



BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

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<p>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.</p>	<p>FILED PUBLIC UTILITIES COMMISSION AUGUST 20, 2009 SAN FRANCISCO, CALIFORNIA RULEMAKING 09-08-009</p>
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**REPLY COMMENTS OF THE ENVIRONMENTAL COALITION
ON ALTERNATIVE-FUELED VEHICLE POLICIES**

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For THE ENVIRONMENTAL COALITION

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I. Introduction

As directed in the Order Instituting Rulemaking, the Environmental Coalition¹ submits these reply comments on policy objectives for alternative-fueled vehicles. In opening this rulemaking, the California Public Utilities Commission (Commission) recognized the important role of plug-in electric vehicles (PEVs) in California's Smart Grid policies. PEVs will also have a significant role in improving air quality and reducing greenhouse gas emissions and oil dependency.

In opening comments, the Environmental Coalition set forth policy objectives for this proceeding, which we reiterate here:

- Reduce barriers for customers to “fuel switch” through plug-in electric vehicles.
- Ensure the environmental benefits of plug-in electric vehicles are maximized.
- Minimize electricity grid impacts and maximize potential grid benefits.
- Ensure cost-effective service for utility customers.

Our reply comments address two issues that need further clarification in light of other parties' comments, namely Low Carbon Fuel Standard credits and the use of renewable energy. Additionally, after the opening comments were filed, the Governor signed into law Senate Bill 695. We offer below some considerations regarding this new law.

II. Additional Comment on Limited Set of Issues

In opening comments, the Environmental Coalition responded to nearly all questions posed in the Order Instituting Rulemaking.² Below, we offer further observations on two topics: Low Carbon Fuel Standard Credits and Use of Renewable Energy. The Environmental Coalition

¹ The Environmental Coalition includes the Natural Resources Defense Council, Friends of the Earth, and the Center for Energy Efficiency and Renewable Technologies.

² *Comments of the Environmental Coalition on Alternative-Fueled Vehicle Policies*, October 5, 2009.

urges the Commission to consider how any specific decisions it makes on these issues comport with the policy objectives outlined above and in our opening comments.

A. Low Carbon Fuel Standard Credits

In opening comments, opinions on who should receive the low carbon fuel standard (“LCFS”) credit vary widely. Some of the utilities argue the credits should accrue only to them (e.g., Sacramento Municipal Utility District).³ Others suggest the credits should be awarded to load serving entities (Southern California Edison)⁴ or retail providers (BP America).⁵ Some industry participants likewise argue the credits are rightly theirs (Toyota).⁶ Others, including advocacy groups, contend the credits belong to utility customers (Better Place, The Utility Reform Network, and Division of Ratepayer Advocates).⁷

The Environmental Coalition reiterates its position from Opening Comments that the Commission should consider the use of LCFS credits as a mechanism to, broadly, help minimize or lower costs for utility customers and improve overall environmental performance. Revenue from LCFS credits – whether it is generated by utilities or by third parties under the LCFS system – should be used to:

- mitigate costs by providing funding for grid upgrades and load management systems needed to meet PEV load;⁸
- fund programs that: shift customers’ electric vehicle charging off-peak; expand distributed or household renewable generation to charge plug-in electric vehicles (PEVs); and/or encourage the most energy efficient PEVs to be used;
- keep costs low for all utility customers (e.g., by returning revenue).

³ Sacramento Municipal Utility District, *Response and Opening Comments*, October 5, 2009, p. 7.

⁴ Southern California Edison, *Response and Opening Comments*, October 5, 2009, pp. 46-69.

⁵ BP America, *Comments*, October 5, 2009, pp. 5-6.

⁶ Toyota, *Comments*, October 5, 2009, responses to questions 33 and 34;

⁷ Better Place, *Opening Comments*, October 5, 2009, p. 21; The Utility Reform Network, *Comments*, October 5, 2009, p. 11; Division of Ratepayer Advocates, *Comments*, October 5, 2009, p. 18.

⁸ As noted in our Opening Comments, we believe load management systems – whether they are on the utility side of the meter or residential side of the meter – are a critical component to minimizing overall grid impacts and costs and should be covered by utilities (i.e., in the rate base) as well as by LCFS credits.

