



May 5, 2015

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 2015 Amendments to the Zero Emission Vehicle (ZEV) Regulations as detailed in ARB Staff's PROPOSED 2014 AMENDMENTS TO THE ZERO EMISSION VEHICLE REGULATION (15 Day Changes) Dated April 20, 2015.**

We also note that these amendments are incomplete, and further work needs to be done to establish appropriate credit requirement for the regulations to fully acknowledge the unique challenges of the IVM5.

In summary, Staff's proposed 15 Day changes partially address the Board's 2012 and 2013 requests to thoroughly evaluate how the 2012 Advanced Clean Car rulemaking affects the IVM5. Specifically, the proposal:

1. Clarifies the definition of an IVM by adding a global revenue test, in addition to the existing California sales threshold (known as "IVM Definition" provision);
2. Provides IVMs transitioning to LVM status additional time to deliver advanced technology vehicles (known as "Lead Time" provision);
3. 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 (known as "Deficit Recovery" provision);

4. Provides IVMs the ability to pool ZEV compliance in Section 177 states (known as “Pooling” provision);
5. Makes no changes to the current credit requirements for IVM5 (known as “Compliance Requirement” provision). As written, the staff proposal requires the IVM5 to meet the same credit requirements as the Large Volume Manufacturers (LVMs).

The IVM5 support the Staff’s proposed 15 Day changes:

1. IVM Definition
2. Lead Time
3. Deficit Recovery
4. Pooling

The IVM5 do not agree with the Staff’s proposed 15 Day changes regarding:

5. Compliance Requirement

Background:

In October 2014, the Initial Statement of Reasons (ISOR) was presented to the Board for consideration. This proposal included:

1. A change to the definition of an IVM (same as #1 noted above).
2. A change to the lead time requirements for an IVM (same as #2 noted above).
3. A change to the credit recovery requirements for an IVM (same as #3 noted above).
4. A change to the pooling requirements in the Section 177 states (same as #4 noted above).
5. A change to the compliance requirements for the IVMs. This reduced requirement reflected the differences between an LVM and an IVM - IVMs have the fewer development, marketing, and dealer network resources compared to LVMs.

After much discussion last October, the Board indicated general agreement with changes to the IVM definition and pooling requirements (#1 and #4 above). The other items were referred back to the ARB staff for further review. The most controversial issue was with the compliance requirements for IVMs (#5 above) because Staff analysis showed a loss of vehicles compared to the base case.

Since that time, the IVM5 have engaged in discussions with the interested stakeholders -especially NGOs/environmental groups - to further understand the questions and concerns raised in testimony at the October 2014 Hearing. We also made a few specific proposals to address the compliance requirements concerns. These proposals would substantially increase IVM credit requirements

compared to the ISOR and would result in more ZEVs than the base case and, more diverse ZEV market. Unfortunately, our proposal is not reflected in the 15 Day Notice.

