October 20, 2014

Clerk of the Board
Air Resources Board
1001 I Street
Sacramento, California 95814

Subject: PROPOSED 2014 AMENDMENTS TO THE ZERO EMISSION VEHICLE REGULATION

Air Resources Board Members:

We are writing on behalf of a group of five Intermediate Volume Manufacturers (IVMs) that include Jaguar Land Rover, Mazda, Mitsubishi Motors, Subaru, and Volvo Cars (collectively referred to as the IVM5 hereafter). Subject to the recommendations provided in this letter, we support the proposed 2014 Amendments to the Zero Emission Vehicle (ZEV) Regulations as detailed in ARB Staff's Initial Statement of Reasons for Rulemaking (ISOR) dated September 2, 2014 .

In summary, Staff's proposed changes address the Board's 2013 request to thoroughly evaluate how the 2012 Advanced Clean Car rulemaking affects the IVM5. Specifically, the proposal:

1. Clarifies the definition of an IVM adding a global revenue test, in addition to the existing California sales threshold;
2. Provides IVMs transitioning to LVM status additional time to deliver advanced technology vehicles;
3. Decreases the ZEV credit percentage requirement for IVMs so that their advanced technology vehicle deliveries, as a percentage of sales, are similar to that of LVMs;
4. Provides IVMs the ability to pool ZEV compliance in Section 177 states;
5. Adjusts the ZEV credit deficit provisions to allow IVMs three years to make up the deficit, if certain conditions are met, and allows the use of TZEV credits to make up the deficit.

1 ARB, 2014b. ZEV Calculator. California Air Resources Board, September 2014. http://www.arb.ca.gov/msprog/zevprog/2014zevreg/2014zevreg.htm
2 ARB, 2011b. ZEV Calculator. California Air Resources Board, January 2013. http://www.arb.ca.gov/msprog/clean_cars/clean_cars_ab1085/clean_cars_ab1085.htm

Before discussing more specific comments, we would like to thank you, the members of the Air Resources Board, for making yourselves available for numerous meeting with our companies. Your thoughtful consideration and insightful questions/challenges have helped guide our work with the ARB staff to create this proposal.

Additionally, we would again acknowledge the ARB staff's willingness to work with our companies in an open, transparent, and cooperative process. As ARB staff developed the regulatory changes, they made themselves available for countless meetings, phone calls, and web meetings, and responded to hundreds of emails. ARB staff's professionalism and willingness to meet and discuss the issues with a cooperative manner directly contributed to noticeable improvements in the regulations.

The remainder of this letter provides an additional discussion as well as justification for these changes and a few general recommendations on the ZEV Regulation as it pertains to IVMs.

Background:

In 2012, the Air Resources Board approved changes to the Advanced Clean Car rulemaking that affect the IVM5. The California sales threshold to be considered a Large Volume Manufacturer (LVM) was reduced from 60,000 per year to 20,000 beginning in the 2018 model year. As these regulations were developed during 2012, the IVMs were not part of the discussions and did not have significant input into their adoption. IVM5 companies complied with the ZEV regulation by selling PZEVs in significant numbers and as a higher percentage of our fleets than LVMs. These PZEVs had and continue to positively impact air quality in California.

As part of these regulations, ARB attempted to recognize some of the unique challenges facing the smaller, limited line manufacturers, by allowing complete compliance with the ZEV regulation using TZEVs. However, due to lower credits awarded to TZEVs, in order to comply with the regulations, an IVM would have to sell over 40% of its CA fleet as TZEVs by 2025. With less than 1 percent of the total US market currently ZEVs or TZEVs, this flexibility did not offer significant regulatory relief to IVM companies.

During 2013, the IVMs petitioned the Board seeking changes to the ZEV regulations, making numerous points in support of our position:

1- The IVM5 companies continue to comply with the ZEV regulation through the production of a diverse range of PZEVs. IVM5 companies, with the exception of one, have not developed any TZEV or ZEV vehicles ready for US marketplace deployment, and needed sufficient lead time to do so.
2- As LVM companies brought TZEVs and BEVs to market, they had significant lead time (13 years) and incentives in the regulation to assist them in advancing the technology. These included

[1] ARB, 2014b. ZEV Calculator. California Air Resources Board, September 2014. http://www.arb.ca.gov/msprog/zevprog/2014zevreg/2014zevreg.htm
[2] ARB, 2011b. ZEV Calculator. California Air Resources Board, January 2013. http://www.arb.ca.gov/msprog/clean_cars/clean_cars_ab1085/clean_cars_ab1085.htm

generous credit multipliers, shared vehicle incentives, and credit travel to the 177 states. The IVM companies had not utilized these incentives, since their ZEV compliance focused on PZEV technologies. Further, the 2012 ZEV revisions eliminated most of these incentives as the requirements for IVM's increased.

