

## DOCKETED

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*Comment Received From: Hannah Goldsmith*

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**CalETC Comments Re Draft Oct. 2017 IEPR**

*Additional submitted attachment is included below.*



November 13, 2017

California Energy Commission  
Docket Office, MS-4  
**Docket No. 17-IEPR-01**  
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**Re: Draft 2017 Integrated Energy Policy Report**

The California Electric Transportation Coalition (CalETC) appreciates the opportunity to provide feedback on the California Energy Commission's (CEC's) Draft 2017 Integrated Energy Policy Report (Draft IEPR).

CalETC supports and advocates for the transition to a zero-emission transportation future as a means to spur economic growth, fuel diversity and energy independence, ensure clean air, and combat climate change. CalETC is a non-profit association committed to the successful introduction and large-scale deployment of all forms of electric transportation including plug-in electric vehicles of all weight classes, transit buses, port electrification, off-road electric vehicles and equipment, and rail. Our board of directors includes: Los Angeles Department of Water and Power, Pacific Gas and Electric, Sacramento Municipal Utility District, San Diego Gas and Electric, Southern California Edison, and the Southern California Public Power Authority. Our membership also includes major automakers, manufacturers of zero-emission trucks and buses, and other industry leaders supporting transportation electrification.

We support the efforts of the CEC to promote the adoption of zero-emission vehicles (ZEVs) and equipment. Although California is leading the nation in ZEV adoption, our state still has a long way to go to reach the goals in the Governor's Executive Order B-16-2012: 1.5 million ZEVs on California roads by 2025 and zero-emission vehicle infrastructure able to support 1 million vehicles by 2020. In addition, the state must implement SB 1275 (De León, 2014) and SB 1204 (Lara, 2014), which set targets for the deployment of 1 million zero- and near-zero-emission vehicles by 2023, access to these vehicles by disadvantaged and low- and moderate-income communities, and deployment of zero- and near-zero-emission medium- and heavy-duty vehicle technologies.

SB 350 (De León) [Chapter 547, Statutes of 2015] authorizes and directs utilities to implement transportation-electrification programs, and recognizes the need for widespread transportation electrification in order to reach many of the state's goals, such as reducing petroleum use, meeting air-quality standards, improving public health, and achieving greenhouse-gas emissions reductions. Achieving widespread electrification will require state agencies, automakers, third-party charging

providers, electric utilities, and a broad coalition of stakeholders to work collaboratively to advance the market for plug-in electric vehicles (PEVs).

We respectfully submit the following comments for your consideration:

### **Vehicle-Grid Integration Roadmap**

CalETC supports staff's recommendation on page 141 to update the VGI Roadmap. The following recommendations relate to how the VGI Roadmap should be updated, and what deliverables should be included in the update.

We agree with the Draft IEPR's assessment that PEVs have a lot of promise to address grid needs, that much work remains to be done, and that the "potential for use [of EVs] in grid management is still at least several years out." (p. 120.) We believe that a major barrier to advancing VGI is not having a clear understanding of the value; the six months of work by the state-agency-led VGI Communications Protocol Working Group (VGIWG) has shown that addressing this barrier—by determining the value of VGI—is a major step to unlocking the vision of VGI (listed as priorities for updating the VGI Roadmap, on page 132 of the Draft IEPR). This point was mentioned in the VGI Roadmap workshop on June 13th, and repeated in a June 27th letter by CalETC, four automakers, and three utilities.<sup>1</sup> Therefore, we agree with the Draft IEPR, on page 131, that the economic value of VGI needs to be better understood. We urge the CEC to recognize that this value barrier must be addressed and funded in 2018 by the state-agencies sponsoring the VGIWG, and the progress to address this barrier should be tracked as part of an updated VGI roadmap.<sup>2</sup>

As we and many other stakeholders have urged in the VGIWG,<sup>3</sup> there are two key steps to be addressed for VGI, which can likely be done simultaneously:

1. A VGI value study that looks at promising services and benefit streams in the consolidated VGI benefits framework from Deliverable 1.1 of the Working Group; and
2. We would be supportive of the CPUC, CEC, and/or other agency authorizing funding for large scale demonstrations by utilities and others (up to 2000 EVs) of promising use cases in several different charging market segments (including public, fleet, workplace and homes) in order to get validation of the realizable benefits of VGI as well as costs of implementing VGI in real world situations. Timely and coordinated approval of cost recovery or funding would facilitate near-term validation of this VGI value.

