by reducing costs while meeting host site needs for electric vehicle charging.”⁵

VGIC was encouraged by OP 5 of D.20-12-029 and the focus on ALM as a VGI strategy to mitigate utility distribution system costs, and presented its proposed concept for enabling ALM during the January 29, 2021 ALM workshop. However, the IOUs’ deficiency in implementing OP 5 has led to growing concern among a broad range of stakeholders.⁶

Based on these facts, VGIC questions whether a robust approach towards ALM solutions for utility-side costs will occur as EV infrastructure is deployed – especially under the proposed approach which would grant a waiver to customer cost contributions for at least 2 years and possibly longer. Unless the Commission establishes a new method for incentivizing customers to pursue ALM solutions (if the customer is willing and able based on their charging needs), it will essentially be abandoning one of its best tools for managing EV infrastructure costs. For these reasons, VGIC strongly encourages the Commission to include in this resolution a robust follow up process to develop and ultimately implement an approach to encouraging ALM. We believe a sensible approach could involve a simple incentive-based approach that would share some of the benefits of ALM with the customers implementing it, while passing most of these savings on to all utility customers. This would be no different than the long-standing approach the Commission has taken towards cost-effective energy efficiency measures as a means to keep utility customer bills low.

⁴ See, for example, *SDG&E Advice Letter 3811-E ALM / Energy Management Systems Plan for the Power Your Drive Extension Program in Compliance with D.21-04-014*. See also, *Reply to VGIC’s Protest to SCE’s Advice 4438-E*.

⁵ D.20-12-029, OP 5.

⁶ See, for example, VGI stakeholder letter re Enabling ALM to the CPUC, signed by Advanced Energy Economy, AMPLY Power, Inc., California Energy Storage Alliance, Enel X North America, Inc., Greenlots, Mobility House, Nuvve, Powerflex, Siemens, VGIC, and Veloce Energy. June 16, 2021. <https://static1.squarespace.com/static/5dcde7af8ed96b403d8aeb70/t/60d2dbd25b043e4141b16164/1624431572513/Enabling+ALM+-+Stakeholder+Letter+to+CPUC.pdf>

IV. RESPONSE TO OTHER PARTIES' POSITIONS ON VGIC'S PROPOSED ALM APPROACH

The Draft Resolution acknowledges VGIC's preliminary proposal for incentive-based approach to encouraging ALM under an AB 841 implementation scheme that waives customer contributions (like what the Draft Resolution proposes). The Draft Resolution states that several parties critiqued this approach including TURN, who "argues that any costs for ALM be borne by applicants not ratepayers" and PCE who argues that "the proposal still has many outstanding questions." Regarding TURN's critique, VGIC notes that our proposal is intended to yield a net benefit to ratepayers (not a cost). VGIC has also subsequently met with TURN to provide greater clarity and TURN has expressed some willingness to consider this approach if additional details can be spelled out through a subsequent process. Regarding PCE's critique, VGIC agrees that there are outstanding questions about our proposal which is why we proposed additional process. We also note that PCE has touted the benefits of ALM, and the inherent incentive it has received under the pre-841 paradigm by avoiding utility-side infrastructure costs.

V. VGIC STRONGLY RECOMMENDS THE COMMISSION ESTABLISH A ROBUST FOLLOW-UP PROCESS TO THIS RESOLUTION FOR DEVELOPING AND IMPLEMENTING ALM SOLUTIONS AS A MEANS TO MANAGE EV INFRASTRUCTURE COSTS GOING FORWARD

As detailed above, unless the Commission sets forth a subsequent process to advance ALM solutions, the Commission's resolution will effectively eliminate a large portion of the existing rationale for EV customers to pursue ALM, which would otherwise benefit all customers. VGIC also notes that previous efforts to advance ALM through D.20-12-029 and the January 29, 2021 ALM workshop have been unsuccessful to date.

VGIC strongly encourages the Commission to ensure the Final Resolution establishes a robust follow-up process to develop and implement a method for incentivizing ALM solutions. Specifically, VGIC recommends the Commission modify the Draft Resolution to direct the Energy Division staff to host two workshops to collect party proposals for how to incentivize the use of ALM to reduce EV infrastructure costs during the 2-year waiver, period (and any subsequent period that includes an extended waiver or substantial allowances). Given the relative complexity of solutions presented by stakeholders in the past, and as detailed in Section IV above, VGIC believes that more stakeholder work is needed to further develop ALM concepts. A single IOU-led workshop and subsequent proposal will likely be insufficient to simultaneously fulfill the vision of both AB 841 and SB 676, while managing system costs. As such, VGIC recommends the Energy Division staff host a workshop within two months and another within five months. Notice of each workshop should be served to the service lists of R.18-12-006 and R.21-06-017. VGIC also recommends the Energy Division staff enter into the record of R.18-12-006 a brief report summarizing the party proposals prior to the workshop ordered by Draft

Resolution OP 5 (i.e., within eight months). This additional stakeholder work and record development will critically inform the workshop ordered by Draft Resolution OP 5.

