

**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)

**REPLY COMMENTS OF THE VEHICLE-GRID INTEGRATION COUNCIL ON THE
TRANSPORTATION ELECTRIFICATION FRAMEWORK (SECTIONS 2, 3.1, 3.2, 3.3,
4, AND 5)**

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In accordance with Rules of Practice and Procedure of the California Public Utilities Commission (“Commission”), the Vehicle-Grid Integration Council (“VGIC”)¹ hereby submits its reply to opening comments on certain sections of the draft Transportation Electrification Framework (“Draft TEF”) in Rulemakings (“R.”) 18-12-006 on February 25, 2020. Pursuant to *Administrative Law Judge’s Ruling Adding Staff Proposal for a Draft Transportation Electrification Framework to the Record and Inviting Party Comments* (“Ruling”) and *E-mail Ruling Denying Joint Motion to Stay Proceeding and Resetting Procedural Schedule*, issued by Administrative Law Judge Patrick Doherty on February 3, 2020 and March 24, 2020, respectively, VGIC timely files these comments on April 27, 2020 in R.18-12-006. VGIC was granted party status in this proceeding on January 28, 2020.

¹ VGIC member companies and supporters include American Honda Motor Co., Inc., Enel X North America, Inc., Fiat Chrysler Automobiles, Ford Motor Company, General Motors Company, Nuvve Corporation, and Toyota Motor North America, Inc.. 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/>).

I. INTRODUCTION.

A. Overview of VGIC

VGIC is a 501(c)6 membership-based advocacy group committed to advancing the role of electric vehicles (“EVs”) and vehicle-grid integration (“VGI”) through policy development, education, outreach, and research. VGIC supports the transition to decarbonized transportation and electric sectors by ensuring the value from EV deployments and flexible EV charging and discharging is recognized and compensated in support of achieving a more reliable, affordable, and efficient electric grid.

B. Organization of VGIC’s Comments

VGIC’s comments are organized as follows:

- First, VGIC recommends **fundamental approaches necessary to support transportation electrification (“TE”)** at the scale and pace required to meet state goals.
- Second, VGIC replies to **recommendations posed in opening comments on Sections 3.1 and 5** of the Draft TEF.
- Finally, VGIC provides a **summary of recommendations** on approaches to accelerate TE and responses to opening comments.

II. NECESSARY STEPS TO SUPPORT TRANSPORTATION ELECTRIFICATION INVESTMENTS AT THE SCALE AND PACE REQUIRED TO MEET STATE GOALS.

A. VGIC supports the Commission’s role and efforts in facilitating TE planning

VGIC supports the Commission’s goal to develop a long-term and sustainable framework to better prioritize and evaluate the investor-owned utilities’ (“IOUs”) TE programs. In recent

years, the Commission has authorized over one billion dollars in ratepayer funds for TE investments, with another one billion currently pending review. These TE proposals and related programs have been made on an ad-hoc, case-by-case basis that has created significant uncertainty for the EV industry, the IOUs, and California ratepayers. As California continues to ramp up its TE efforts to meet decarbonization goals, a more holistic and streamlined framework for evaluation and authorization of IOU TE investment proposals can provide greater certainty to the industry over the long run, which is a concept VGIC broadly supports.

The Draft TEF makes progress towards this goal by seeking to establish a holistic framework for California’s TE programs. However, VGIC believes the level of EV adoption and TE infrastructure deployment needed to realize California’s clean energy and transportation goals necessitates certain key steps that are not included in the Draft TEF. As identified by VGIC and several other parties in opening comments, the Joint Motion to Stay TEF, and the March 23, 2020 TEF Workshop, the Draft TEF has significant shortcomings, chief among them the lengthy interim period between now and when the long-term framework would go into effect,² as well as the complex and redundant procedure to review and approve TE investments once the framework is live. We believe that addressing these fundamental issues would go a long way towards creating a streamlined regulatory process that predictably reviews and approves IOU TE investments against the continued evolution and maturity of the market.

² See, for example, Center for Community Action et al. joint comments at 1-4, Environmental Defense Fund (“EDF”) comments at 1-2, Greenlots and Siemens joint comments at 3-5, Pacific Gas and Electric (“PG&E”) comments at 1-3, Southern California Edison (“SCE”) at 4-7, and San Diego Gas & Electric (“SDG&E”) comments at 6-12.

B. The TEF should create a streamlined regulatory process that provides certainty to all stakeholders and facilitates progress at the pace and scale required to meet California’s decarbonization goals.