All of the above can help lower costs for utility customers. In principle, if the recipients of the LCFS credits are accomplishing the above goals to a sufficient level – as determined by the Commission – the Commission can be flexible in the use of any additional credits including, but not limited to, helping fund capital investments in charging infrastructure.

We also agree with the many parties who point out that the LCFS credit issue is a particular priority because LCFS credit generation will begin in 2011.⁹ Providing a forum for discussion of this issue, and how it is affected by Commission regulation, will generate important information that the California Air Resources Board (CARB) can consider as it addresses LCFS credit in its rulemaking process. Over the next several months, the Commission should work with CARB, the California Energy Commission (CEC), utilities, third parties, consumer advocates, and environmental non-governmental organizations to identify the ways LCFS credit can be used to support better environmental outcomes and more reliable, efficient, and cost-effective service. The Commission should work with CARB and CEC to ensure these criteria are reflected in the LCFS regulatory language. Establishing criteria based on the above principles is the fairest, most transparent way to award LCFS credits.

The Commission (within the bounds allowed by precedent) has the jurisdiction to and should exercise its authority to ensure that the investor-owned utilities (IOUs) use LCFS credits in a manner consistent with the above goals. With regard to third party infrastructure providers, whether they should receive LCFS credits depends on whether it can also be assured that they would use the LCFS credits in the manner described above – either through the Commission’s own jurisdiction and requirements over third parties and/or through CARB’s LCFS regulations.

⁹ California Air Resources Board (CARB), “Proposed Regulation to Implement the Low Carbon Fuel Standard - Staff Report: Initial Statement of Reasons (ISOR), Volume 1.”

If the Commission finds it has jurisdiction over third parties and, under this jurisdiction, can assure that the credit value is used to achieve the goals set forth above, then the Environmental Coalition believes it is appropriate to allow LCFS credit value to go either to utilities or third-parties, based on factors that will be addressed in further detail in the LCFS proceedings.¹⁰

Under this approach, utilities or third parties would be awarded LCFS credits, so long as they minimize systems impacts and use the value to minimize or lower costs for utility customers and improve environmental performance. As noted above, the Commission can be flexible in the use of additional LCFS credits so long as these goals are met. Absent these basic safeguards, however, the LCFS credits would largely benefit third parties or utilities without any guarantees that the value would be used to keep costs low for all customers or that potential grid impacts would be minimized. In essence, the LCFS credits could end up creating incentives for business models that work against the interests of customers and the Commission's mission of ensuring reliable, efficient, and cost-effective electricity service.

Finally, we do not agree with the position advocated by Toyota that car companies should receive LCFS credit. The purpose of the LCFS is to create incentives for the provision of low carbon fuel. This principle was articulated and addressed early-on in CARB's LCFS regulatory process. Siphoning off that incentive by giving credit to automakers would reduce the benefits of the LCFS, which seeks to address barriers in the fuel markets as noted by Sperling and Yeh (2009).¹¹ Moreover, automakers are eligible to receive credit for their investment in vehicle

¹⁰ To clarify, we define third-party providers broadly as meaning parties other than investor owned or publicly owned utilities that may develop charging infrastructure and/or offer services to plug-in electric vehicle customers. These presently include companies like Better Place and Coulomb Technologies. However, third-party providers could also refer to Energy Service Providers (ESPs) as well as Community Choice Aggregators (CCAs) that potentially offer similar services or have similar business models.

¹¹ Sperling, D. and S.L. Yeh, 2009. "Low Carbon Fuel Standards". In: *Issues in Science and Technology*, Winter 2009, pp. 57-66.

technology under other state programs that create incentives for or require the production of low carbon, low emission, and/or fuel efficient vehicles, including the State's Clean Cars Law (Pavley), the Zero Emission Vehicle Program, and AB 118's Alternative and Renewable Fuel & Vehicle Technology Program. The correct mechanism to address the current, higher up-front costs related to PEVs is through consumer vehicle incentives, manufacturing incentives, federal and state support for RD&D in advanced vehicle technologies and components such as battery development, as well as policies such as a fee-bate system. All of these approaches are currently being pursued or explored in other venues.