3- The development of limited volume, advanced technology vehicles like a BEV or FCV require large research and development budgets. IVM companies, some that are 1/10th the size of the largest LVMs, struggle to make this investment in addition to resources needed to develop technologies to comply with new regulatory requirements such as CAFÉ/GHG and LEVIII/Tier 3.

4- The existing ZEV regulations did not practically allow IVMs to use any form of credit pooling in the Section 177 states, as the LVMs have been able to do. The ability to utilize credit pooling is critical to the IVM5 due toour smaller dealer network, especially in many New England states. This creates undue burden for compliance as the small number of independently owned franchised dealerships can significantly affect the number and type of vehicles offered for sale.

In October 2013, the Board directed the ARB staff to review the issues raised by the IVMs and come back in 2014 with a proposal.

Proposal:

1. Since the Board directive was issued in 2013, the IVM5 companies have worked with ARB to provide a more complete picture of our companies and our relative size from both a sales and financial perspective. This included discussion of our abilities to produce and market ZEV technologies. IVM5 companies have also held individual, confidential discussions with ARB regarding future product strategies. Revise the ZEV credit percentage requirement for IVMs so that their advanced technology vehicle deliveries, as a percentage of sales, are similar to that of LVMs:

ARB's proposed regulatory changes differ greatly from the ideas put forth by the IVM companies in 2013. In an effort to simplify the regulations, ARB is not adopting IVM proposals for demonstration fleets, credit multipliers, extended service credits, and credit travel. Instead, ARB's proposal makes changes that provide IVM companies with different incentives to bring ZEVs to market, but still requires a similar percentage of our fleets to be ZEVs (TZEV and BEV) as the LVMs.

In changing the percentage of ZEVs that IVMs must produce, ARB proposes to re-align the amount of credits required through 2025. Using a likely compliance scenario, IVMs would have a very similar percentage of ZEV sales as LVMs, but with the additional flexibility to comply completely with TZEV credits if desired. This provides important flexibility for the IVM5 to develop products that we feel will resonate with our unique customers, and add additional consumer choices in the marketplace.

ARB also acknowledges that IVMs do not have the resources to develop multiple models of ZEVs in different market segments, and our ability to comply may rest on one particular model.

1 ARB, 2014b. ZEV Calculator. California Air Resources Board, September 2014. http://www.arb.ca.gov/msprog/zevprog/2014zevreg/2014zevreg.htm

2 ARB, 2011b. ZEV Calculator. California Air Resources Board, January 2013. http://www.arb.ca.gov/msprog/clean_cars/clean_cars_ab1085/clean_cars_ab1085.htm

Effect of Change

ARB's analysis indicates that the proposed compliance requirements will only lead to 1.7% reduction in ZEVs on the road by 2025. This amounts to 25,842[1] vehicles out of 1,520, 954[2] ZEVs the 2012 ACC Regulation required by 2025. Therefore, this caused a net loss of 4888 vehicles with respect to Governor Brown's 1.5M vehicle goal.

Please note, these changes will not in any way affect criteria pollutant emissions (NMOG, NOx) or greenhouse gas emissions, as those are addressed in separate regulations (LEV III and GHG). Therefore, even with a minor change to the ZEV regulation requirement, the emissions reduction goals and targets are maintained.