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<sup>1</sup> Joint Utility-Automaker Comments on the California Energy Commission Docket No. 17-IEPR-12: Joint Agency Staff Workshop on the Review of the Actions and Status of State-level Energy Roadmaps, submitted June 27, 2017.

<sup>2</sup> The VGIWG has made progress in developing over 75 VGI use cases, understanding the functional, non-functional and customer requirements for VGI communications between the grid and the vehicle for these use cases, mapping these requirements to existing communication protocols, developing a glossary, and other tasks.

<sup>3</sup> See Joint Utility-Automaker Letter to the VGI Communications Protocol Working Group Sponsoring Agencies, Re the CPUC and CARB staff proposal to futureproof the EVSE and refocus the workplan of the VGI Working Group, submitted November 8, 2017.

We request the IEPR include a new recommendation for the CEC, CPUC, and/or other state agency to set aside funding to support a partnership between automakers, utilities, charging-station providers, and others that assess the VGI value proposition; and that pursue large-scale, multi-year demonstration projects to validate the real-world value and cost of VGI. The stakeholder partnership, or working group, established to update the VGI Roadmap should include interested parties, as well as the CEC, CPUC, and Cal ISO, additional agencies such as CARB, U.S. DOE, GO-Biz, and those agencies should have specific funding to pursue their action items. Additionally, we recommend CEC funding for expert participation in the 2018 VGIWG. This is needed based on our experience with the 2017 effort, and to be consistent with the CEC's prior funding of the consultants who created the 2014 VGI Roadmap.

The VGI issue is complex and goes beyond charging equipment. The automakers must be convinced that there is a business case to equip their EVs with VGI communications protocols, and they must think about the potential impact on their customers. They must determine if they want the EV to communicate to the charging station, directly to the grid, or to both. The utilities, charging station providers, aggregators, and other parties also need to understand the VGI value proposition, as discussed above. Our recommendations mirror the process and steps that storage and other emerging grid technologies that have gone through, but these steps require funding and a plan with broad stakeholder buy-in.

We also recommend that the Draft IEPR better reflect how complex VGI is, and how challenging the VGIWG effort has been. For example, the VGIWG's deliverables were supposed to be completed by October 2017, but the main deliverables on costs, benefits, and policy recommendations have not yet been launched. In addition, the Draft IEPR should not get ahead of the VGIWG by mentioning, for example, that there is agreement to use open standards or any type of communications protocols. (p. 141.) However, the five state agencies and the private-sector stakeholders in the VGIWG have proved there is great stakeholder interest in accelerating VGI efforts and have made progress on important fundamentals.<sup>4</sup> A sustainable way to capitalize on that interest in 2018 is needed.

## **Data Collection**

We support staff's recommendation on page 81 for the CEC to lead a collaborative effort with researchers; local government, air district, and utility charging infrastructure program administrators; and others to share data about charging-infrastructure programs. We agree that this collaboration will help enhance existing programs. Given that charging-station and PEV data is being collected in multiple forums, we greatly support this recommendation so that experts will be brought together to compare and understand existing data, and determine what gaps need to be addressed. As we mentioned in previous letters on the Title 20 data-collection pre-rulemaking,<sup>5</sup>

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<sup>4</sup> See Footnote 3.