IVM5 Specific Comments regarding the 15 Day Notice - Items Supported

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

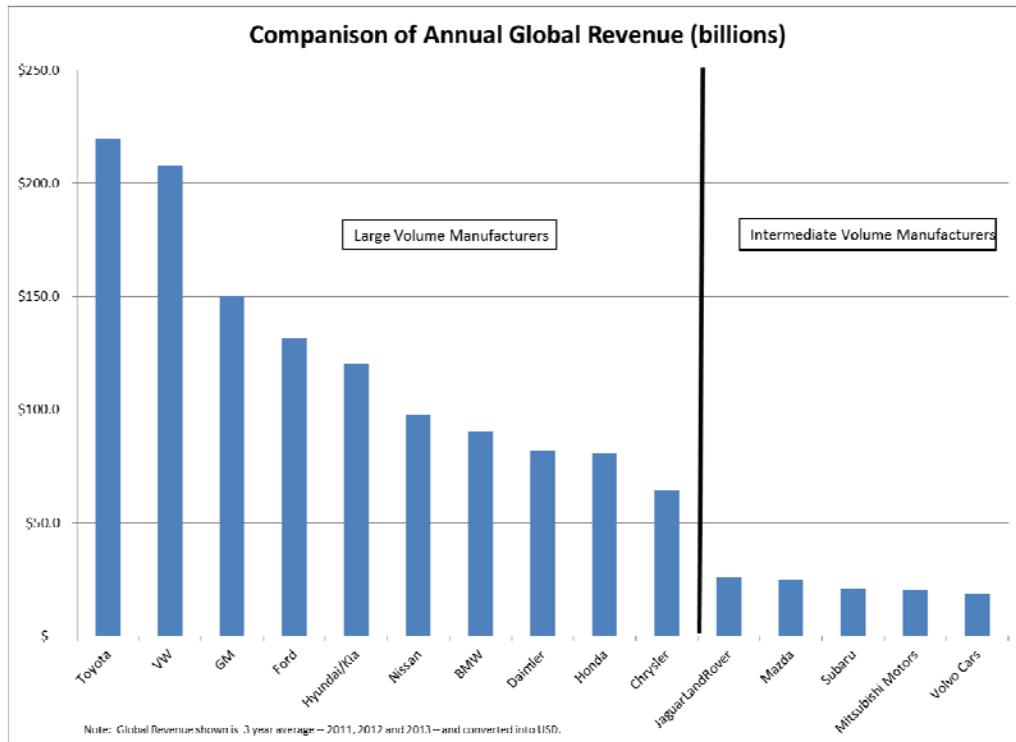


Figure 1 – Comparison of Annual Global Revenue – average of 2011, 2012 and 2013

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

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).

CARB staff has correctly concluded that only automotive related revenue should be included. Some IVMs have business interests unrelated to their automotive activities and requested that this was clearly separated in the global revenue total.

After thorough review of the 15 Day Notice, the IVM5 request clarification of the following items:

A. In the draft regulatory language, Section 1900 of Title 13:

"§ 1900. Definitions.

(9) "Intermediate volume manufacturer"

...any 2018 and subsequent model year manufacturer with California sales between 4,501 and 20,000 new light- and medium-duty vehicles based on the average number of vehicles sold for the three previous consecutive model years for which a manufacturer seeks certification."

This definition clearly states that in 2018 MY, a manufacturer is an IVM only if sales are less than 20,000 averaged across 15 - 17MYs. If the 15 - 17 MY average exceeds 20,000, then the manufacturer would be classed as an LVM in 2018 MY. Therefore, the transitioning provisions outlined in 1962.2 (b)(7)(A), which includes the global revenue test and 5x 3MY rolling-average, would not apply. As it stands, the regulatory language only helps manufacturers who are IVM and transition after 2018MY.

We request that § 1900. Definitions, (9) "Intermediate volume manufacturer", be revised adding language including the additional criteria:

- (1) The \$40 billion global revenue test,
- (2) Five, three model year sale volume rolling-average test

B. In Section 2.7 (a) on page B-4, the regulatory language could be read to confuse the revenue threshold:

*"For example, assuming the production volumes described for Manufacturer B at the end of the preceding paragraph, and assuming Manufacturer B had **automotive-related global revenue of 39 billion dollars in fiscal year 2019 ...**"*

We request this be revised to align it with sales volume regulatory language clearly stating that this calculation is based on a three year rolling average.

2. Lead Time: Provides IVMs transitioning to LVM status time to develop and deliver advanced technology vehicles:

The additional lead time (increase from three years to five years) provides IVMs the time needed to develop and market advanced technology (TZEVs, BEVs or FCVs) vehicles, and is similar to that offered to IVMs that transitioned to LVMs prior to 2018.

Under this proposal, the clock for transition from IVM to LVM would begin once an IVM passes both 20,000 sales in CA, and \$40B global revenue. But since the global revenue criteria sunsets in 2020, any IVM with sales over 20,000 in CA would begin the clock in 2021.

After thorough review of the 15 Day Notice, the IVM5 request clarification of the following item:

The following is an excerpt from the LEAD TIME PROVISION discussion in the Notice of Public Availability of Modified Text, (page 3).

“At the October 2014 Board hearing, ARB staff proposed that an IVM comply with the ZEV requirements for LVMs *beginning with the fifth consecutive three-year production volume average* in excess of 20,000 vehicles. The additional two consecutive three-year production volume averages recognize the typical product development time frame and are consistent with the lead-time provisions established for those IVMs that transitioned to LVM status prior to 2018 in the ZEV Regulation, as it existed prior to the 2012 amendments.”

This italicized language above appears to be inconsistent with 1962.2(b)(7):

The following text is how we suggest this section, found on page B-4 of the Proposed 15-Day Modifications, should read:

*“shall comply with the ZEV requirements for large volume manufacturers beginning with the **next model year after the model year corresponding** to the fifth consecutive three-year average.”*

3. Deficit Recovery: For IVMs only, adjusts the ZEV credit deficit provisions to allow IVMs, if certain conditions are met, three years to make up the deficit, 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 required one year would be greatly limiting. ZEV credits are officially reported in September following the model year. By the time a deficit is realized, the following model year is 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 of lead time, but 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 for approval.