2. Adjusts the Definition of an IVM by including a new secondary criteria of global revenue:

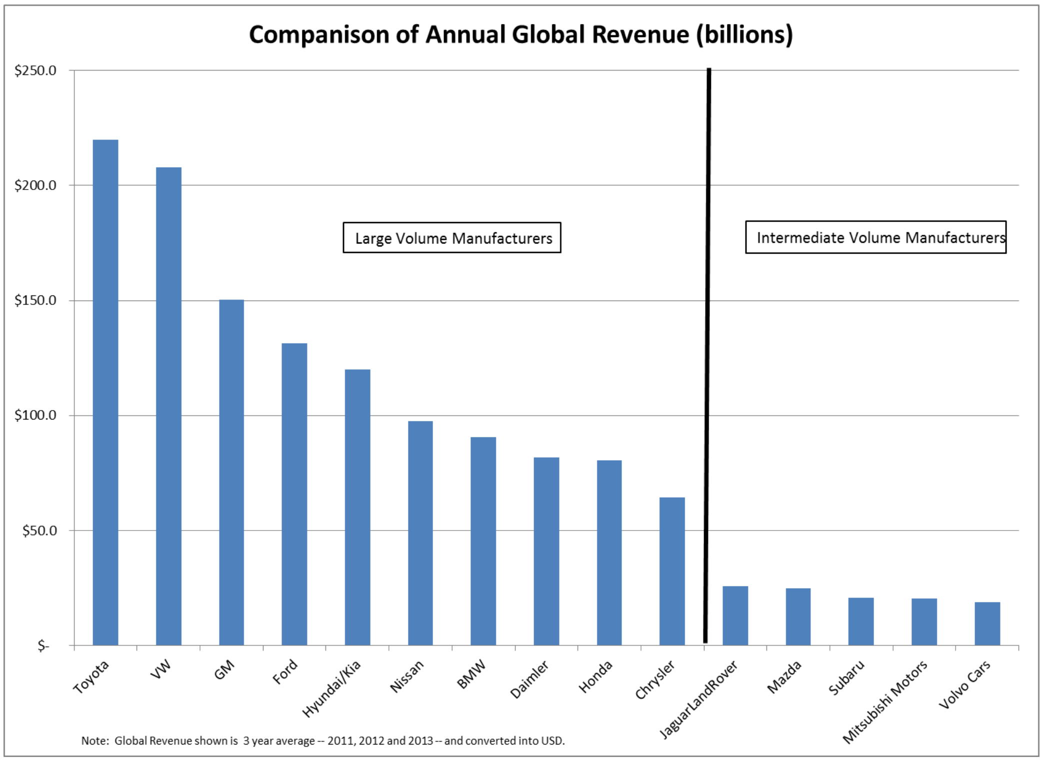

Figure 1 – Comparison of Annual Global Revenue – average of 2011, 2012 and 2013

ARB also proposes adding a global revenue test as a secondary criterion for a company to be considered an IVM. The proposed changes separates IVMs from LVMs by selecting $40 Billion Gross Auto Related Revenue as the threshold.

1 ARB, 2014b. ZEV Calculator. California Air Resources Board, September 2014. http://www.arb.ca.gov/msprog/zevprog/2014zevreg/2014zevreg.htm

2 ARB, 2011b. ZEV Calculator. California Air Resources Board, January 2013. http://www.arb.ca.gov/msprog/clean_cars/clean_cars_ab1085/clean_cars_ab1085.htm

Global revenue is a reasonable, justifiable criterion to assess a company's ability to successfully develop and market a ZEV, and it starkly illustrates the difference in size between IVM and LVM companies (see Figure 1). There are very real differences in the abilities and resources that a smaller auto company can muster in developing and marketing ZEVs, and this proposal recognizes those differences(Some of the IVM companies have annual global revenues that are 1/10th that of the largest LVMs).

IVMs are concerned that only automotive related revenue should be accounted. Some IVMs have business interests unrelated to their Automotive activities and requested that this was clearly separated.

3. Provides IVMs transitioning to LVM status additional time to deliver advanced technology vehicles;

The additional lead time (increase from three years to five years) provides IVMs the time needed to develop advanced technology vehicles, and is similar to that offered to IVMs that transitioned to LVMs prior to 2018. In giving the staff direction to review IVM issues at the October, 2013 board meeting, the board acknowledged that IVM issues were not addressed in the 2012 revisions, and it has been difficult to commence with product planning as a result.

4. Adjusts the ZEV credit deficit provisions to allow IVMs three years to make up the deficit, if certain conditions are met, and allows the use of TZEV credit to make up the deficit.

IVMs also noted to ARB that our ability to make up ZEV credit deficits in the currently allowed one year would be greatly limiting. ZEV credits are reported in May following the model year. By the time a deficit is realized, the following model year in nearly concluded. This schedule provides no time to make adjustments to a product to increase its sales. If an IVM is only able to sell one model of ZEV, and it is not a success in the marketplace, substantial changes to its appearance, equipment, or powertrain cannot be accomplished in one year.

In its proposal, ARB acknowledges this challenge and allows up to three years to make up a credit deficit, which is similar to the time period a manufacturer is allowed to make up credits for GHG compliance. To address staff concerns, two conditions were added to allow the three years, which are only if:

1) The IVM is offering a TZEV or ZEV for sale and

2) The IVM submits an acceptable recovery plan to the Executive Officer.

<u>Importantly, ARB is also proposing a change to allow an IVM to make up a credit shortfall with either TZEV or ZEV credits.</u> Currently, only ZEV credits are prescribed in the regulation. If an IVM is selling only a TZEV and fell short on credits, that company would have no opportunity to make up the deficit on its own; it would be forced to buy ZEV credits from another OEM or pay penalties. This proposed change can properly be viewed simply as a correction to the regulation, in order to align this requirement with the flexibility provided for IVMs to comply entirely with TZEVs.

