

09-1-8  
Robb Protheroe

January 20, 2009

Submission from Plug-In Supply Inc. on the Proposed Rulemaking for  
Aftermarket PHEV (OVCC HEV) Conversions

Dear Sir,

Plug-In Supply Inc. has reviewed the California Air Resource Board's proposed rules for aftermarket PHEV conversions and we are concerned these rules will impose an unnecessary financial burden that will put us out of business and rob California of much needed jobs and tax revenue.

We are a small start-up manufacturer. Our first product is for converting the Toyota Prius into a PHEV. Our product is designed to work with different batteries from different manufactures. It is independent of battery chemistry. Our customers can up-grade their cars to higher performance batteries as they become available. In this way we help spur development of advanced batteries that will reduce our reliance on imported oil and reduce greenhouse gas emissions. Our products create demand for high performance batteries now and will continue to do so in the future.

**Mandate: No Negative Impacts**

We want to draw the board's attention to a quote from the CalCars submission: "The Staff and Executive Officer have prematurely concluded there are no negative impacts." The Staff Report: Initial Statement of Reasons for Proposed Rulemaking for Plug-In Hybrid-Electric Vehicles on page 28 says, "The proposed amendments to the Exhaust and Evaporative Test Procedures are not expected to have a noticeable impact on the status of California business creation, elimination, or expansion."

In the Notice of Public Hearing, we read, "The Executive Officer has made an initial determination that the proposed regulatory action would not have a significant statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states, or on representative private persons. In accordance with Government Code section 11346.3, the Executive Officer has determined that the proposed regulatory action would not affect the creation or elimination of jobs within the State of California, the creation of new businesses or elimination of existing businesses within the State of California, or the expansion of businesses currently doing business within the State of California."

Below, we clearly show the proposed regulations have the opposite effect to that stated above. Jobs will be lost. Revenue and taxes lost. Growth eliminated and a promising new technology suppressed.

## Cost of Compliance

Our staff has over 40 years of high-tech product development experience. We estimate our cost of complying with the proposed regulations will be \$1,552,260 the first year followed by \$275,000 per year for nine years. Totaling \$4 million over 10 years.

This large number is probably conservative. Keep in mind it is just for approval of one product for the Prius. We have three Prius products. Each will incur a similar cost.

We arrived at this number by adding up the individual costs of complying. Below is a summary break down. Our detailed cost estimate is attached. Further data regarding our calculations is available upon request.

Emission Testing: \$38,660

OBD Compliance: \$16,500

Application Process: \$12,100

Test Vehicles: \$210,000

Warranty: \$275,000 per year for 10 years.

Potential lost revenue in CA during certification: \$1,000,000

Total cost of compliance: \$4,027,260 over 10 years.

\$1,552,260 during the first year.

Clearly, we can't afford to comply. Few companies could. There must be ways to reduce the cost of compliance and make this clean technology widely available for the betterment of all.

## Lost Jobs.

We currently have a dozen dealers across the country. Each on average has a staff of two. Along with our staff of three that is 27 jobs lost. Our suppliers have additional hourly paid staff working on our products. Assuming the above have family the number affected could reach 100.

## Lost Revenue for California

Our projected sales are 500 units for 2009. Half will be sold in California. At an average price of \$8,000 that is \$4,000,000 that could be injected into California's economy, generating taxes of \$310,000. Not much, but in a recession every thing helps. Eighty five percent of our product comes from companies in California.

## Alternatives to Proposed Regulations

Others have made submissions suggesting alternatives to the proposed regulations and we agree with their intent. The exact details should be determined in consultation with all.

CARB has already granted a 500 unit exemption to one supplier. We, a California based corporation, would expect the same consideration.

Exemptions are probably the easiest way to handle this issue; combined with further study.

Respectfully submitted for your consideration by:  
Robb Protheroe, Ben Jones and Chuck Protheroe  
on behalf of:  
Plug-In Supply Inc. A California corporation.

### Attachment:

#### Cost Estimates for Plug-In Supply Compliance with Proposed CARB PHEV Conversion Certification Requirements

##### Assumptions:

- \$300/8 man-hours (1 day = 8 man-hours)
- 6 month certification process
- 500 systems/year in the first year

<b>Emission Testing/Compliance</b>		\$38,660	
Exhaust Emissions Test:		\$10,400	Appendix K
Evaporative Emissions Test:		\$17,760	Appendix K
Emission and Durability Analyses:	20 days	\$6,000	
System Adjustments for Evaporative Emissions:	15 days	\$4,500	To maintain EV mode

<b>OBD Compliance</b>		\$16,500	
Investigate OEM Vehicle Monitors:	20 days	\$6,000	
Alter Conversion System (e.g. address monitoring frequency):	20 days	\$6,000	
Add OBD Reporting to Conversion System Components:	15 days	\$4,500	
<b>Application Process</b>		\$12,100	
Description of System:	5 days	\$1,500	
Wiring Diagrams:	2 days	\$600	
Parts List and Supplier Information:	2 days	\$600	
Integration Explanation:	1 day	\$300	
Warranty Statement and Parts List:	1 day	\$1,000	Warranty written by legal professional
Emission and Durability Tests/Analyses Justifications:	3 days	\$900	
Testing Data:	5 days	\$1,500	Time to test and process data
Proof of OBD Compliance:	2 days	\$600	
Installation and Maintenance Procedures:	10 days	\$3,000	
Owner's Manual:	5 days	\$1,500	
Record Keeping:	2 days	\$600	
<b>Test Vehicles</b>		\$210,000	
1 Emission Car, 1 Durability Car:		\$60,000	
5 In-Use Testing Cars:		\$150,000	Assumes cars pass, CARB pays for testing
<b>Warranty</b>		\$275,000	Per year
OEM Vehicle:		\$75,000	3% failure rate, \$5,000 per vehicle repair
Conversion System:		\$200,000	5% failure rate, \$8,000 per system
<b>Total Compliance Cost in First Year</b>		\$552,260	
Potential Lost Revenue During Certification Process:		\$1,000,000	CA sales 50% of total, \$8,000 per system, 6 month certification period