



March 3, 2010

Mr. Gary Collord
California Air Resources Board
Sacramento California
via email at gcollord@arb.ca.gov

Subject: Transportation Electricity and the Renewable Electricity Standard

Dear Mr. Collord:

The International Council on Clean Transportation (ICCT) appreciates the opportunity to comment on the framework of the Renewable Electricity Standard (RES). The goal of the ICCT is to dramatically improve the environmental performance and efficiency of personal, public and goods transportation in order to protect and improve public health, the environment, and quality of life. We are writing to recommend that the California Air Resources Board (CARB) include the amount of electricity used to charge electric vehicles when calculating the amount of renewable electricity that is required under the RES for the following reasons:

- Renewable electricity will facilitate long-term transportation sector greenhouse gas (GHG) reductions;
- Environmental benefits will likely be an important factor in encouraging “early adopters” of electric vehicles (EVs), including both plug-in electric hybrid vehicles and pure electric vehicles; and
- Including transportation electricity load in the RES will not noticeably change the cost of owning and operating an EV.

California has set an ambitious 2050 GHG goal of about 90% reduction per capita, and the transportation sector is the largest source of greenhouse gas emissions in California. Governor Arnold Schwarzenegger’s Executive Order S-21-09 notes that, “increased use of renewable electricity is one of the most promising means to reduce greenhouse gas emissions in the transportation sector and meet California’s 2050 greenhouse gas reduction goals.” EVs using current grid electricity would reduce greenhouse gas emissions by about two-thirds (based on marginal electricity) compared to conventional vehicles and fuels. While this is an important reduction, a pathway for longer-term reductions based on lower-carbon electricity is also needed.¹ Increased use of renewable energy will also reduce ozone and smog-forming pollutants.

The environmental benefits of including transportation electricity under the RES will reinforce perceptions of environmental value for EVs, which have been a major marketing force for the

¹ See comments and references by the Center for Energy Efficiency and Renewable Technologies at <http://www.arb.ca.gov/energy/res/comments/ceertmills-attach.pdf>

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first generation of hybrid vehicles.² On the other hand, an exemption could create consumer confusion over the environmental attributes of electric vehicles. If consumers believe that electricity for EVs is not as clean as electricity generated for other more familiar uses, this perception could undercut a primary selling point for early adopters and work at cross purposes to the Zero Emission Vehicle program.

In addition, the incremental cost of including transportation demand in the RES would be small and the potential electricity cost increases are unlikely to affect EV purchase decisions. There would be no price difference in the near term since the initial RES framework does not start ramping up from the current 20 percent standard until 2016. In the future, the incremental costs for EV users could range from one to several dollars a month, which could be offset by cost savings for renewable electricity that should occur under California's cap and trade system and Low Carbon Fuel Standard (LCFS).³ And in any case, potential EV buyers are not likely to be swayed by such small differences in operating costs.⁴

Some utility companies have expressed concerns that they would bear an additional RES burden as electricity demand increases for transportation purposes. We expect that there would be little near term impact. And while the added demand of charging electric vehicles will require utilities to procure additional renewable electricity over the long term, at that point cost savings under cap and trade and the LCFS from renewable energy may mitigate or offset any added costs. In any case, the California Public Utilities Commission, in collaboration with CARB, is the appropriate venue to determine how to fairly allocate any future net costs or benefits, not an upfront RES exemption for transportation sources.

In conclusion, we encourage CARB to include electricity used to charge electric vehicles under the 33 percent Renewable Electricity Standard. Please feel free to contact me at Yulee@theicct.org or Ed Pike of the ICCT at Ed@theicct.org or (415) 202-5753 if you have any questions regarding our comments.

Sincerely,



Dr. Alan C. Lloyd
President, International Council on Clean Transportation

² See Ken Kurani presentation on early hybrid buyers dated March 21, 2003 http://www.arb.ca.gov/cc/ccms/meetings/042108/4_21_mkt_mech_4_kurani.pdf and de Hann, P., Duthaler, C., Peters A., Smieszek, T. 2006 "Characteristics of Buyers of hybrid Honda Civic IMA)

³ Assumes 20-40 miles per day on electricity for PHEV, 50-100 miles per day for BEV; 0.25 KWhr/mile; reference price of \$0.09 cents per KW-hr; and \$0.01/kw-hr premium (across all electrons) based on CPUC study available at <http://www.cpuc.ca.gov/NR/rdonlyres/B123F7A9-17BD-461E-AC34-973B906CAE8E/0/ExecutiveSummary33percentRPSImplementationAnalysis.pdf>

⁴ Ken Kurani presentation dated March 21, 2003 http://www.arb.ca.gov/cc/ccms/meetings/042108/4_21_mkt_mech_4_kurani.pdf