VI. VGIC RECOMMENDS THE COMMISSION MODIFY THE DRAFT RESOLUTION TO ACKNOWLEDGE AND DEFINE AUTOMATED LOAD MANAGEMENT

ALM can be utilized for different use cases, or to capture different value streams. Notably, SCE has detailed a distinction between “Type 1” and “Type 2” ALM, explaining that Type 1 ALM relates to load management at an EV supply equipment (EVSE) site where there is no constraint to service (i.e., maximum connected EVSE load does not exceed site capacity).⁷ This is implemented throughout California today as a strategy for customers to manage their utility bills in response to Time-of-Use rates, for example. SCE defines Type 2 ALM as “energy management systems in which the connected load exceeds capacity, and the failure of such ALM would lead to an unsafe condition.”⁸ SCE notes that “Type 2 ALM could have a potential for significant cost reduction and avoidance of major construction or upgrades by utilizing the existing capacity to the largest extent.”⁹

VGIC supports this key distinction between situations in which the maximum connected load is less than site capacity (Type 1 ALM) and situations in which the maximum connected load exceeds site capacity (Type 2 ALM). In seeking clarity and considering recommendations for strategies to promote Type 2 ALM, additional definitions of ALM “subtypes” are also necessary to capture the differences between when the maximum connected load exceeds service capacity versus customer electric panel size. **Type 2A ALM** should be used to describe situations in which maximum connected load exceeds site capacity, and customers have an inherent incentive to use load management to save on customer-side costs (e.g., panel upgrades). To our knowledge, this is done today at several sites in California to save customers costs on panel upgrades. Meanwhile, **Type 2B ALM** should be used to describe situations in which maximum connected load exceeds site capacity, and the use of load management is incentivized as a means to reduce utility-side costs (e.g., service drop or transformer upgrades). PG&E has reported on their efforts to implement Type 2B ALM as part of its EV Charge Network program.

In their recent advice letters described above, the IOUs have pointed to the existence of Type 1 ALM as a reason not to pursue incremental Type 2 ALM. However, Type 2 ALM stands to provide substantially greater benefits to all customers. VGIC recommends that the Draft Resolution be modified to include a definition for ALM that includes the Type 1, Type 2a, and

⁷ SCE, *Presentation on Transportation Electrification, Charging Infrastructure Programs, Energy Management Systems*, presented at EPRI IWC on March 20, 2019. See also *Reply to The Vehicle-Grid Integration Council’s Protest to Southern California Edison Company’s Advice 4439-E*. April 8, 2021. Page 2.

⁸ *Ibid.*

⁹ *Ibid.*

Type 2b distinctions. We further recommend that the IOUs be required to include a definition that also defines each of these subtypes within their EV Infrastructure Rules.

VII. CALIFORNIA BUILDING CODE AGENCIES HAVE RECENTLY PROPOSED UPDATED RULES TO ALLOW AUTOMATED LOAD MANAGEMENT AS A CODE COMPLIANCE OPTION

Several California state agencies recently submitted proposed actions (code changes) that are intended for inclusion in the 2022 California Building Standards Code, Title 24, scheduled for publication in July 2022 with an effective date of January 2023.¹⁰ These agencies include the Building Standards Commission (BSC), the Division of State Architect, and the Department of Housing and Community Development. In each of these proposed building code revisions, the agencies have proposed new language regarding the definition and use of automatic load management systems. For example, in the BSC proposed changes, section 5.106.5.3.3 describes how the use of automatic load management systems can allow the minimum required amperage for EV charging spaces to be reduced from 40 amperes to 30 amperes.¹¹ This demonstrates that ALM is being pursued by other California decision-makers as a viable option to reduce demand on the power system. However, such efforts will be less effective if there is a reduced customer incentive to pursue them.

VIII. IT IS CRITICAL THAT THE EV INFRASTRUCTURE RULES DO NOT ARBITRARILY PUSH CUSTOMERS TOWARD REQUIRING A SEPARATE SERVICE OR METER, AS SEPARATING EV FROM SITE LOAD OBSTRUCTS IMPLEMENTATION OF VGI STRATEGIES PER D.20-12-029

As VGIC understands, the proposed EV Infrastructure Rules apply to customers receiving EV service separately from their existing service. While some customers may ultimately require a separate service drop, VGIC believes this may only represent a fraction of locations if load management solutions are effectively leveraged. VGIC notes the importance of comingling EV and site load as a means to develop a meaningful baseline for demand response participation and providing load against which bidirectional EV/EVSE configurations can offset.

