

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

Order Instituting Rulemaking on the
Commission's Own Motion to Consider
Alternative-Fueled Vehicle Tariffs, Infrastructure
and Policies To Support California's Greenhouse
Gas Emissions Reduction Goals.

Rulemaking R.13-11-007

**GREEN POWER INSTITUTE AND COMMUNITY ENVIRONMENTAL COUNCIL
PREHEARING CONFERENCE COMMENTS**

February 19, 2014

Gregory Morris, Director
Tam Hunt, Consulting Attorney
The Green Power Institute
a program of the Pacific Institute
2039 Shattuck Ave., Suite 402
Berkeley, CA 94704
ph: (510) 644-2700
fax: (510) 644-1117
gmorris@emf.net

Michael Chiacos
Energy and Transportation Manager
Community Environmental Council
26 W. Anapamu St. 2nd Floor
Santa Barbara CA 93101
(805) 963-0583, ext. 110
mchiacos@cecmail.org

GREEN POWER INSTITUTE AND COMMUNITY ENVIRONMENTAL COUNCIL PREHEARING CONFERENCE COMMENTS

The Green Power Institute and the Community Environmental Council (GPI/CEC) respectfully submit these comments on **Administrative Law Judge's Ruling Setting Prehearing Conference and Requesting Comments**, mailed February 5, 2014.

The Green Power Institute is the renewable energy program of the Pacific Institute, a non-profit environmental and social advocacy group. Under the direction of Dr. Gregory Morris, the Green Power Institute performs research and provides advocacy on behalf of renewable energy systems and the contribution they make to reducing the environmental impacts of fossil-based energy systems. The Green Power Institute is located in Berkeley, California.

The Community Environmental Council (Council) is a member-supported environmental non-profit organization formed in Santa Barbara in 1970 and is the leading environmental organization in the Central Coast region of California. The Council is a member of the steering committee of the Plug in Central Coast (PCC), one of the EV Readiness regions funded by the Department of Energy and the California Energy Commission. The Council provided significant input into PCC's forthcoming EV Readiness Plan, and works frequently with local businesses, governments, and residents as they purchase EVs, build charging infrastructure, and develop EV friendly policies. The Council's state policy work is directly informed by experience with what has worked, or is likely to work, at the local level. The Council is almost unique in combining on-the-ground work on a number of energy and climate change-related issues with concurrent work on state and federal policy issues. The Council is also pioneering a number of on-the-ground activities to promote alternative transportation and EVs. In 2004, the Council shifted its primary focus to energy and transportation issues and is spearheading a regional effort to wean our communities from fossil fuels, on a net basis, during the next two decades. More information on the Council and its energy programs may be found at www.cecsb.org.

I. Discussion

A. General comments on ALJ Ruling

The ALJ Ruling (“ALJR”) directs parties to submit comments on a number of issues (ALJR p. 1):

This ruling schedules a Prehearing Conference (PHC) for February 26, 2014 to address the scope, schedule, and other matters for both Tracks 1 and 2 of this Rulemaking. This ruling also requests comments on questions regarding Track 1 Vehicle-Grid Integration (VGI) and provides an additional opportunity to present written comments following the December 4, 2013 Energy Division Workshop on VGI, Plug-in Electric Vehicle (PEV) and electric vehicle supply equipment financing.

We include some general comments in this section and answers to the ALJ’s questions in Section III below.