B. Ensuring Use of Renewable Energy for Additional Load Created by Electrification

Several parties (e.g., Pacific Gas & Electric, SCE, Sempra, and Better Place) including the Environmental Coalition acknowledge that PEVs have the potential to deliver greenhouse gas (GHG) reductions, environmental, and societal benefits to Californians.¹² Moreover, the utilities acknowledge that there are systems benefits associated with PEV use that can come from load shifting/leveling and the use of off-peak power, although often without explicitly acknowledging that much of this power could come from renewable sources. However, the utilities also express concerns that load growth due to electrification will increase procurement requirements for Renewable Portfolio Standard (RPS) compliance and could also increase system costs.¹³

As the Environmental Coalition noted in our opening comments, the increased utilization of renewable generation by PEVs will improve the displacement of transportation-related emissions by utilizing power with substantially lower GHG emissions than the average

¹² PG&E, *Opening Comments*, pp. 1, 10, 22, & 29; SCE, *Opening Comments*, pp. 2, 46, 47; Sempra, *Opening Comments*, pp. 3, 6, & 34; Better Place, *Comments*, pp. 19, 20; Silicon Valley Leadership Group, *Comments*, p.8. Also see comments filed on the CPUC Staff's May 22, 2009 White Paper.

¹³ PG&E, *Opening Comments*, p. 31; SCE, *Opening Comments*, p.46; Sempra, *Opening Comments*, p. 33; SMUD, *Comments*, p.16.

California grid mix. Additionally, the use of off-peak power largely sourced from renewable power sources has the potential to improve the system load factor and reduce the need for the cycling of power plants.¹⁴ The greater utilization of existing baseload capacity should allow for faster cost recovery on assets increased plant efficiencies.¹⁵ This last observation has also been noted by SCE and Sempra.¹⁶

If California is to achieve its AB32 and longer term climate goals,¹⁷ the two most significant GHG emissions sources in the state – the electrical utility and transportation sectors – will both need to achieve deep emission reductions by 2050.¹⁸ Research exploring GHG reduction scenarios for transportation indicates that, in all scenario cases, plug-in hybrid electric vehicles (PHEV) and ZEV (zero emission vehicles) technology – including EVs – will need to play a significant role if California is to succeed in meeting its 2050 targets. Moreover, to achieve the State’s greenhouse gas reduction targets, the PHEV/ZEV fleet must continuously improve in efficiency over time and be powered from an electrical grid that itself is progressively and deeply de-carbonized during the approach to 2050.¹⁹ This conclusion points to a need for state policy and regulation to move away from the traditional thinking which views the electrical grid and transportation as being distinct from one another, and towards recognition that these two

¹⁴ Improving the system load factor allows for more efficient utilization of existing infrastructure and can reduce the need for more costly peaking infrastructure. cf CEERT February 9, 2009 *Comments* (R. 08-12-009), at p.15.

¹⁵ Environmental Coalition, *Opening Comments*, citing NREL and the U.S. DOE Electricity Advisory Committee, pp. 13-16.

¹⁶ SCE, *Opening Comments*, p. 40; Sempra, *Opening Comments*, p. 25.

¹⁷ Executive Orders S-3-05, S-14-08, & S-21-09 <http://gov.ca.gov/executive-order/1861/>, <http://gov.ca.gov/executive-order/11072>, and <http://gov.ca.gov/executive-order/13269>

¹⁸ See, AB 32 Scoping Plan.

¹⁹ State Alternative Fuels (AB 1007) Plan; Alternative and Renewable Fuels and Vehicle (AB 118) Program; Yang et. al., 2008, *Identifying Options for Deep Reductions in Greenhouse Gas Emissions from California Transportation: Meeting an 80% Reduction Goal in 2050*. See also presentations to the October 28, 2009, CARB Public Workshop on 2050 Automotive Sector Greenhouse Gas Emissions Modeling Assumptions and Scenarios: The Role of Zero Emission Vehicles. (i) Joshua Cunningham, ARB Staff (ii) Simon Mui, NRDC (iii) Karen Webster and Marc Melaina, NREL and, (iv) Joan Ogden, UC-Davis ITS, to be made available at: <http://www.arb.ca.gov/msprog/zevprog/2009zevreview/2009zevreview.htm>,. Also see HM Treasury, October 2007, *The King Review Of Low-Carbon Cars*.

sectors will become more tightly integrated and that their emissions as well as their benefits need to be understood in the aggregate.