To the extent that the EV infrastructure rules eliminate customer costs for this separate service, they may also unintentionally push customers towards a charging solution that would effectively eliminate EV demand response participation options. This would be counterproductive

¹⁰ <https://www.dgs.ca.gov/BSC/Rulemaking/2021-Triennial-Code-Adoption-Cycle/2021-Public-comments/ACCESS-GREEN-Public-Comment-Page-2021>

¹¹ <https://www.dgs.ca.gov/-/media/Divisions/BSC/03-Rulemaking/2021-Triennial-Cycle/2021-Public-Comment-Periods/2021-ACCESS-Public-Comment/BSC/BSC-03-21-ET-PT11-45day.docx?la=en&hash=70E74AE5D10B2EAF44D71A3BB03971680DC8ACAF>

August 25, 2021



California's current grid reliability issues and efforts under way to address extreme summer weather events as part of the Emergency Reliability Rulemaking (R. 20-11-003).

As such, VGIC strongly recommends that the Commission should take bold action in other proceedings and in the future to advance TE rules, tariffs, applications, frameworks, and plans (i.e., the Draft TEF) that enable comingled EV and site load, including the use of submetering via EVSE or EV telematics to measure consumption and discharging for settlement purposes. This is key to unlocking VGI and fulfilling the vision of SB 676 and VGI strategies adopted in D.20-12-029.

IX. CONCLUSION

VGIC appreciates the opportunity to submit these comments and looks forward to working with the Commission and stakeholders.

Respectfully submitted,

/s/ Ed Burgess

Ed Burgess

Senior Policy Director

Vehicle-Grid Integration Council

Date: August 25, 2021

Appendix A: Proposed Redline Edits to Draft Resolution

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13. Offering of Load Management Tools

The IOUs' proposals to not include load management as a condition of taking advantage of the new EV Infrastructure Rules is reasonable at this time. However, IOUs shall offer and discuss with each applicant available IOU and third-party load management solutions including load management solutions that could defer utility-side infrastructure costs.

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The IOUs within their Tier 2 AL should outline which load management solutions they will offer applicants and how they plan to update this list over time. This list should include not only Type 1, but also Type 2b load management solutions. It should also include a detailed description of how the IOUs plan to incentivize customers to adopt Type 2b ALM while the 2 year waiver (and any future allowances) is in effect.

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14. Enrollment in a Time-Variant Rate

SDG&E's proposal to require applicants to be enrolled on a TOU rate is reasonable and should be applied to all of the IOUs' EV Infrastructure Rules. TOU rates should not be considered a substitute for other types of load management solutions, including Type 2b.

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Order Paragraph 3:

e. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company must each modify the definition of electric vehicle within the Electric Vehicle Infrastructure Rules to include the same referenced definition of electric vehicles from Decision (D.) 20-09-025.

f. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company must each include a definition for load management

within the Electric Vehicle Infrastructure Rules. This definition must include the following subtypes of load management approaches:

- Type 1: Maximum connected load is less than site capacity (e.g. time varying rates)
- Type 2a: Maximum connected load exceeds site capacity and load management is used to save on customer-side costs.
- Type 2b: Maximum connected load exceeds site capacity and load management is used to save on utility-side costs.

h. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company must each update their Electric Vehicle Infrastructure Rules to reflect that as a default, participants will be enrolled on the commercial time-variant electric vehicle rate that each investor-owned utility offers, but that applicants may choose to change to another time-variant rate. Time-varying enrollments pursuant to this paragraph may not be used as a substitute for Type 2b load management solutions.

Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company shall each submit their expected revenue requirement and rate impact resulting from the EV Infrastructure Rules through the end of 2024.

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Ordering Paragraph 4:

g. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company must outline which IOU and third-party load management solutions they will offer customers taking service under their Electric Vehicle Infrastructure Rules, and how they plan to update this list over time. This list should include not only Type 1, but also Type 2b load management solutions. It should also include a detailed description of how the IOUs plan to incentivize customers to adopt Type 2b ALM while the 2-year waiver (and any future allowances) is in effect.

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Ordering Paragraph 5:

5. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company must host a workshop to discuss the development of a proposal for an allowance structure within eight months of the adoption of this Resolution. The Energy Division staff shall host a workshop within two months and a workshop within five months to collect and discuss party proposals for an allowance structure. Notice of each workshop should be served to R.18-12-006 and R.21-06-017.

Following these workshops, the Energy Division staff shall enter into the record of R.18-12-006 a short report summarizing the party proposals presented during these workshops and any feedback provided during the workshops. Following the IOU-hosted workshop, Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company in coordination with Energy Division staff, ratepayer advocates, and other stakeholders shall submit a proposal for an allowance structure no later than 180 days after the workshop. They must file the joint allowance structure proposal within Rulemaking (R.) 18-12-006, or any successor proceeding. No allowance structure or customer contribution requirement will be incorporated into the Electric Vehicle Infrastructure Rules for the first two years of implementation, however, the Commission may establish an allowance structure in the future. The workshop, as well as the subsequent proposal, must take into consideration the following:

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Ordering Paragraph 5:

d. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company shall consider how load management may impact the allowance value and the total expected grid impact and/or revenue resulting from the installation of Electric Vehicle Supply Equipment. If the proposal includes a continued waiver (or full allowance) of customer contributions beyond 2 years, it must also include a detailed proposal for how Type 2b load management solutions can be incentivized.