VGIC agrees with several parties that the plain language of the Draft TEF would lead to a protracted period of limited TE investment over the next several years, specifically in the time between approval of the Draft TEF and implementation of the first TE programs.³ The process the Draft TEF outlines for development, review, and approval of IOU TE Plans (“TEP”), followed by a separate process to review IOU TE program applications and budgets, is unnecessarily lengthy and burdensome.

Instead, the Commission should adopt a streamlined approach to simultaneously approve TEPs and authorize program budgets. This approach would not only eliminate the lengthy delay in significant new TE infrastructure investments that would result from the Draft TEF, but would also enable existing and new TE infrastructure to provide near-term grid benefits by scaling up existing and new VGI programs. The Commission can ensure that significant and timely action is taken to deploy the required TE solutions at the scale and pace required by California’s decarbonization goals if the prolonged and overly complex process to implement the first TEPs is eliminated.

The simultaneous approval of an IOU’s strategic TEP and authorization of TE program budgets will also provide much-needed certainty to industry actors, such as VGIC members and supporters from the automotive original equipment manufacturer (“OEM”) and EV service provider (“EVSP”) industries who benefit from long-term predictability. Regulatory certainty

³ *ibid.*

enables market participants to implement new business models, develop new technologies, and realize customer benefits associated with VGI-related activities.

To further provide clear and consistent signals to stakeholders, IOU TEPs should be based on a five-year planning horizon. VGIC supports a five-year TEP that simultaneously requests authorization for TE programs and budgets, as multi-year predictability is critical to inform investment decisions. Predicting demand trends and infrastructure needs beyond five years into the future inherently comprises a large amount of uncertainty and risks implementing programs that do not achieve the statutory objectives of IOU TE programs as ordered by SB 350.

VGIC believes that moving to a five-year TEP and simultaneous approval of TE programs and budgets are necessary steps to streamline the regulatory processes, a goal that the December 19, 2018 DRIVE OIR explicitly sets out to accomplish.⁴

C. The TEF should allow for separate consideration of relatively non-controversial elements of TE programs to accelerate infrastructure deployment and EV adoption.

VGIC believes that the TEF should allow for the separate consideration of programmatic elements of IOU TE investments that enjoy a certain degree of consensus. Implementation of such items would be unnecessarily delayed if tied to the disposition of relatively contentious issues. For instance, a general consensus has emerged through the disposition of prior TE applications around the natural role for utility ownership of utility-side make-ready infrastructure. One pathway to expedite relatively non-controversial and no-regrets elements of TE programs is to direct IOUs to propose tariffs or rules that allow them to advance TE goals by

⁴ OIR at 9-10.

designing, installing, and maintaining infrastructure on the utility side of the meter necessary to support EV charging installations.

VGIC supports a tariff or rules-based approach to deploying TE infrastructure. This could either build off of existing IOU rules, namely Rules 15 and 16, that govern the regular buildout of primary and secondary distribution infrastructure or could entail the development of a new tariff that considers the specific characteristics and capabilities associated with EV charging infrastructure. Such a tariff or program would put forth standardized processes and accounting for customers to apply for interconnection, oversee construction of necessary upgrades, and access available utility funding, and is explored below in Section III-A.

On the other hand, the more controversial elements of proposed IOU TE investments will need to be addressed on an ongoing basis in the evaluation of each IOU TEP application. VGIC supports a standardized framework for evaluating proposed TE investments under SB 350 that continually reviews elements prone to controversy, such as utility-ownership of EV supply equipment (“EVSE”). These issues should not be decided upon up-front in the final TEF that will result from the instant proceeding. Individual IOU TE infrastructure and program proposals should be evaluated in their entirety and within the context of other existing and proposed TE investments to determine if the program characteristics are appropriate given the relative nascency or maturity of a given market segment.

III. RESPONSES TO RECOMMENDATIONS AND ANSWERS TO PUC QUESTIONS PROVIDED IN OPENING COMMENTS.

In the spirit of identifying alternative framework proposals, VGIC provided recommendations in our opening comments for potential modifications to the Draft TEF that would allow more flexibility in the interim period before the TEF is in full effect, including:

- Allowing an expanded list of approved near-term investment options,
- Removing the per-IOU budgetary cap on near-term investments, and;
- Allowing for additional *ad hoc* TE programs to be proposed and reviewed until the final TEF is adopted, under the current rules and guidance used to date.

