



January 25, 2012

To: California Air Resources Board

From: Eileen Wenger Tutt, Executive Director

Re: **Proposed Amendments to "LEV III", the California Greenhouse Gas and Criteria Pollutant Exhaust and Evaporative Emission Standards and Test Procedures, and to the On-Board Diagnostic System Requirements for Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles, and to the Evaporative Emission Requirements for Heavy-Duty Vehicles**

**Proposed 2012 Amendments to the California Zero Emission Vehicle Regulation
Proposed Amendments to the Clean Fuels Outlet Regulation**

Introduction

The California Electric Transportation Coalition (CalEETC) appreciates this opportunity to provide comments to the California Air Resources Board (CARB) on the three topics, agenda item number 12-1-2, being considered by the Board January 26-27, 2012. CalEETC is committed to the successful introduction and large-scale deployment of all forms of electric transportation including plug-in electric vehicles, transit buses, port electrification, off-road electric vehicles and equipment and rail.

CalEETC generally supports CARB's efforts to ensure that low-emission vehicle options are available to consumers and that fueling stations support alternative-fuel vehicles are publicly available. CalEETC believes that it is essential our state move away from near-total dependence on a single fuel in the transportation sector, the Zero-Emission Vehicle (ZEV) and Clean-Fuels Outlet (CFO) programs are key policy drivers in the efforts to end the dependence. The current reliance on oil in the transportation sector is harming our economy, our environment and our national security. California's leadership on clean cars, in particular in support of cars that reduce our dependence on oil, has spurred action by other states and regions. In the case of LEV III, CARB's leadership has resulted in action at the federal level at a critical juncture; CalEETC applauds CARB's success working with our federal government.

CalEETC has participated in a number of workshops and has met with CARB staff throughout the development of the amendments being proposed for agenda items 12-1-2. CARB staff has been accessible to stakeholders and has worked to balance the need to negotiate with the federal government on LEV III and continue to pursue California's commitment to the ZEV and CFO programs. It is important to recognize that the agreements with our federal government regarding LEV III should not interfere with California's strong commitment to zero-emission vehicles that use alternative fuels and the programs that help to ensure alternative fuels are available in California.

Comments regarding LEV III Amendments

CalEtc commends the work of the CARB Board Chair and staff to negotiate with the federal government to set clean car standards for the nation. National standards are critical from an economic and environmental perspective.

CalEtc is working with U.C. Berkeley to evaluate the macro-economic impacts of plug-in electric vehicles (PEVs) in California. Our preliminary runs are quite favorable but we were unable to get the final assessment done in time for the January Board hearing. Based on the research conducted thus far we appreciate the opportunity to provide feedback on the cost estimates for PEVs that are included in the LEV III cost-effectiveness assessment.

Although we largely agree with the methodology that CARB staff utilized, we are concerned that the incremental price associated with PEVs out to 2025 is not reflective of a number of price mitigating technology factors and policies at the state and national level. Although the CARB staff has indicated that there are factors that mitigate price, none of these factors were included in the CARB assessment. The result is an incremental price that is significantly higher than CalEtc believes is accurate.

Some benefits of PEVs that have been assessed include:

- A pure ZEV fleet of vehicles would save about \$1.6 Billion per year in societal damages, relative to a fleet of vehicles meeting current standards. This equates to about \$3K-\$4K per vehicle over the lifetime of the vehicle.¹
- The federal government does not count upstream emissions when calculating the corporate average fuel economy (CAFE) rating for PEVs. The incremental value of the PEV CAFE benefit is approximately \$4,200 per battery-electric vehicle.²
- Intensive analysis of the retail market for vehicles allowed access to high-occupancy vehicle lanes, even when there is only one passenger, indicates that such vehicles command a premium of \$4K. These studies also indicate an incentive effect of 20 percent higher aggregate demand due to the HOV access.
- Reduced vehicle maintenance costs for pure battery-electric vehicles are approximately \$1,200 per vehicle over its lifetime.³

¹ The Road to Clean Air, American Lung Association, 2011

² Simon Mui. NRDC. To estimate the value of the zero upstream credits for a BEV/PHEV/FCV for a manufacturer, a marginal cost curve for credits was developed based on the incremental cost estimates from the U.S. EPA Technical Assessment Report (November, 2011). The high case indirect cost multiplier was removed from this value to achieve a value of about \$34 for each gram per mile reduction in order to be conservative in MY2025. It is assumed that upstream emissions credit for a BEV is approximately 125 g/mi. Based on the value of each g/mi reduction, an estimate of \$4,200 was derived for a BEV. Assuming a PHEV with 40 mile range achieves 60% of miles traveled on electricity, this credit would be worth approximately \$2,500 for a PHEV with 40 mile range.

