

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Continue
the Development of Rates and
Infrastructure for Vehicle Electrification.

Rulemaking 18-12-006
(Filed December 13, 2018)

**JOINT REPLY COMMENTS OF THE VEHICLE-GRID INTEGRATION COUNCIL,
ENEL X NORTH AMERICA, INC. , ADVANCED ENERGY ECONOMY, CALIFORNIA
ENERGY STORAGE ALLIANCE, CHARGEPOINT, INC., ENVIRONMENTAL
DEFENSE FUND, GREENLOTS, NATURAL RESOURCES DEFENSE COUNCIL, AND
SIEMENS ON ALJ RULING SEEKING PARTY COMMENT ON VEHICLE-GRID
INTEGRATION ISSUES**

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I. INTRODUCTION

In accordance with Rules of Practice and Procedure of the California Public Utilities Commission (“Commission”), the Vehicle Grid Integration Council (VGIC¹) is pleased to provide these reply comments on behalf of its members and supporters, as well as Enel X North America, Inc., Advanced Energy Economy (“AEE”), California Energy Storage Alliance (“CESA”), ChargePoint, Inc., Environmental Defense Fund (“EDF”), Greenlots, Natural Resources Defense Council (“NRDC”), and Siemens (collectively, “Joint Commenters”) on the *Administrative Law Judge’s Email Ruling Seeking Party Comment on Vehicle-Grid Integration*

¹ The views expressed in these Comments are those of VGIC, and do not necessarily reflect the views of all of the individual VGIC member companies or supporters. (<https://www.vgicouncil.org/>).

Issues (“Ruling”) issued by Administrative Law Judge (“ALJ”) Patrick Doherty on July 20, 2020. Pursuant to the Ruling, we timely file these reply comments on August 31, 2020.

II. FULFILLING THE VISION OF SB 676 WILL ACCELERATE TRANSPORTATION ELECTRIFICATION, NOT IMPEDE IT.

In opening comments, San Diego Gas & Electric (“SDG&E”) states that “there remains widespread uncertainty regarding the value and cost of many VGI use cases. SDG&E therefore believes the primary focus of state strategy and investment must remain on spurring EV adoption.”² Joint Commenters acknowledge that both VGI and transportation electrification (“TE”) are in a relatively nascent state; however, SDG&E’s assertion that VGI may present barriers to broader TE is misplaced. To the contrary, the Joint Commenters believe that VGI strategies offer opportunities to accelerate TE by addressing critical cost barriers related to EV adoption. As discussed in our Joint Comments, VGI can directly address barriers to faster EV adoption by:

*Reducing the total cost of ownership via lower charging costs and new customer revenue streams; Unlocking new value propositions beyond e-mobility and VGI (e.g., V2H/V2B providing backup power – especially relevant during COVID-19 and rolling brown-outs.); Unlocks new revenue streams for OEMs, improves business case for EVs; Can help “right-size” TE infrastructure investments and unlock revenue streams for EVSPs and OEM end user.*³

Joint Commenters maintain that there is a critical need to develop VGI in parallel with - not in lieu of - broader TE initiatives. To enable VGI to accelerate TE and maximizes ratepayer benefits, the Commission should focus its efforts on rates, programs, and market mechanisms,

² San Diego Gas & Electric Company’s (U 902-E) Opening Comments on Email Ruling Seeking Party Comments on Vehicle-Grid Integration Issues at 5.

³ Joint Comments of the Vehicle-Grid Integration Council, Enel X North America, Inc., Advanced Energy Economy, California Energy Storage Alliance, ChargePoint, Inc., Environmental Defense Fund, Greenlots, Natural Resources Defense Council, and Siemens on Email Ruling Seeking Party Comment on Vehicle-Grid Integration Issues at 20.

such as those supported by the Joint Commenters' VGI Portfolio concept. These rates, programs, and market mechanisms will source cost-effective VGI use cases that deliver customer value.