[1] ARB, 2014b. ZEV Calculator. California Air Resources Board, September 2014. http://www.arb.ca.gov/msprog/zevprog/2014zevreg/2014zevreg.htm
[2] ARB, 2011b. ZEV Calculator. California Air Resources Board, January 2013. http://www.arb.ca.gov/msprog/clean_cars/clean_cars_ab1085/clean_cars_ab1085.htm

5. Provides IVMs the ability to pool ZEV compliance in Section 177 states;

Finally, and importantly, the Section 177 states agreed to allow credit pooling through a mechanism similar to that used by the LVM companies, providing much needed flexibility for the IVM companies. In some Section 177 states, some IVMs have only one or two dealerships, so the ability to meet a state's requirement could fall heavily on one dealer, greatly increasing the possibility of a credit shortfall if IVMs were required to comply state by state. This provision for IVMs was not addressed in the 2012 ZEV changes, and this proposal corrects that. The Section 177 states representative from NESCAUM fully supported the ARB staff proposed changes to the ZEV regulation at the ARB workshop in July, 2014.

Conclusions:

The proposed changes to the ZEV regulations put forth by the ARB staff reflect a great deal of thought, analysis, and investigation. For IVM companies, the proposal is tough, but fair in that it provides the kind of regulatory certainty that LVMs obtained in 2012.

Staff proposal is not overly generous

Some have argued that the staff proposed changes to the credit requirements are "too generous", go too far and will overly impact the number of ZEVs on the road in California. The IVM5 have stated throughout this process to all stakeholders that our desire is to comply with ZEV regulations with vehicles, not purchased credits. But in order to do so, we need a regulation that reflects our relative size and resources in the marketplace, and our ability to design and market ZEVs starting in 2018. Some IVM5 companies have already made product announcements regarding PHEVs in other markets, but work required to comply with US and CA safety, emissions, OBDII, and other requirements has not yet been done. The US remains the most complex and challenging market in the world in which to market light duty vehicles from a regulatory standpoint.

Loss of ZEVs? IVMs Recommendation supports the Governor's goal of putting more ZEVs on the road

Some also argue that ARB has underestimated the potential loss of ZEVs if this proposal were adopted. Those groups have used different assumptions, different estimates, and different forecasts than ARB staff. ARB's proposal and analysis reflect the same logic, databases, and sources that they have used in other ZEV regulatory proposals. The staff proposal creates requirements that will encourage IVM companies to comply with vehicles, not purchased credits. The use of purchased credits for compliance does nothing to support the overall goal of putting more ZEVs on the road. Further, the IVMs recommendation supports the Governor's Goal of 1.5M vehicles by 2025 while maintaining an equivalent percentage vehicle requirement to LVMs.

ZEV marketplace is still uncertain

Others argue that the sales of ZEVs are rising rapidly, and therefore no change is needed in the requirements. Our analysis of RL Polk data indicates that while BEV sales have risen in Georgia and

[1] ARB, 2014b. ZEV Calculator. California Air Resources Board, September 2014. http://www.arb.ca.gov/msprog/zevprog/2014zevreg/2014zevreg.htm

[2] ARB, 2011b. ZEV Calculator. California Air Resources Board, January 2013. http://www.arb.ca.gov/msprog/clean_cars/clean_cars_ab1085/clean_cars_ab1085.htm

California, they have declined in all other states from 2013 to 2014. And while PHEV sales have increased in California, they have declined in all other Section 177 states. The challenges of these vehicles in the marketplace is acknowledged by the Section 177 states developing action plans for each of those states to try and stimulate consumer demand. The market for all types of BEVs remains in flux, and it is premature to declare market success.

Importantly, IVMs need time to continue to develop not just vehicle technology, but the sales process. Dealerships must be properly equipped and trained to effectively sell these new vehicles. This continues to challenge LVMs with strong dealer support networks and resources. IVMs do not have these same resources and it will take more time to develop the dealer network for ZEVs.

Changes should not be postponed; there is a critical need for regulatory certainty

Still others have argued that any changes to ZEV requirements should be postponed until the upcoming mid-term evaluation is completed in a few years. However, we view these changes as not being in the scope of the mid-term evaluation. As previously expressed by the board and staff, the IVM issues were not fully considered or analyzed in the 2012 rulemaking. This is an addendum to the original rule, not a shift in the overall ZEV goals and targets.