³ Plugin Cars, 2011. PluginCars.com. Zach McDonald. <http://www.pluginCars.com/ford-pushes-key-marketing-message-electric-cars-lower-maintenance-costs-106793.html>

- The Low Carbon Fuel Standard credit value for electricity used in PEVs must be passed on to PEV owners as a result of CARB's adopted amendments in December, 2011. The value of this credit ranges from \$75-\$300 per vehicle per year, \$750-\$3,000 over the life of a PEV.⁴

CalEtc recommends the CARB staff include the value of these and other benefits associated with PEVs when assessing the incremental price associated with PEVs.

Comments Regarding ZEV Amendments

CalEtc believes the ZEV mandate is a critical policy in the effort to reduce our dangerous dependence on oil in the transportation sector fuel. As indicated above this dependence is damaging to our economy and to our environment. The ZEV mandate also contributes to the State's goals to reduce greenhouse gas emissions and results in measurable reductions in criteria and toxic pollutants. For these reasons, CalEtc has long supported the ZEV mandate.

CalEtc is concerned about and does not support the recommendation to allow for credits resulting from over compliance with LEV III greenhouse gas obligations to count as credits in meeting the ZEV obligations. As indicated above the ZEV program is more than just a greenhouse gas reduction regulation, it is a key policy in reducing our dependence on oil. The ZEV mandate is a policy driver intended to accomplish needed action beyond the LEV III program. Although CalEtc understands that a very few auto makers may benefit from allowing LEV III credits to satisfy a portion of their ZEV obligation, such a provision undermines the efficacy of the ZEV mandate at a very critical time. California is benefiting from the introduction of PEVs and is a target state for car makers producing PEVs. The greenhouse gas benefits of PEVs are substantial, but the value of the ZEV program and PEVs goes well beyond greenhouse gas benefits. CalEtc recommends the Board reject this provision, which so clearly benefits only a few auto makers while undermining a critical policy on the path to energy independence in the transportation sector.

The Staff Report, *2012 Proposed Amendments to the California Zero Emission Vehicle Program Regulations*, indicates that CARB staff cannot predict performance results based on vehicle attributes. Over the next 2-3 years, CARB staff committed to studying PEV user behavior to refine an attribute-based methodology that can better correlate with desirable zero-emission vehicle miles travelled and emission reductions. CalEtc supports a data-driven approach to regulation and CARB staff's commitment to studying PEV data with the intention of improving the current methodology for ZEV credits. The next few years will be critical to better understanding PEV driving patterns and behavior. Some of the data gathered to date indicates that annual ZEV miles driven by a plug-in hybrid vehicle do not differ significantly from annual ZEV miles driven by a pure battery-electric vehicle. Further, there is a significant body of data that shows that pure battery-electric vehicles with a 100-mile range can meet 75%-90% of driving needs for vehicle

⁴ Fuel Electricity and Plug-in Electric Vehicles in an LCFS. University of California, Davis. Chris Yang. June 23, 2011



owners and that younger drivers are more willing to consider car-share programs. The collection of this kind of data could result in improvements in the ZEV credit methodology.

Comments Regarding the CFO Amendments

CalEETC supports the CARB staff recommended amendments to the Clean Fuels Outlet regulations. These regulations are essential to ensure that clean alternative fuels are available for vehicles that need these fuels.

In the case of electricity, CalEETC commends the staff for recognizing that PEVs and hydrogen fuel-cell vehicles face differing challenges. Analyses to date indicate that 80% or more of the charging needs of PEVs will be met either at home or at work. There is significant innovation in the home and workplace charging space and many PEV owners are choosing to charge their vehicles with the standard 120 Volt plug. Public charging stations are important, however the market for public charging is innovating and new concepts continue to emerge. At this time, it is not possible to know what type of public charging stations are ideal or the ideal location of public charging stations. Mandating a particular path for electric vehicle public charging at this time could stifle market expansion and innovation and harm the attractiveness of PEVs. CARB staff's recommendation to reconsider the need for a mandate in two years time is prudent. On the other hand, it is clear that fuel cell vehicles will follow the centralized fueling station model typical of today's gasoline vehicles. Therefore it is critical that centralized hydrogen stations be publicly available to support fuel cell vehicles.

Conclusion

In conclusion, CalEETC thanks the CARB Board for your consideration of our comments. We also thank CARB staff for their willingness to work through these complex issues with stakeholders. We look forward to continuing to work with you.

Sincerely,

A handwritten signature in blue ink, appearing to read "Eileen Wenger Tutt".

Eileen Wenger Tutt
Executive Director