



December 8, 2009

**To: Mary D. Nichols, Chairman
Members of the Board**

Re: General Comments on ZEV Whitepaper

Dear Chairman Nichols and Members of the Board:

The Large Volume Manufacturers¹ (LVM) would like to thank the staff for their concerted efforts on working with stakeholders in producing the ZEV Whitepaper and its attachments. We as individual companies are now carefully reviewing the contents and will submit detailed comments to staff at a later time, but as a group would like to offer a few general comments in advance of the December 10th Board Meeting.

Need for Complementary Policies

We encourage the board to support staff efforts to address the issues of market incentives and infrastructure needs in their next steps revising the ZEV Regulation. In particular, we fully agree with the first statement in Attachment C, “Complementary Policies” which states: “...the ZEV regulation will not likely be successful without additional policy tools that help ensure infrastructure and market demand for the vehicles.” This observation is shared and supported by the LVM’s, who along with ARB are most at risk if these policies fail to materialize.

Incentives

While the ZEV regulation through 2014, and the proposed directional changes for 2015 and beyond address the requirements for OEMs to producing ZEV vehicles, it does not address fully the consumers who will make the ultimate decisions on whether or not to purchase or lease those vehicles. To expand the ZEV market, incentives to customers will be essential. These should include monetary incentives to buy down the higher up front costs of ZEV technology as well as non-monetary

¹ The Large Volume Manufacturers are BMW Group; Chrysler Group LLC; Ford Motor Company; General Motors LLC; American Honda Motor Company, Inc.; Mercedes-Benz USA, LLC; Nissan North America, Inc.; and Toyota Motors North America, Inc.

incentives which add significant value to the customer, such as HOV lane access, parking policy, etc.

Infrastructure

Infrastructure development for Battery Electric Vehicles (BEVs), Plug-in Hybrid Electric Vehicles (PHEVs), Fuel Cell Electric Vehicles (FCVs), and Hydrogen Internal Combustion Engine vehicles (HICE) is essential for the market success of these technologies. It is also important to note that the reduction in greenhouse gas emissions that these vehicles can provide depends on the infrastructure. Greater availability of charging locations for BEVs and PHEVs, and hydrogen stations for H₂ fueled vehicles, means more miles driven on electricity or hydrogen instead of petroleum.

- *BEVs and PHEVs*

Infrastructure support is critical to assure market acceptance of PHEVs and BEVs and a concerted effort on the part of utilities, codes and standards, building inspectors, emergency response personnel, the California Public Utilities Commission, etc. is essential to successful implementation. While emphasis should focus on supporting infrastructure at home where the vast majority of charging is expected to take place, workplace and public charging can play an important role in public education, market development and reduction of “range anxiety.”

- *FCVs and HICE*

Significant resources are being committed to the development of hydrogen fueled vehicles. A commensurate commitment to the development of public hydrogen refueling infrastructure is essential as auto manufacturers need assurance that adequate hydrogen stations will be in place when vehicles are introduced and we are encouraged that Staff is looking at ways to provide that assurance. Mechanisms are needed to engage infrastructure partners in the process of creating market clusters that can build into a network of hydrogen stations as the market develops.

Technical and Commercial Challenges

The LVMs have made great progress on BEVs, FCVs, PHEVs and HICE; however, many significant technical and commercial challenges still remain. These have been described to staff by individual manufacturers during the technical review and survey process leading up to the Board Meeting. While we are optimistic that most of the technical challenges can eventually be overcome, and we will continue to bring costs down through subsequent generations of design, we caution that an overly aggressive ZEV requirement, in terms of volume or timing, could have a detrimental impact by misdirecting OEM resources before consumers, the infrastructure and the technologies are ready for high volume introduction.

These are a few initial thoughts on some of the most critical issues in bringing advanced technology vehicles to market. We are encouraged by the staff's exploration of various policy alternatives. Additionally, we appreciate that the ARB is looking more closely at not only the current economic reality and challenges in the industry but the particular challenges of marketing advanced technology vehicles. We would also propose that the ARB strongly consider how the revised ZEV regulation can be integrated with current and future GHG and criteria emission standards so resources can be most efficiently and effectively allocated.

In closing, we appreciate the Staff's recognition that all parties will have to work together to reduce greenhouse gas emissions in the passenger vehicle sector. In particular, vehicle manufacturers will need to supply the advanced technology vehicles, energy companies will need to reduce the carbon intensity of the fuels used to power those vehicles, and government will need to adopt policies to reduce VMT growth. Only then will it be possible to achieve the reductions from the passenger vehicle segment that the ARB desires.

Very Truly Yours,

**BMW Group
Chrysler Group LLC
Ford Motor Company
General Motors LLC
America Honda Motor Company, Inc.
Mercedes-Benz USA, LLC
Nissan North America, Inc.
Toyota Motors North America, Inc.**