Comment 1 for Comments associated with the 2010 ZEV Regulatory Changes (2010zev-reg-ws) - 1st Workshop.

First Name: Fraser
Last Name: Murison Smith
Email Address: fdms@electradrive.net
Affiliation: ElectraDrive, Inc.

Subject: Expand ZEV changes to encompass aftermarket systems
Comment:

Having reviewed the proposed ZEV regulatory changes for 2010, I have a suggestion for a way to attain the targets much sooner than planned, by expanding the scope of the regulations to also encompass aftermarket systems.

ElectraDrive is a plug-in drivetrain solutions provider. We are developing an Add-On Electric Drive which will give gas-guzzling utility vehicles, such as trucks, a plug-in electric capability of up to 40 miles of range without compromising the factory powertrain. This solution is expected to reduce fuel consumption and emissions by 50-70 percent in mixed driving. Our core integration technology is able to traverse different OEM platforms and operate up and down the size spectrum.

ElectraDrive's reference customer, Alameda County, operates a diverse fleet of trucks whose emissions they seek to reduce, while extending the lives of the vehicles themselves. In this they are typical of many public fleets in California.

ElectraDrive recently calculated the project cost-effectiveness on an Add-On Electric Drive for the first of several pilot projects with Alameda County, on a Dodge Dakota. This calculation was performed to determine whether to apply for a BAAQMD Advanced Technology Demonstration grant to support the project. The BAAQMD requires project cost-effectiveness be calculated based on the projected reduction in criteria emissions, using CARB EOs as reference.

It turns out that this specific project is not cost-effective based on consideration of criteria pollutants alone. The truck in question is not a heavy emitter of criteria pollutants. However, it is a heavy emitter of carbon dioxide. The project is extremely cost-effective when CO2 is factored into the equation. The problem up to this point has been that BAAQMD has not been permitted to consider CO2 as a determining species in cost-effectiveness.

It is good to see that CO2 is finally being brought into the regulations. However, a turnover rate of about 6 percent in the general vehicle population means that the replacement of CO2-heavy drivetrains, such as in light trucks, with low-emission alternatives will be far slower than what is actually needed to satisfy the requirements of present and future legislation.

The penetration of clean drivetrain technologies by the incorporation of CO2 into the regulations can be vastly accelerated

by expanding the regulations to encompass aftermarket technologies that can be fitted to existing vehicle platforms. In many cases (ElectraDrive's included) the aftermarket system will cost less than a new vehicle. Customer ROI for our solution projects to 3-5 years, which is well within the extended service life of the vehicle.

Institutional fleet customers want these solutions today, as a way to accelerate their clean-fleet programs during the roughly ten years it will take for a wide range of OEM solutions to become available. The market for these solutions can receive a significant stimulus if the ZEV regulations are expanded to encompass aftermarket drivetrain solutions.

I understand that such a modification may necessitate the merger of programs presently in different areas. I would encourage CARB to consider this. After all, the problem is not with the vehicle platforms themselves but with the drivetrains contained inside them. The regulations should pertain to and refer to 'drivetrains' rather than 'vehicles'.

Thank you for your consideration.

Fraser Murison Smith
CEO, ElectraDrive

Attachment: www.arb.ca.gov/lists/2010zev-reg-ws/1-commentstocarb_zev_20100510.doc

Original File Name: CommentsToCARB_ZEV_20100510.doc

Date and Time Comment Was Submitted: 2010-05-10 15:11:11

No Duplicates.

Comment 2 for Comments associated with the 2010 ZEV Regulatory Changes (2010zev-reg-ws) - 1st Workshop.

First Name: Jeff
Last Name: U'Ren
Email Address: jeffuren@mac.com
Affiliation: Ex EV1 driver and MINI-E program

Subject: 2010 ZEV Regulatory Changes comments
Comment:

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1. Please allow ZEV credits only for vehicles that are sold or
leased to sell to the purchaser. No lease only vehicles.
ZEV credits should be for commercial production vehicles only, not
mules or prototypes.

