

BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Consider  
Alternative-Fueled Vehicle Programs,  
Tariffs, and Policies.

Rulemaking 13-11-007  
(Filed November 14, 2013)

**OFFICE OF RATEPAYER ADVOCATES  
COMMENTS ON ASSIGNED COMMISSIONER'S  
SCOPING MEMO AND RULING**

**LISA-MARIE SALVACION**

Attorney for  
The Office of Ratepayer Advocates

California Public Utilities Commission  
505 Van Ness Avenue, 5<sup>th</sup> Floor  
San Francisco, CA 94102  
Telephone: (415) 703-1694  
Facsimile: (415) 703-2905  
Email: [lisa-marie.salvacion@cpuc.ca.gov](mailto:lisa-marie.salvacion@cpuc.ca.gov)

**FARZAD GHAZZAGH, P.E.**

Senior Utilities Engineer  
The Office of Ratepayer Advocates

California Public Utilities Commission  
505 Van Ness Avenue, 2<sup>nd</sup> Floor  
San Francisco, CA 94102  
Telephone: (415) 703-1694  
Facsimile: (415) 703-2905  
Email: [farzad.ghazzagh@cpuc.ca.gov](mailto:farzad.ghazzagh@cpuc.ca.gov)

**JOSE ALIAGA-CARO**

Utilities Engineer  
The Office of Ratepayer Advocates

California Public Utilities Commission  
505 Van Ness Avenue, 2<sup>nd</sup> Floor  
San Francisco, CA 94102  
Telephone: (415) 703-2338  
Facsimile: (415) 703-2905  
Email: [jose.aliaga-caro@cpuc.ca.gov](mailto:jose.aliaga-caro@cpuc.ca.gov)

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**I. INTRODUCTION**

Pursuant to the *Assigned Commissioner's Scoping Memo and Ruling* (Scoping Memo), issued on July 16, 2014, the Office of Ratepayer Advocates (ORA) respectfully submits its responses to the questions posed in the Scoping Memo.

**II. BACKGROUND**

On November 22, 2013, the California Public Utilities Commission (Commission) opened the *Order Instituting Rulemaking to Consider Alternative-Fueled Vehicle Programs, Tariffs, and Policies* (R.13-11-007) (OIR) to address issues relating to expanding the use of alternative-fueled vehicles in California and in support of California Executive Order B-16-2012, which set a target of 1.5 million zero-emission vehicles (ZEVs) on California roads by 2025.<sup>1</sup> R.13-11-007 sets forth two policy-focused tracks:

(1) to evaluate the potential and value of vehicle-grid integration (VGI); and (2) to focus on development of new Alternative-Fueled Vehicles (AFV) tariffs.

A Prehearing Conference (PHC) was held by the Commission on February 26, 2014. During the PHC, the parties discussed the Assigned Administrative Law Judge's

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<sup>1</sup> California Executive Order B-16-2012, issued on March 23, 2012, <http://gov.ca.gov/news.php?id=17463>.

(ALJ) proposed proceeding structure. The proposed structure diverged from the two-track approach discussed in the OIR—the proposed structure consisted of three phases that grouped related issues together and sequenced the phases. Each phase would build upon the final decision of the prior phase. On July 16, 2014 the Commission issued a Scoping Memo outlining the three phases<sup>2</sup> in the OIR, the first of which will be resolved in two interim decisions.

### III. DISCUSSION

The Scoping Memo posed thirteen questions aimed at the topics in Phase 1 of the OIR. The Scoping Memo also asked for “Opening and Reply Comments addressing the proposed Guiding Principles, Section 3.2, Question 1 and the [Current Program Issues] Section 3.2, Questions 2 through 5.”<sup>3</sup>

**A. Question 1. Should the Commission adopt the proposed AFV Guiding Principles? What modifications, if any, are appropriate?**

ORA supports the proposed AFV Guiding Principles<sup>4</sup> as outlined in Section 3.1.1 of the Scoping Memo. All stakeholders will benefit from the proliferation of electric

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<sup>2</sup> The three phases are:

- Phase 1—Policy matters dealing with the VGI Guiding Principles, VGI unidirectional flow cases, and rates policy for transit and commercial charging segments;
- Phase 2—Policy matters dealing with VGI bidirectional flow case, and proposals to address Electric Vehicle Supply Equipment infrastructure and Plug-in Electric Vehicle purchase barriers;
- Phase 3—Ratesetting matters dealing with tariffs and pilots for VGI unidirectional and bidirectional flow cases and tariffs to address rate financing.