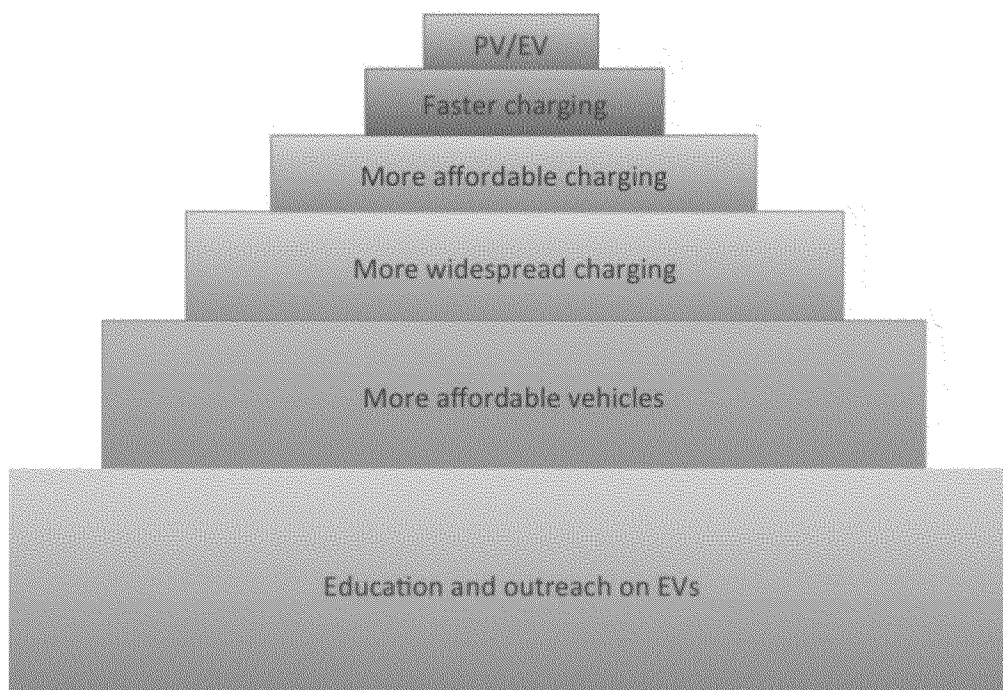
1. Third-party E&O efforts should be prioritized

We highlight again here the need for the Commission to focus on education and outreach (E&O) as the key hurdle to higher EV adoption. The OIR includes E&O in Track 2 but we have previously called for a separate track to focus on E&O because of its importance. We also have called for a third-party focus for E&O funding and programs, rather than a pure IOU model in this area. There is ample evidence to believe – including very recent evidence from the exorbitant proposed budgets for the IOU submetering pilots in this proceeding – that third parties could perform E&O at far lower cost than IOUs. At the least, a workshop should be held to examine in detail how E&O efforts should unfold in 2014 and whether third parties should be eligible to receive funding for E&O efforts.

Figure 1 reproduces our proposed “prioritization ziggurat.” This prioritization matches in some ways the conclusions of the Governor’s ZEV Action Plan, but we believe that education and outreach is the key obstacle at this time, whereas this is not prioritized in the

ZEV Action Plan in the same way; nor has it been prioritized in this proceeding to the degree we feel that it should be – and in particular not with a third party focus.

Figure 1. GPI/CEC’s proposed “prioritization ziggurat” to spur higher adoption of EVs in California.



The diagram is designed to show quickly and simply the largest barriers to more widespread EV adoption. While we acknowledge that EV adoption rates are growing fast at this point (more than doubling in each of the last two years), growth is occurring from a very small base. Early in the adoption curves of most technologies, rapid adoption rates are quite common. We also often see a substantial slowdown in adoption as the technology at issue becomes more widespread. The Governor’s 1.5 million ZEV goal by 2025 requires a consistent exponential growth rate. We calculate that EVs (BEVs and PHEVs) need to grow at an average 30% annual rate and FCVs need to grow at an average annual rate of 52% from a base of 1,000 vehicles sold in 2014, in order to reach 1.4 million and 100,000 vehicles on the road by 2025, respectively. While we are currently on, or even above, the

required growth curve to reach the 2025 goal for EVs, we need to do what we can to prevent major obstacles from slowing the growth rate.

2. Demand charges should be removed or reduced for DC Fast Chargers

We urge the Commission to prioritize in this proceeding an examination of appropriate demand charges for DC Fast Chargers (DCFCs). Demand charges are currently inhibiting market adoption of this critical tool for allowing EVs to expand their range and reduce “range anxiety” for new and existing owners. For example, PG&E has rates that eliminate demand charges while SCE and SDG&E still offer high charges that can comprise the majority of monthly costs for DCFC operators. SCE and SDG&E should explore offering a rate similar to PG&E’s A-1 rate schedule. Hawaii has recently started offering EV rates without demand charges and we urge the Commission to consider Hawaii as a good model.¹

DCFCs are not only costly to procure and install, they can be extremely costly to operate due to their impact on local utility infrastructure. While tariffs vary, many commercial site hosts find that DCFC electricity loads have dramatic impacts on their bill, reflecting utility demand charges to deliver the high power output to Fast Chargers that utilize 480 volt three-phase DC power. (Note that an emerging class of Fast Chargers can operate with 208 volt single phase power which pull less than 20 kW from the grid, which typically falls below the threshold for demand charges.)