2. Please give plug in electric cars a priority over hydrogen fuel
cell cars. No manufacture is quoting a price point or a purchase
date for HFC cars while plugin electric cars are well on their way
to the market in the next year or two with prices being announced
during this time.

3. Please always factor in the cost and environmental impact of
making the fuel for Plugin electric cars, hydrogen fuel cell car
and gasoline cars when showing the true cost and environmental
impact of each technology.

4. Please provide consumer of plugin electric cars an incentive to
install photovoltaic  solar arrays on their home and/or business
for the purpose of charging plugin electric vehicles.
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Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2010-05-10 17:03:11

No Duplicates.

Comment 3 for Comments associated with the 2010 ZEV Regulatory Changes (2010zev-reg-ws) - 1st Workshop.

First Name: Sigmund
Last Name: Gronich
Email Address: sigmundgronich@aol.com
Affiliation:

Subject: Revised ZEV mandate
Comment:

For years the ZEV mandate was ahead of the technology. Now it is in concert with industry plans to deploy tens of thousands of vehicles by 2015 to 2017. Yet the plan is not to change the current ZEV mandate from 2015 to 2017 which allows for 25,000 ZEVs to be substituted by some 85,000 PHEVs. It is critical to get to 50,000 ZEVs with potentially 30,000 to 40,000 HFCVs so that there is a robust infrastructure in place (i.e., 30 to 40 1000kg/day to 1500kg/day stations). Just the uncertainty of how many HFCVs will be deployed can have a negative impact on station commitments. This is the MOST CRITICAL ZEV mandate time as it allows the industry to begin to think about volume production and quite frankly subsequent vehicle deployments will be quite dependent on market conditions that are difficult to project at this time. So If the staff is unwilling to open up this critical time period,then at least require more PHEVs to offset the true ZEVs or increase the 25,000 minimum to 40,000.

While I agree that it is important to then mandate another increase in the number of vehicles there has to be a rational limit to a mandate that can potentially violate market conditions. These vehicles will be reliable and performance stars, but they are going to be more expensive than gasoline vehicles and as such the price of gasoline needs to be greater than today. Japan, Europe and Korea may be better places for the technology to be deployed because of their greater fuel prices. All of this will impact the cost of the vehicle. I don't believe it is fair for government to edict what is not market ready when we get to very large production numbers. So that is why the 2015 to 2017 period is so critical to do at a level of ZEVs that can show where both the infrastructure and vehicle really are and have a policy to go from there as part of an international program and compatible with market conditions.

I recently presented a paper on this subject at the NHA meeting and am attaching both the paper and the presentation for your consideration.

Attachment: www.arb.ca.gov/lists/2010zev-reg-ws/3-are_plug-in_hybrid_vehicles_more_market_ready_than.ppt

Original File Name: Are plug-in hybrid vehicles more market ready than.ppt

Date and Time Comment Was Submitted: 2010-05-11 10:24:34

No Duplicates.

Comment 4 for Comments associated with the 2010 ZEV Regulatory Changes (2010zev-reg-ws) - 1st Workshop.

First Name: Sigmund
Last Name: Gronich
Email Address: sigmundgronich@aol.com
Affiliation:

Subject: Revised ZEV mandate
Comment:

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I recently presented a paper on this subject at the NHA meeting and am attaching both the paper and the presentation for your consideration.

Attachment: www.arb.ca.gov/lists/2010zev-reg-ws/4-are_battery_electric_vehicles_more_cost_effective.doc

Original File Name: Are battery electric vehicles more cost effective.doc

Date and Time Comment Was Submitted: 2010-05-11 10:24:34

No Duplicates.

There are no comments posted to Comments associated with the 2010 ZEV Regulatory Changes (2010zev-reg-ws) that were presented during the Workshop at this time.