<sup>3</sup> Scoping Memo, p. 16.

<sup>4</sup> The Guiding Principles are:

- Promote the deployment of safe and reliable AFV grid infrastructure designed to meet transportation and energy service needs while maximizing ratepayer benefits and minimizing costs to all utility customers.
- Target near-term solutions that complement the use of preferred energy resources and utilize the grid efficiently. Incorporate and enhance policies from other, related Commission proceedings to promote efficient program implementation and use of ratepayer funding.
- Enable and incorporate the full range of values from VGI in a new program as part of the Commission’s overall AFV efforts while remaining technology neutral and allowing for business model innovation.

vehicles. Plugged-in Electric Vehicles (PEV) owners will benefit from gas price savings since PEVs currently cost less to drive than gasoline vehicles for the same distance. The increase in electricity sales that a higher PEV market would create will be favorable to ratepayers.<sup>5</sup> The societal benefits such as lower green-house gas emissions, reduction of local air pollution, more energy security, and less dependence on foreign oil will also be realized.

ORA offers the following recommendations:

- ***Cost-effective incentives should be implemented to encourage the availability (or build out) of charging installations while ensuring a reliable AFV grid infrastructure.*** For example, the Los Angeles Department of Water and Power (LADWP) offers an Electric Vehicle Charger Rebate Program for home and workplace charging.<sup>6</sup> LADWP offers rebates to commercial customers for out-of-pocket expenses incurred for the purchase of PEV chargers for use by their employees.
- ***The potential benefits to all the ratepayers should be considered.*** Rate-based PEV pilot projects should have a reasonable probability of producing results that will benefit all ratepayers. The Commission should consider the specific costs and benefits to all California ratepayers from the adoption of PEVs in addition to the potential societal benefits.
- ***Small-scale pilots should be implemented before launching any large-scale projects.*** Small-scale pilots will allow valuable data to be collected and analyzed at a much lower cost than large-scale projects. The results from smaller scale pilot projects can be used to inform the need for any larger scale projects. Keeping PEV pilot projects on a smaller scale would be less costly to the ratepayers, help with the PEV goals of the State, and will be consistent with the Commission’s goal of “minimizing costs to all utility customers.” Small-scale pilots will also further the

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<sup>5</sup> Kwh sales when PEVs charge during off-peak periods would tend to lower rates for all ratepayers since much of the costs of utilities are fixed. In other words, when total costs are divided by more kWh, the per-kWh price would decrease.

<sup>6</sup> <https://www.ladwp.com>.

Commission’s policy of remaining “technologically neutral” by not favoring one technology over others.<sup>7</sup>

- ***Short-term pilots should be encouraged as opposed to long-term pilots.*** The PEV technology is changing rapidly. Long-term pilots will impede the Commission’s goal of remaining “technologically neutral” by favoring one technology over others. Additionally, relevant data can be gathered in three to five years.<sup>8</sup> Results of short-term pilots will encourage the use of PEVs by showing actual positive results, such as a reduction of GHG emissions, within a reasonable time-frame.

**B. Question 2. Should the Commission consider an increased role for the utilities in PEV infrastructure deployment and, if so, what should that role be? If the Commission should consider utility ownership of PEV charging infrastructure, how should the Commission evaluate “underserved markets” or a “market failure” pursuant to D.11-07-029? What else should the Commission consider when evaluating an increased role for utilities in EV infrastructure deployment?**

The Commission should consider an increased, but limited, role for the utilities in PEV infrastructure deployment.<sup>2</sup> The IOU ownership of Electric Vehicle Supply Equipment (EVSE) should be limited to small scale pilot projects in the beginning phase of the EVSE infrastructure development. This will ensure that the PEV market can be adequately studied while avoiding large costs associated with implementing large scale programs. The utilities’ role should also be limited at this time so that third party EVSE infrastructure development and ownership is not hampered. There should be ample competition in the EVSE infrastructure development, deployment and ownership.