III. CLAIMS THAT DYNAMIC PRICING SIGNALS OR VGI PROGRAMS WILL ADVERSELY IMPACT CUSTOMER CHARGING EXPERIENCES AND POTENTIALLY DETER EV ADOPTION ARE UNSUPPORTED.

In opening comments, SDG&E states “state policy must balance the grid values of VGI with the potential for confusing or alienating potential EV adopters” and suggests dynamic rates may be too confusing for some customers.⁴ While there are likely to be some customers that are unable to respond to a real-time price signal or are uninterested in leveraging dynamic rates, this provides absolutely no justification for avoiding dynamic rates altogether, especially given the technological solutions the market already offers to make internalizing and responding to advanced price signals quite straightforward. For example, a “set-and-forget” strategy could be used wherein customers select a mileage range or state of charge for their vehicle and allow charge management to occur in the background without any additional or potentially complicated decision points that could confuse customers. Under this example, EV and/or EVSE-based managed charging systems would be able to respond to dynamic price signals “behind the scenes,” while making the VGI process both easy for customers and beneficial for the grid. SDG&E describes a scenario in which “being defaulted to a complex real-time rate” leads to greater costs for fleet operators.⁵ However, no party has suggested that complex real-time rates needs to be the default option for EV customers and this was not a recommendation of the Final VGI WG Report – and, indeed, it is not clear that SDG&E’s concern would not be remedied by more effective marketing, education, and outreach. Instead, the Joint Commenters recommend

⁴ *San Diego Gas & Electric Company’s (U 902-E) Opening Comments on Email Ruling Seeking Party Comments on Vehicle-Grid Integration Issues* at 6.

⁵ *Ibid.*

the Commission issue guidance that encourages dynamic rate options and supporting programs mechanisms that allow customers to choose the solution that delivers the most value in exchange for grid-friendly charging.

SDG&E proceeds to offer an example that:

requiring a direct current fast charging (“DCFC”) station to participate in demand response events may produce grid benefits but would seriously inconvenience drivers who arrive at the station and are unable to charge.⁶

Joint Commenters note that this is not a recommendation provided in the VGI WG Final Report. Furthermore, there is no evidence to Joint Commenters’ knowledge that activating certain grid services would necessarily render drivers “unable to charge,” or that passing through amplified price signals to drivers will be incomprehensible to customers and deter EV adoption. This is especially true for fleet operators that are likely to have more sophisticated energy management systems for charging. Moreover, some of these more sophisticated energy management systems may be willing and able to accept a moderate level of “inconvenience” if provided the right incentive structures to appropriately compensate them for grid and/or environmental benefits.

Joint Commenters also believe that there are potential VGI strategies for DCFC stations that simultaneously provide grid benefits and promote broader TE. For example, DCFC operators that opt into a dynamic rate option or demand response program could develop new business models and offerings that allow their customers to realize monetary benefits if they voluntarily choose to provide grid services or manage their charging in a more dynamic way. However, the incentive to create these offerings likely will not exist without dynamic rates, price signals and/or managed charging programs that allow these offerings and services to create value. Drivers of traditionally fueled vehicles can be quite price sensitive and respond by driving

⁶ *Ibid.*

significant distances to save money on gas. There is no reason to believe that EV drivers would not similarly respond to price signals if given the option and choice to do so.

IV. TIMELY IMPLEMENTATION OF SB 676 IS A STATUTORY REQUIREMENT AND NOT CONTINGENT ON FULL RESOLUTION OF THE JOINT AGENCIES VGI WORKING GROUP SCOPING QUESTIONS.