The demand charges can be prohibitively costly for site owners, particularly when DCFC utilization is relatively infrequent. For example, when a Fast Charger is utilized only once in a summer month, the demand charge will be a substantial portion of the overall bill. Summer costs are significantly higher than winter costs, and both winter and summer should be taken

¹ <http://www.heco.com/heco/hidden/Hidden/CorpComm/Hawaiian-Electric-Companies-offer-new-rates-for-public-EV-charging?cpsextcurrchannel=1>.

into account when setting rates across the whole year (there are no fall or spring rate variations).

We urge the Commission and IOUs to consider in this proceeding how to modify demand charges for DCFCs in order to help the business case become more feasible.

II. Comments on Summary Report

We feel that the summary report accurately reflects the discussions at the workshop.

III. Comments on questions included in ALJR

The ALJR invites comments on the following questions:

1. What programmatic changes can be made to support VGI as a resource within existing or proposed state energy programs and policies, such as demand response, resource adequacy requirements, energy storage, interconnection, and net energy metering?

Interconnection is an area that will require more focus for successful VGI. There is no tariff-specific procedure for interconnecting energy storage devices at this time, including for standalone storage or VxG. The Staff White Paper calls for Wholesale Distribution Access Tariff (WDAT/WDT) modification (White Paper, p. 29) and we agree that modification of existing tariffs will be beneficial for VGI and EV connection. However, we recommend that the Commission instead focus on modifying Rule 21, the state-jurisdictional interconnection tariff that includes wholesale and retail interconnections. The Commission has a proceeding,

R.11-09-011, already focused on Rule 21 reform, so adding a VGI track would not be difficult.

We also note that the recent FERC update to the Small Generator Interconnection Procedures (SGIP) specifically included energy storage. The WDAT tariff is FERC-jurisdictional so these changes to SGIP will soon be reflected in the WDAT. These changes make energy storage eligible for Fast Track wholesale interconnection, similar to renewables like solar and wind. Regardless, the Commission will still need to focus on revising Rule 21 to allow for VxG interconnection because the FERC ruling did not provide any guidance on vehicle energy storage (as opposed to stationary energy storage facilities).

We also recommend that the Commission prioritize efforts to quantify the value provided to the grid by EVs, particularly Demand Response value. The White Paper states, and we agree (p. 33):

Utilities should develop tariffs that immediately allow PEV fleets to test the value of vehicles as a DR resource. While the exact DR value of controlled charging has not been quantified, existing values can serve as a reasonable proxy until the utilities can determine PEV-specific estimates that evaluate integration benefits. After successful implementation with fleets, utilities should explore implementation in workplace and residential fleets. SDG&E's ongoing Experimental Rate Pilot and PG&E's current Demand Response PEV Pilot may help evaluate the benefits with V1G.

The White Paper also provides a number of estimates that are very promising in terms of the ratepayer benefits from EV charging and grid reliability, specifically on Demand Response. ChargePoint CEO Richard Lowenthal suggested at the December workshop that this grid value from EV charging may allow California utilities to offer free charging for EV owners.

As we wrote in comments on the workshop, we are intrigued by this suggestion and we strongly support the Commission's additional work in this area, as required to firm up the preliminary estimates and to determine if a free or partially free charging may be possible statewide. Free or partially free charging – mirroring Tesla's existing free charging model for their vehicle owners – would of course be a large additional incentive for drivers to buy EVs.

2. What immediate, near-term actions should the Commission undertake to support the development and implementation of VGI use cases and applications?

GPI/CEC agree with the White Paper that V1G use cases (use cases 1-3) should be prioritized over V2G (White Paper, p. 31) and that most VGI benefits can be realized, at least qualitatively, with V1G alone. It's mostly a matter of magnitude of benefit, with V2G realizing a larger magnitude of services per vehicle, but with many hurdles to achieving V2G, as the White Paper describes.

We believe that use cases 1-3 should be worked on concurrently, with standing working groups created and supervised by the Commission for each use case, and members drawn from stakeholders in this proceeding. This model has been quite effective in the Rule 21 proceeding at the Commission.

3. In consideration of the Use Case prioritization proposed in the Whitepaper, are there near-term actions that the Commission should avoid in order to not preclude progress on Use Cases considered to be more complex?

We have no response to this question at this time.

IV. Conclusion

GPI and CEC urge the Commission to adopt the recommendations discussed above.

Dated: February 19, 2014, at Berkeley, California.

Respectfully Submitted,



Gregory Morris, Director
The Green Power Institute
a program of the Pacific Institute
2039 Shattuck Ave., Suite 402
Berkeley, CA 94704
ph: (510) 644-2700
e-mail: gmorris@emf.net