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<sup>7</sup> One new technology being developed is wireless charging of electric vehicles, which would change the VGI infrastructure from what it is today. One article states that wireless charging electric vehicles may be on the market in the United Kingdom by 2017. (<http://www.autoexpress.co.uk/car-news/88327/wireless-charging-electric-cars-on-uk-roads-in-2017>)

<sup>8</sup> Typical PEV-related pilot programs last less than five years, such as the submetering pilots. A long-term program lasting 10 or more years should not be considered.

<sup>2</sup> ORA recommended against utility ownership of EVSEs in its original comments for the PEV proceeding (R.09-08-009). However, there could be a role for the IOUs that can provide value to further enhance PEV adoption and PEV market data-gathering.

Large-scale EVSE pilot projects may saturate the market with only one large scale IOU-owned EVSE infrastructure and hinder competition and third party owner market penetration.

In addition, utility shareholders should take some of the risk associated with PEV pilot projects. The costs of development and deployments of PEV infrastructure should not be borne solely by ratepayers. For example, Public Service Electric & Gas (PSE&G), New Jersey's largest electricity provider, will announce a program that provides up to 150 free electric car charging stations for workplace charging in New Jersey. It is estimated that PSE&G will spend \$400,000 on the 150 "smart" charging stations.<sup>10</sup> The cost of the two-year pilot program will be at the expense of PSE&G shareholders, not its customers.<sup>11</sup> If increased EVSE installations are effective in increasing PEV ownership and additional ZEV miles driven, utility shareholders may benefit by an increase in electricity sales because such shareholder-funded "green" activities can serve as a marketing tool that enhances the utility's image.

A study will be required to determine what constitutes "underserved markets" and "market failure." If not already done, surveys should be conducted to evaluate the primary cause(s) of underserved PEV markets and market failure. The survey should be conducted within the commercial and residential customer classes, as well as within different income brackets. ORA is not aware of any studies that have evaluated the causes for the lack of PEV ownership in locations that have low PEV ownership, such as multi-unit dwelling (MUDs) complexes. Lack of PEV ownership in MUDs may make MUDs appear to be "underserved markets," but it has not been shown that the lack of EVSEs in MUDs is the root cause of lack of PEV adoption, as opposed to lack of income to purchase a PEV or lack of awareness. Data gathered from surveys may be a starting

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<sup>10</sup> Cost of installation is at the work-owner's expense.

<sup>11</sup> [http://www.nj.com/business/index.ssf/2014/07/pseg\\_promotes\\_electric\\_vehicles\\_and\\_its\\_business\\_with\\_free\\_charging\\_stations.html](http://www.nj.com/business/index.ssf/2014/07/pseg_promotes_electric_vehicles_and_its_business_with_free_charging_stations.html).

point to determine if the lack of EVSE infrastructure is the main reason for underserved markets and market failure.

The rate of technological change related impacts on PEV pilot programs should be considered before implementing any pilot project. With technology changing rapidly, the Commission should avoid the implementation of large-scale and long-term PEV pilot projects so as to limit the risk of the technology in these pilot projects becoming obsolete, and to ensure the pilots themselves do not become obsolete as a result of better and new PEV technology. PEV pilot projects that become obsolete will result in a waste of ratepayer funds. The Commission needs to be aware of the prevailing technology in the PEV market and the diversity and applicability of the advances in technologies for PEV use.

**C. Question 3. What education and outreach activities must the utilities provide to support further customer PEV adoption? What existing resources are available for these activities and what additional resources are needed?**

Below are some specific actions that the utilities can take to further support customer adoption of PEVs:

- The utilities should provide potential PEV owners with evidence that clearly compares the cost of operating PEVs as compared to gasoline vehicles.<sup>12</sup> These may include actual testimonials from current PEV owners. This, in addition to providing clear information on the environmental and energy benefits, would encourage customers to buy PEVs.
- The utilities should inform customers about the types and costs of charging options available to them, including informing customers that using a regular household 110 Volt outlet is sufficient to charge their vehicles overnight.
- Shareholders should invest in advertising and commercials that promote PEVs in appropriate social media.