<sup>5</sup> CalETC Letter Re: General Rulemaking Proceeding for Developing Regulations, Guidelines and Policies for Implementing SB 350 and AB 802: Title 20 Data Collection Regulations to Support New Analytical Needs, October 17, 2016, 16-OIR-01; CalETC Letter Re: Title

we support a voluntary effort as the best way to address the data needs of the state agencies, utilities, and other stakeholders. If the voluntary, collaborative effort finds critical gaps, then, in the context of the Title 20 rulemaking on transportation-electrification data collection, the stakeholder group could determine what information is needed to close the gaps. We recommend that the date to begin Phase 2 of the Title 20 data-collection rulemaking be updated to account for this voluntary effort and working-group process.

## **Integrated Resource Planning**

### 1. Transportation Electrification

CalETC appreciates staff's incorporation of many of our previous recommendations with regard to the transportation-electrification guidance for Integrated Resource Plans (IRPs).

We support the recommendation in the Draft IEPR to align CEC emissions forecasting and assessment methods with the California Air Resources Board's (CARB's) programs, such as the Cap-and-Trade Program, Low Carbon Fuel Standard, Mobile Sources Strategy, and Greenhouse Gas Inventory programs. As the CEC aligns its forecasting, we encourage staff to update any tools, such as the *Light-Duty Plug-in Electric Vehicle Energy and Emissions Calculator*, with the revised, aligned forecasting information.

We also appreciate staff's recommendation to partner with local utilities and governments to identify ways to support utility, governmental, and community initiatives that advance transportation electrification, including funding partnerships and collaborative procurement and deployment initiatives. In addition, we support staff's recommendations to learn and share from interstate and international charging technology best practices; and support the development of specialized consumer education and engagement tools.

### 2. Vehicle-Grid Integration

CalETC agrees with staff that transportation-electrification programs and investments should be coordinated with grid conditions and distributed-energy resource planning. We support current and proposed efforts by utilities to provide pricing information, either through time-of-use rates or potential new technologies, to encourage them to charge at off-peak times or times when there is a high volume of renewable energy on the grid. When it comes to more complex Vehicle-Grid Integration (VGI) solutions, like communications standards, we recommend keeping the IRPs focused on evaluating potential solutions that harmonize well with the rest of the communication protocols associated with other distributed-energy resources, recognizing there are multiple pathways to promote competition and achieve low-cost solutions.

Multiple sections of the Draft IEPR refer to communication and control functionalities of charging equipment, charging equipment with localized intelligence, or standardization of charging equipment. While we agree that VGI solutions are important for managing grid resources, there is not yet consensus on a single vehicle-to-grid (V2G) communication pathway that fits multiple use cases and will lead to benefits for EV drivers and others.

### **Transportation Energy Demand Forecast**

CalETC believes the CEC's new DAWG subgroup, dedicated to transportation electrification, will be valuable as staff continues to analyze the potential effects of increased transportation electrification on California's grid. The DAWG subgroup on transportation electrification should also participate in the broader working groups on TE data collection and VGI, because all of these working groups will benefit from information exchange.

We appreciate staff's commitment to develop a wider set of electric-vehicle scenarios, and staff's recommendation to work with stakeholders and CARB to develop reasonable scenarios for transportation-electrification impacts for the revised Integrated Energy Policy Report demand forecast. Given the rate of acceleration in ZEV-technology advancements, it will be important to consider and support deep electrification of the transportation sector across all classes of vehicles and equipment.

We agree with the recommendation on page 222, that the CEC should track the electric-vehicle market and electric-vehicle policies in other countries, especially China. We also recommend that more attention be paid to electrification trends in the medium- and heavy-duty vehicle sectors. China's progress in these sectors, and the many recent announcements by major truck and bus manufacturers, will significantly impact the medium- and heavy-duty sectors.

We appreciate your consideration of our comments. Please do not hesitate to contact me should you have any questions.

Sincerely,



Hannah Goldsmith, Project Manager  
California Electric Transportation Coalition