Staff asserted during the March 23, 2020 TEF Workshop that the Draft TEF does not propose limiting near-term investment options or capping per-IOU budgets, but rather puts these ideas forth in the form of questions for stakeholder feedback. Staff also clarified that the *status quo* ability of IOUs to seek approval for TE investments will continue throughout the Draft TEF stakeholder process until any new Commission guidance is adopted. Furthermore, the *E-Mail Ruling Denying Joint Motion to Stay Proceeding and Resetting Procedural Schedule* issued by Administrative Law Judge Patrick Doherty on March 24, 2020 reiterated, and further clarified these points.

VGIC appreciate Staff's clarification and maintains the recommendations included in our opening comments in response to Staff's questions, specifically those regarding the potential for the Draft TEF's guidance around near-term investments to hinder infrastructure and EV deployment through unnecessary limitations on investment scope and scale.

In this section, VGIC responds to the specific recommendations posed in opening comments related to the following sections of the Draft TEF:

- Section 3 (excluding Section 3.4): IOU TEP Development, and
- Section 5: Near-term Investment Priorities.

A. Response to Opening Comments on Section 3: IOU TEP Development.

In opening comments, Enel X and Pacific Gas & Electric (“PG&E”) both discussed the importance of existing IOU planning processes, specifically as they relate to forecasting assumptions for EVs. VGIC believes this is a critical area for TEF development and agrees that more sensitivity analyses around TE load and cost comparisons should be leveraged by IOUs in their TE investment applications.⁵ As Enel X points out, the assumed 8,760 hour EV load profiles and use cases assumed in the IEPR have “direct downstream impacts on the resulting conclusions about the generation, transmission, and ancillary services needed to meet forecasted EV charging demand.”⁶ VGIC agrees that the assumed impact of VGI strategies should be included in forecasting EV load, for example describing whether EVs may contribute to peak load or consume low-cost solar in the middle of the day.

The Draft TEF identifies the Integration Capacity Analysis (“ICA”) as a tool to inform IOU TEPs, specifically using ICA maps to determine opportunities where “costly distribution upgrades could be deferred by incorporating load management solutions such as on-site renewable generation and storage facilities to offset some of the new incremental TE load.”⁷ VGIC recommended in our opening comments that flexible charging and – as the market develops – discharging capabilities be included in the set of load management solutions that IOUs should consider.

⁵ Enel X comments at 3-6 and PG&E comments at 11-12.

⁶ Enel X comments at 3.

⁷ Draft TEF at 22.

In opening comments, Enel X also supported this use of the ICA. However, they also detailed the inherent challenges in implementing such an approach and offered a practical alternative: “the Commission, through TEF development and through the VGI working group process underway, should focus on establishing tariffs and programs to allow site hosts to select a load balancing and/or DER solution to avoid grid upgrades that are identified through the interconnection process.”⁸

VGIC supports this solution as an alternative to the language proposed in the Draft TEF and agrees that provides a more practical and customer-centric approach. The option to elect certified load management software to defer customer-triggered distribution upgrades should accompany tariffs created for utility-side or behind-the-meter make-ready infrastructure. This tariffed approach to upgrade deferral would support customer choice, leverage mature technology and existing load management standards, encourage competition, and contain ratepayer costs while enabling standardized access to behind-the-meter load management or other DER solutions. Customers could assess the market offerings from EVSPs, automotive OEMs, and other market participants to make an informed decision based on which solution, if any, best fits their needs at the least cost.

Behind-the-meter solutions would comply with relevant standards to ensure IOUs maintain grid safety and reliability. For instance, existing and revised codes and standards that certify power control systems and energy management software on the customer side of the meter to manage load could be leveraged for such a tariff. And, as California works to enable the widespread use of vehicle-to-grid (“V2G”) applications, the set of available customer-side solutions that leverage EV batteries to defer or avoid TE investments will expand.

⁸ Enel X comments at 6.

Any Commission-approved investment framework must seek to maximize the value VGI can provide to all ratepayers, given the potential for VGI strategies to offer a least-cost alternative to, for instance, distribution infrastructure investments. The California State Legislature has indicated through SB 676 (Bradford, 2019), codified in Public Utilities Code §740.16, that VGI has an important role to play in the state’s clean energy and transportation future, by ensuring EV infrastructure investments place downward pressure on rates and support the integration of the state’s abundant renewable energy resources. Establishing tariffed options for load management alongside traditional EV infrastructure investments would provide a streamlined opportunity to implement VGI solutions in a way that reduces costs to ratepayers and develops the competitive third-party VGI market in ways consistent with SB 676 and SB 350.

B. Response to Opening Comments on Section 5: Near-Term Investment Priorities.

Section 5, Question 1: Should the IOUs’ pre-TEP program proposals be limited to these identified priority areas? Why or why not?