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<sup>12</sup> Total operating cost of a PEV is a fraction of the operating cost of a gasoline vehicle – electricity costs less per mile driven as compared to gasoline, and PEVs have a lower maintenance costs (e.g., PEVs do not need oil changes, or less frequent oil changes in case of PHEVs).

Below are existing resources available for marketing, education and outreach activities:

Public Utilities Code section 748.5(b) required the Commission to adopt a customer marketing, education, and outreach program (ME&O) for the utilities under the Greenhouse Gas (GHG) Cap-and-Trade Rulemaking, (R.)11-03-012. The ME&O program is called Energy Upgrade California (EUC).<sup>13</sup> EUC's aim is to maximize public awareness about generalized energy education and awareness, develop coherent and accurate messaging about

climate change, and inform ratepayers and small businesses about action they can take to reduce GHG emissions.<sup>14</sup> The Commission should take advantage of the efficiencies and resources available by coordinating the PEV ME&O into the EUC efforts:<sup>15</sup>

- Not all ratepayers read their bills or their bill inserts. The utilities should coordinate PEV ME&O efforts into the existing EUC ME&O program to engage ratepayers with quick facts about PEVs that can be made available to them on the EUC website, digital media, social media, and EUC community outreach events.
- The EUC website, digital media, social media, and community outreach activities will help utilities engage young generations.

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<sup>13</sup> The Energy Upgrade California is a program that educates and connects residents and small businesses to information, resources, and rebate programs Californians can utilize to reduce GHG emissions and lessen the impacts of climate change.

Resolution E-4611, pp.10-13. This Resolution reallocated ME&O funds previously approved for San Diego Gas and Electric Company (SDG&E), Pacific Gas & Electric Company (PG&E), and Southern California Edison Company (SCE) to a third-party central administration to fund the statewide GHG reduction education and outreach effort under EUC. Currently, the third-party central administrator is the Center for Sustainable Energy (CSE). However, the Commission is considering the ongoing need and involvement of a third-party central administrator in 2015 and beyond under Phase 2 of A.13-08-002. This issue is still pending but EUC will continue to be an effective channel of communication for Californians to access GHG reduction information in 2015 and beyond. See ORA Phase 1 Reply Brief for A.13-08-026, filed December 17, 2013, available at:

<http://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=85033984>.

<sup>15</sup> Application (A.)13-08-026 is the ongoing customer awareness proceeding that coordinates the ME&O program.



Targeting a younger market may ultimately be beneficial to PEV adoption and ownership because young people are likely to be the PEV drivers of the future. Younger people will also be able to educate their parents or guardians on environmental issues and other benefits from PEV ownership. To accomplish this, utilities may utilize the EUC's efforts that partner with community based organizations (CBOs), local governments, retailers, realtors, and small businesses to conduct seminars or presentations at elementary, middle, high school and college campuses about PEVs.<sup>16</sup> The utilities could expand EUC community outreach efforts by educating students at college career fairs during the school year. These types of educational outreach will be help to better inform the general public and the younger generation about the benefits of PEVs.

- EUC is conducting research and pilot messaging to small businesses in 2014-2015 to inform small businesses about GHG reduction.<sup>17</sup> Therefore, the utilities should utilize the current EUC small business outreach, research, and pilot messaging efforts as communication channels to help educate car dealers and their sales persons about the benefits of PEVs for the customer and to meet the Governor's energy and greenhouse gas emission goals. According to Green Car Report, car dealers are a challenge for electric-car sales.<sup>18</sup> One author claims he "knows why battery-electric vehicles aren't more popular: because dealership personnel aren't well trained or motivated to sell them."<sup>19</sup> Car-dealers need to be educated on PEVs so they can better inform their customers of their PEV options and not sway the customer to buy a gas powered vehicle instead of a PEV due to lack of PEV information.

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<sup>16</sup> See Center for Sustainable Energy Advice Letter 49.

<sup>17</sup> See Center for Sustainable Energy Advice Letter 49.

<sup>18</sup> [http://www.greencarreports.com/news/1093687\\_the-challenge-for-electric-car-sales-is-car-dealers-again](http://www.greencarreports.com/news/1093687_the-challenge-for-electric-car-sales-is-car-dealers-again).