The Commission should create incentives to pair growth in PEVs with production and use of renewable electricity. Moreover, in encouraging and ensuring that consumers shift their vehicle charging to off-peak hours, and by matching the increasing PEV load to the availability of variable renewables, the Commission will also be furthering the state's demand response, demand-side management, energy efficiency, renewable, and climate goals. The Commission also can at the same time recognize the contribution of renewable generation to resource adequacy. Using more renewable power sources is the best way to ensure that a growing PEV fleet achieves the greatest overall reductions and to minimize any additional emissions from the electricity sector.²⁰

C. Senate Bill 695

SB 695 prohibits, for a certain period of time, the imposition of mandatory or default time-variant pricing for residential electricity customers, and thereafter allows it only under certain conditions. Given the importance of ensuring that PEVs avoid charging during peak periods of the day, and given the ability of time-variant pricing to help reduce demand during such times, we suggest that the Commission explore whether electric transportation is a non-residential category that would fall outside the range of SB 695's prohibition. One basis for differentiating electric transportation is the likely need for a separate meter or submeter,²¹ even in the absence of time-variant pricing; these meters would facilitate a pricing structure distinct from residential service. In either case, as discussed in our opening comments, the Commission

²⁰ ICCT also sees an explicit connection between the charging of PEVs that is complimentary to the state's renewable energy goals. ICC, *Comments*, October 5, 2009, cover page and p. 1.

²¹ To reduce barriers and keep costs to PEV customers low, we encourage the Commission to fully explore the broad range of submeter technology and ownership models available.

should consider a wide variety of options for promoting PEV charging that both avoids the need for building new electric generation and facilitates charging during optimal times such as when overall demand is low and/or renewable energy is available.

D. ERRATA

The following is a correction to our opening comments “Environmental Coalition Opening Comments on Alternative-Fueled Vehicles,” filed on October 13, 2009

p. 7, number 5. The language should read: “Require third-parties to coordinate with utilities so there are no adverse grid impacts from charging at privately owned facilities, and to ensure that third party providers ~~use renewable energy to charge vehicles are abiding by a limited set of rules and procedures governing their interaction with utilities and the provision of vehicle charging.~~ Commission rules governing energy service providers may be a good model here.”²²

III. CONCLUSION

The Commission should endorse the policy objectives recommended by the Environmental Coalition and other groups:

- Reduce barriers for customers to “fuel switch” through plug-in electric vehicles.
- Ensure the environmental benefits of plug-in electric vehicles are maximized.
- Minimize electricity grid impacts and maximize potential grid benefits.
- Ensure cost-effective service for utility customers.

The Commission should address LCFS credit issues over the next several months. LCFS credits can be an important tool to help minimize costs for utility customers (including the provision of funding for upgrades and improvements to the grid), and improve environmental performance. LCFS credits should be allocated such that they assist in achieving the goals outlined above. The Commission should also focus on creating incentives to pair growth in PEVs with production and use of renewable electricity. It should do this with an eye towards furthering the state's

²² Notwithstanding the fact that the Environmental Coalition recommends that all providers of electricity as transportation fuel be responsible for and encouraged to “use renewable energy to charge vehicles” in a manner that pairs it with the growth in the PEV fleet.

demand response, demand-side management, energy efficiency, renewable, resource adequacy and climate goals. Doing so will ensure that the environmental benefits from PEVs are maximized.

Finally, the Commission should also explore whether electric transportation is a non-residential category that would fall outside the range of SB 695's prohibition against requiring time variant pricing.

Dated: November 6, 2009

Respectfully submitted,



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For THE ENVIRONMENTAL COALITION

CERTIFICATE OF SERVICE

I, Jody London, certify that I have, on this date, served a copy of “Reply Comments Of The Environmental Coalition On Alternative-Fueled Vehicle Policies” on all known parties to R.09-08-009 by transmitting an e-mail message with the document attached to each party named in the official service list, and by serving a hard copy on the Administrative Law Judge.

I declare under penalty of perjury, pursuant to the laws of the State of California, that the foregoing is true and correct.

Dated November 6, 2009 in Oakland, California.

A handwritten signature in blue ink that reads "Jody London". The signature is written in a cursive style with a long horizontal flourish at the end.

Jody London

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