As mentioned by some parties in opening comments, the VGI WG process was inherently incomplete⁷ and the Final Report did not reflect the broad swath of stakeholders that should have been included. Joint Commenters appreciate the considerable effort made by stakeholders, facilitators, and engaged members of Energy Division Staff over the course of the VGI WG process to address the three VGI WG scoping questions. As active participants in the VGI WG, Joint Commenters agree with others that the process was not perfect; however, we believe it did highlight certain high-value, near-term recommendations, many of which are included in Joint Commenters' recommended Model VGI Portfolio and are identified in the August 10, 2020 Staff Paper on VGI Issues.⁸

In opening comments, some parties indicate the need to conduct further analysis of the VGI WG use cases because the VGI WG did not answer all three scoping questions.⁹ Critically, Joint Commenters emphasize that implementation of SB 676 is a statutory requirement and not contingent on full resolution of the VGI WG scoping questions. Furthermore, the VGI WG did not explicitly consider the "action" or implementation pathway(s) needed to monetize VGI use cases, and therefore the WG's efforts should be seen a useful effort to inform, not prescribe, the

⁷ See, for example, *San Diego Gas & Electric Company's (U 902-E) Opening Comments on Email Ruling Seeking Party Comments on Vehicle-Grid Integration Issues at 2* and *Southern California Edison Company's (U 338-E) Opening Comments on ALJ Ruling Seeking Party Comments on Issues Related to Vehicle-Grid Integration at 2*.

⁸ *Energy Division Staff Paper on Vehicle Grid Integration Implementation and the Draft Transportation Electrification Framework* (August 10, 2020)

⁹ See *San Diego Gas & Electric Company's (U 902-E) Opening Comments on Email Ruling Seeking Party Comments on Vehicle-Grid Integration Issues at 2* and *Southern California Edison Company's (U 338-E) Opening Comments on ALJ Ruling Seeking Party Comments on Issues Related to Vehicle-Grid Integration at 3*.

path forward for SB 676 implementation. Therefore, while further analysis of VGI use cases beyond the VGI WG Report may be helpful, Commission guidance on VGI strategies pursuant to SB 676 is not critically dependent on completing that analysis. Instead, the Joint Commenters reiterate our request that the Commission provide guidance in support of rates, programs and market mechanisms that fulfill the requirements of SB 676. We believe the Model VGI Portfolio framework offers the fundamental toolkit necessary to implement the statutory requirements established by SB 676.

V. **FOCUSING ON RATES, PROGRAMS, AND MARKET MECHANISMS WILL SOURCE VGI SERVICES THAT DEMONSTRATE REAL VALUE TO DRIVERS, AVOIDING THE RISKS OF “OVER-PILOTING” SOLUTIONS.**

In opening comments, SCE states “the Commission should support and fund market demonstration to validate technology, assess market readiness, and verify costs and benefits to deliver VGI services and programs.”¹⁰ Similarly, PG&E highlights that “pilots, demonstrations and studies, including customer and market research, are important and essential to gather that data on a use-case-by-use-case basis.”¹¹ Gathering data on a use-case-by-use-case basis, as PG&E implicitly recommends, is unnecessary, infeasible, and would significantly delay SB 676 implementation. Indeed, discussions that occurred throughout the VGI WG process, in which several of the Joint Commenters were actively engaged, indicated a strong consensus that a near term focus on formally instantiated VGI programs addressing Customer Bill Management could produce multi-dimensional benefits for ratepayers, load-serving entities (“LSEs”), EV service providers (“EVSP”), and original equipment manufacturers (“OEMs”), and can be based on presently available secure communications methods. The Joint Commenters do believe that

¹⁰ *Southern California Edison Company's (U 338-E) Opening Comments on ALJ Ruling Seeking Party Comments on Issues Related to Vehicle-Grid Integration* at 3.

¹¹ *Opening Comments of Pacific Gas and Electric Company (U 39 E) on Administrative Law Judge Ruling Seeking Party Comments on Vehicle-Grid Integration Issues* at 5.

large-scale demonstration projects can be a valuable component of VGI implementation initially, but encourage the Commission to fully consider the risks associated with “over-piloting” solutions – and ensure that demonstration pilots pursued are suited to enabling full-scale programs. While VGI is a nascent market, many VGI strategies and solutions are proven and ready for large-scale deployment and programs. Joint Commenters’ preference is for implementation efforts to instead focus on creating rates, programs, and market mechanisms that will source VGI services that demonstrate real value in the near term. The risk of “over-piloting” and requiring continual demonstration of value in pilot or demonstration settings is captured in more detail in *Comments of VGIC on Transportation Electrification Framework (“TEF”) Section 7*.¹²

To the extent the Commission does direct IOUs to pursue reasonable and justifiable demonstration projects within a framework that mitigates the risk of over-piloting, the Joint Commenters support these actions taking place in the near-term, pre-TE Plan (“TEP”) timeframe. At the same time, to ensure that any pilot facilitates potential scaling, pilots should be carefully crafted with key objectives and an evaluation plan that would support scaling the pilot program to a commercial program.