<sup>19</sup> <http://wardsauto.com/blog/dealers-blamed-dismal-ev-market>.

**D. Question 4. How should the Commission mitigate the impact of demand charges, if at all, on entities pursuing transportation electrification?**

Large demand charges<sup>20</sup> should be avoided to encourage PEV adoption. SDG&E filed Application (A.) 14-04-014 for Approval of its Electric VGI Pilot Program in April 2014. Although ORA opposed SDG&E's request for ratepayer funded VGI infrastructure because of the large scale and long term nature of the pilot project, the type of VGI rate proposed by SDG&E in A.14-04-014 could be a good alternative to PEV tariff rate options with large demand charges.<sup>21</sup> In SDG&E's proposed tariffs for its VGI pilot project, there are no demand charges. Rather, customers will be charged on a volumetric basis for their PEV charging. The rates are differentiated substantially hour-by-hour and day-by-day based on system conditions. The rates will be higher if there are reliability concerns or a shortage of supply, but these are limited to a few hours per day. Therefore, the PEV charging will be economic if customers schedule their charging periods to avoid the higher rate hours. This rate option discourages undesirable charging during system constrained hours. This type of rate structure should be explored and evaluated by the IOUs based on their respective operational conditions and system cost structure.

**E. Question 5. How should the Commission identify and consider in this proceeding best practices achieved and lessons learned from current AFV pilot project results?**

Two important attributes needed to identify "best practices" and "lessons learned from current AFV pilots project results" are to have the information available to all parties and to have the information clearly stated. Results of all PEV-related pilot

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<sup>20</sup> A demand charge is a rate that is applied to a customer's highest demand. This can be non-coincident demand, in which case it generally is the customer's highest demand in a billing period. Or it can be coincident demand, in which case it is the highest demand in a certain TOU period. Generally it is expressed in \$/kW. It reflects the marginal cost of generation or distribution capacity.

<sup>21</sup> ORA is not endorsing the actual rates presented in SDG&E's filing at this moment because ORA is still evaluating SDG&E's VGI rates and will present its own testimony in that proceeding.

studies<sup>22</sup> should be provided to the Commission and other parties in the OIR through a “master e-mail list.” This would ensure that all parties in R.13-11-007 are aware<sup>23</sup> of all the PEV-related pilot project results without needing to subscribe to all the other PEV-related proceedings to obtain copies of the results. The knowledge of the results from the pilot projects will help the Commission and other parties to determine which PEV infrastructure design will better optimize PEV adoption and customers’ charging behavior. The notices of PEV workshops should also be included in this “master e-mail list” so that all parties are informed of PEV-related workshops ahead of time and not after-the-fact.<sup>24</sup>

The results of PEV pilot programs should be conveyed through concise and clearly written scientific reports, instead of a lengthy report. The scientific community publishes articles normally five to seven pages in length starting with the simplest case in one paper and then adding complexity in subsequent papers. The same approach should be utilized to present PEV pilot project results. This will make the “best practices” and “lessons learned” from PEV pilot projects easily readable and understandable by all parties in this proceeding and the general public who may not have the time or patience to read lengthy reports about the benefits of PEV.

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<sup>22</sup> These pilots are listed in the “AFV OIR Inventory” matrix filed by the utilities on June 13, 2014 as ordered in R.13-11-007.

<sup>23</sup> ORA was not fully informed about the detailed results of SDG&E’s pilot, conducted in R.09-08-009, to determine charging behavior based on different ratios of on-peak and off-peak rates.

<sup>24</sup> ORA only became aware of a Submetering Pilot Workshop, which occurred on July 23, 2014, two weeks after the event had occurred.

**IV. CONCLUSION**

ORA respectfully requests the Commission to consider ORA's suggestions stated above.

Respectfully submitted,

/s/ LISA-MARIE SALVACION  
LISA-MARIE SALVACION

Attorney For  
The Office of Ratepayer Advocates

California Public Utilities Commission  
505 Van Ness Avenue  
San Francisco, CA 94102  
Telephone: (415) 703-2069  
Facsimile: (415) 703-2262  
Email: [lms@cpuc.ca.gov](mailto:lms@cpuc.ca.gov)

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