Several parties, including VGIC, indicated in opening comments that pre-TEP proposals should not be limited to the small subset of areas identified in the Draft TEF.⁹ Additional near-term actions are needed to ensure alignment with the state’s policy goals and to continue to develop the EV and VGI markets. In opening comments, Pacific Gas and Electric (“PG&E”) recommended pre-TEP programs should also include proposals to extend or expand existing TE programs, to the extent they are consistent with guidance in an approved final TEF and former guidance from the Commission that proposals contain necessary evidence of market need and

⁹ See, for example, CESA comments at 9, EDF comments at 2-4, and SCE comments at 16.

justification for investment.¹⁰ VGIC also agrees that the extension or expansion of existing TE programs should be permitted in the pre-TEP period.

VGIC reiterates that it strongly disagrees with the Staff’s recommendation that “the IOUs should not propose new investment programs where the market shows signs of private sector engagement, such as single-family home residential charging stations and workplace L1 or L2 charging deployment.”¹¹ This approach implies that TE programs addressing charging at single-family homes and workplaces will not be implemented until the IOUs’ first TE program applications are implemented, a delay that risks needless societal costs. This would also forgo a ripe opportunity to focus near-term market development on segments that entail relatively low costs and provide ideal environments to test innovative business models for deploying EV infrastructure that enables the full capabilities of VGI technologies.

Given the long lead times for TE programs that would result from the Draft TEF, the risk of technology lock-in, the cost of deferring rate reduction through increased kWh usage and VGI applications, and the availability of existing Commission processes, VGIC echoes the widespread stakeholder support for a more open approach to pre-TEP program proposals.

Section 5.2, Question 1: Should the IOUs prioritize projects that will test and validate resiliency strategies that utilize EVs as grid resources and ensure EV drivers have adequate access to charging options during power outages? If yes, how should the IOUs design their pilot(s)? What sector(s) should the pilot(s) target? What use cases should the IOUs prioritize in their pilot(s)?

¹⁰ PG&E comments at 18-19.

¹¹ Draft TEF at 44.

In opening comments, SCE responded positively to Staff’s question about whether IOUs should prioritize the testing and validation of EV resiliency initiatives, including the use of EVs for backup power.¹² VGIC agrees with SCE and strongly supports the inclusion of EVs for backup power in the list of priority areas for IOU pre-TEP program focus. Connect California (“ConnCA”), in their opening comments, argued that “grid resources” in the context of Staff’s Section 5.2, Question 1 “should include resources that do not interconnect and run in parallel to the distribution grid.”¹³ VGIC agrees with the definition of “grid resources” within the context of Staff’s question. Under this definition, VGIC echoes the recommendation made in our opening comments for a pilot program that leverages EVs as backup power, for example through disconnection from the grid in advance of a PSPS, e.g. by using a transfer switch. This and other solutions that use EVs as backup power during PSPS events warrant serious consideration as near-term priorities given the high potential to provide net benefits to vulnerable customers and the limited barriers to implementation.

IV. SUMMARY OF RECOMMENDATIONS.

In responding to parties’ opening comments, VGIC proposes several recommendations, which can be summarized as follows:

Overarching steps to support TE investments at the scale and pace required to meet state goals:

- The Final TEF should implement a streamlined regulatory process, a goal set out in the December 2018 OIR, that includes the simultaneous approval of five-year TEPs and authorization of their budgets.
- The Commission could separate utility-side make-ready infrastructure from other, more controversial elements of TE programs, for example through a tariff or rules-based

¹² SCE comments at 16-17.

¹³ ConnCA comments at 5.

approach. Contentious issues should be addressed in each IOU TEP to account for the nuances of each proposed investment.

Section 3:

- VGI strategies should be considered when developing load forecasting assumptions that will be used to determine distribution-level needs.
- While the Integration Capacity Analysis (“ICA”) maps could be used to identify opportunities for load management to defer distribution upgrades, there are simpler approaches that should be explored. One such approach would be to develop tariffs to allow customers the choice of load management solutions as an alternative to system upgrades.

Section 5:

- The IOUs’ pre-TEP proposals should not be limited to the identified priority areas, as several parties have highlighted the risks of imposing high societal costs, deferring opportunity to reduce customer rates, and significant misalignment with state TE and broader decarbonization goals.
- VGIC further expands on one possible approach to a pilot program enabling EVs to provide backup power in resiliency use cases.

V. CONCLUSION.

VGIC appreciates the opportunity to submit these reply comments on the TEP development and near-term investment priorities sections of the Draft TEF. We look forward to further collaboration with the Commission and stakeholders on this initiative.

Respectfully submitted,



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