VI. JOINT COMMENTERS SUPPORT SEVERAL OF THE UNION OF CONCERNED SCIENTISTS’ (“UCS”) RECOMMENDATIONS.

In opening comments, UCS underscores the importance of recognizing the different capabilities and needs of various sectors. Joint Commenters agree with UCS’s recommendation that “vehicle segment should be a consideration as the Commission develops and refines VGI

¹² *Comments of the Vehicle-Grid Integration Council on the Transportation Electrification Framework (Sections 7 And 8)* at 2. <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M343/K624/343624819.PDF>

strategies.”¹³ Given the different battery sizes and operational characteristics between light-duty and medium- and heavy-duty vehicles, as well as within the latter two categories, the VGI capabilities of these various sectors will need to be considered under different lenses. Joint Commenters also support UCS’ comment that “ESJ communities, in particular, need thorough ME&O on VGI opportunities to ensure they are aware of and have access to the benefits of VGI,”¹⁴ and their recommendation that the Commission facilitate IOU coordination with other agencies to provide VGI educational materials to low-income drivers under existing California Energy Commission and Air Resources Board programs.

VII. JOINT COMMENTERS AGREE WITH SEVERAL PARTIES ON COMMON RECOMMENDATIONS

Several parties indicated that the VGI definition should describe the capability for VGI strategies to support resiliency.¹⁵ The Joint Commenters agree with this recommendation, and encourage the Commission to adopt a revised definition that captures not only the opportunity to enhance resiliency but also broader economic, social, or environmental benefits associated with TE¹⁶ to reflect the growing needs for renewables integration and wildfire-risk-related resiliency.

Joint Commenters also agree with parties that indicated SB 676 implementation remain within the DRIVE OIR at this time. While a dedicated proceeding can provide focus on particular issues, especially ones that are not being addressed elsewhere, the Joint Commenters

¹³ *Opening Comments of the Union of Concerned Scientists on Administrative Law Judge Ruling Seeking Party Comment on Vehicle-Grid Integration Issues* at 6.

¹⁴ *Id.* at 12.

¹⁵ See, for example, SBUA Comments on VGI Issues at 3, SCE Comments on VGI Issues at 2, SDG&E Comments on VGI Issues at 7, and PG&E Comments on VGI Issues at 2.

¹⁶ See *Joint Comments of the Vehicle-Grid Integration Council, Enel X North America, Inc., Advanced Energy Economy, California Energy Storage Alliance, ChargePoint, Inc., Environmental Defense Fund, Greenlots, Natural Resources Defense Council, and Siemens on Email Ruling Seeking Party Comment on Vehicle-Grid Integration Issues* at 7.

have concerns that a separate docket would create additional time and resource burdens on the Commission and stakeholders, create scoping issues in terms of which proceeding to best address certain VGI issues, and create some risk of misalignment between this separate proceeding and the DRIVE OIR. Especially as there are already a number of proceedings at the Commission where identifying the appropriate proceeding to address a particular issue is a persistent challenge for the Commission and stakeholders, a single umbrella proceeding on all issues related to transportation electrification would better address each of the aforementioned concerns. Rather, the Joint Commenters encourage consistent focus on VGI matters in the DRIVE OIR. By effectively implementing SB 676 within R.18-12-006, overarching VGI policy focus, development, and implementation can be directed within this proceeding or potentially in others.

VIII. CONCLUSION

Joint Commenters appreciate the opportunity to submit these reply comments on VGI Issues. We look forward to further collaboration with the Commission and stakeholders on this initiative.

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