The IVM5 are steadfast in our need for regulatory certainty. All OEM's need to know what is required of them, and by when, and the IVM5 are no exception. Without regulatory certainty and reasonable lead time to develop vehicles, our ability to comply with the regulation with vehicles, not purchased credits, will be severely compromised. We also note that LVMs had sufficient certainty and lead time to make product plans, and the IVM5 seek similar treatment.

Changes in credit requirements are essential and fair; no change would lead to IVMs having higher fleet requirements for TZEVs than LVMs.

Others have argued that it is reasonable to address the requirements of "Who is an IVM?", but changes in the credit requirements should not be made. The IVM5 emphasize the critical importance of the changes in the credit requirements in the staff proposal. It is an integral part of an overall package and their removal would in many ways render this proposal meaningless. It would also leave the IVM5 with compliance requirements that are relatively more stringent than LVMs. Board direction last year was clear; staff was to review all aspects of the IVM requirements and come back with recommendations. A piecemeal approach would only leave the IVM5 in limbo and would likely leave them with reduced ability to comply with credits obtained from selling vehicles.

It becomes a simple comparison, should IVMs, with their limited resources, be required (proportionally) to market 100% more ZEV vehicles than LVMs? IVMs would need to market greater than 30% while LVMs market 15.4% -- this is not equitable.

Current profits do not provide a complete picture of an IVMs ability to develop ZEVs

[1] ARB, 2014b. ZEV Calculator. California Air Resources Board, September 2014. http://www.arb.ca.gov/msprog/zevprog/2014zevreg/2014zevreg.htm
[2] ARB, 2011b. ZEV Calculator. California Air Resources Board, January 2013. http://www.arb.ca.gov/msprog/clean_cars/clean_cars_ab1085/clean_cars_ab1085.htm

Finally, some argue that the global automobile market has improved over the past few years, and the individual IVM5 companies are now profitable enough to make the needed investments in ZEVs. While it is true that most auto companies are again profitable, we note that this is a cyclical business, and many automobile manufacturers are still recovering from tremendous losses during the recent recession. For example, one of the IVM5 lost a total of $2.7B during 2009-2012, and is projected to make profits of around half that amount during 2013-2014. Two large automakers also went through bankruptcy proceedings in the last five years. IVM5 members must also allocate significant resources to developing compliant vehicles for other environmental and safety regulations along with product development in all segments in which they compete, not just the development of ZEVs. So while the current outlook for automakers may be positive, it is important to remember that one good year does not guarantee future good years.

As IVM companies work towards doing their part to support California's clean air goals, it is imperative that these proposed regulatory changes be adopted in October, 2014. Any automobile is arguably the most complicated and regulated consumer product on the planet. To develop all-new, advanced technology TZEVs or ZEVs that meet industry, government, and consumer requirements for environmental, safety, and comfort and convenience needs, requires substantial lead time of multiple years. Adoption of these proposals would also provide the needed regulatory certainty for IVMs to finalize future product plans and commence vehicle development.

The IVMs look forward to continuing work in this important area.

Clinton Blair

Clinton Blair
Vice President, Government Affairs
Jaguar Land Rover
555 13th Street NW
Washington, DC 20004

Daniel V. Ryan
Director, Government and Public Affairs
Mazda North American Operations
1025 Connecticut Ave, Suite 910
Washington DC 20036

1 ARB, 2014b. ZEV Calculator. California Air Resources Board, September 2014. http://www.arb.ca.gov/msprog/zevprog/2014zevreg/2014zevreg.htm

2 ARB, 2011b. ZEV Calculator. California Air Resources Board, January 2013. http://www.arb.ca.gov/msprog/clean_cars/clean_cars_ab1085/clean_cars_ab1085.htm

David N Patterson

David N. Patterson, P.E.
Chief Engineer, Regulatory Affairs and Certification
Mitsubishi Motors R&D of America
6400 Katella Ave.
Cypress, CA 90630

Maurice Arcangelli
Director-Government Relations
Subaru of America, Inc.
Subaru Plaza, PO Box 6000
Cherry Hill, NJ 08034-6000

Katherine Yehl

Katherine Yehl
Director-Government Affairs
Volvo Car Corporation
House of Sweden
2900 K Street, NW, Suite 502
Washington, DC 20007

CC: Mary Nichols
Virgil Welch
Alberto Ayala
Annette Hebert
Annalisa Bevan
Elise Keddie

---

[1] ARB, 2014b. ZEV Calculator. California Air Resources Board, September 2014. http://www.arb.ca.gov/msprog/zevprog/2014zevreg/2014zevreg.htm

[2] ARB, 2011b. ZEV Calculator. California Air Resources Board, January 2013. http://www.arb.ca.gov/msprog/clean_cars/clean_cars_ab1085/clean_cars_ab1085.htm