Importantly, ARB is also proposing a change to allow an IVM to make up a credit shortfall with either TZEV or ZEV credits. 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.

4. Pooling: 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. Also, as we have seen recently, states can quickly make changes to incentives available to consumers which can change the market for ZEVs dramatically, without sufficient lead time for manufacturers to make adjustments. Lean state budgets have legislatures looking at eliminating current incentives, or assessing special fees on EVs. 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 hearing in October 2014.

IVM5 Specific Comments regarding the 15 Day Notice - Items Opposed

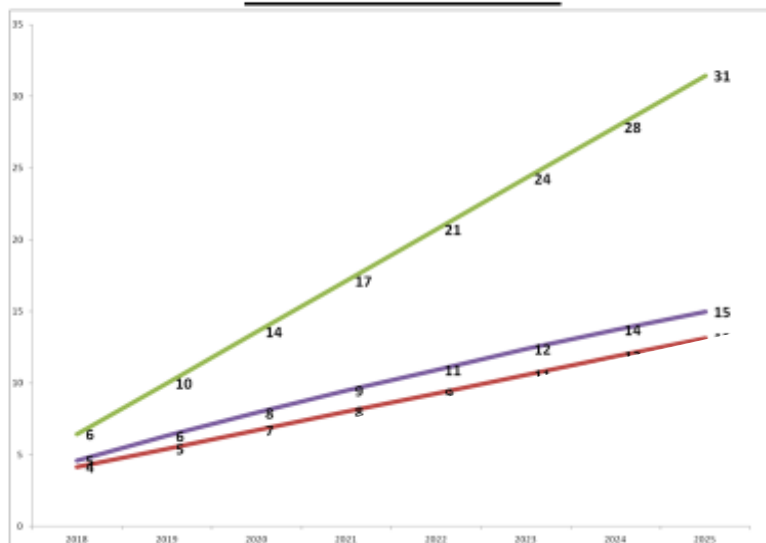
5. Compliance Requirement: the quantity of ZEV program credits required to satisfy the regulatory requirements:

The chart below shows the existing LVM requirement in purple, and the proposed staff requirement for IVMs in green. As we noted for the Board since January 2012, our credit requirements are the same as the LVMs.

The original ZEV 2.0 provided a small flexibility for IVMs; we can comply completely with TZEVs if we choose. However, doing so would require IVMs to sell a larger percentage of ZEVs than LVMs. For example, if an IVM were to comply exclusively with a PHEV with 40 miles of all electric range (known as a TZEV40), our CA sales of this vehicle would need to exceed 31% of our total sales in order to generate the required amount of ZEV credits. In comparison, an LVM is projected to sell 15.4% total sales of ZEVs. Therefore, IVMs would have to sell twice as many vehicles as LVMs.

If the 15 Day changes are enacted, the IVM credit requirements will be unchanged from the 2012 regulation and exactly the same as the LVMs leaving the IVM5 with compliance requirements that can be more stringent than LVMs with respect to TZEVs.

Likely Compliance Scenario Percent of Sales



The effect of this rule is to force IVMs to produce BEVs, since the additional credits BEVs generate is the only realistic way an IVM could comply with the credit requirements. This reality effectively negates the ONLY IVM compliance flexibility; specifically that IVMs may meet their entire obligation with TZEVs.

To support this point, we note the discussion in the ADDITIONAL ANALYSIS AND CONSIDERATIONS, Notice of Public Availability of Modified Text, (page 7 and 8).

ARB Staff compares the TZEV-only to other possible technologies and found the TZEV-only option:

- (1) Costs: \$182 million more expensive than if IVMs just produced and marketed fuel cell vehicles, or
- (2) Costs: \$82 million more expensive than the LVM expected mixture of BEVs, FCVs and TZEVs (the Base Case), and
- (3) Requires IVMs to market 57,500 more vehicles than the Base Case.

Considering the three results above, by simple inspection of Staff's analysis, it is clear that the TZEV-only compliance path is more expensive and difficult than any of the alternatives. Therefore, ARB's basic assumption that this is a viable flexibility must be questioned. Further, it is easy to conclude that the existing regulation provides NO VIABLE DIFFERENCE IN STRINGENCY BETWEEN LVMs and IVMs.

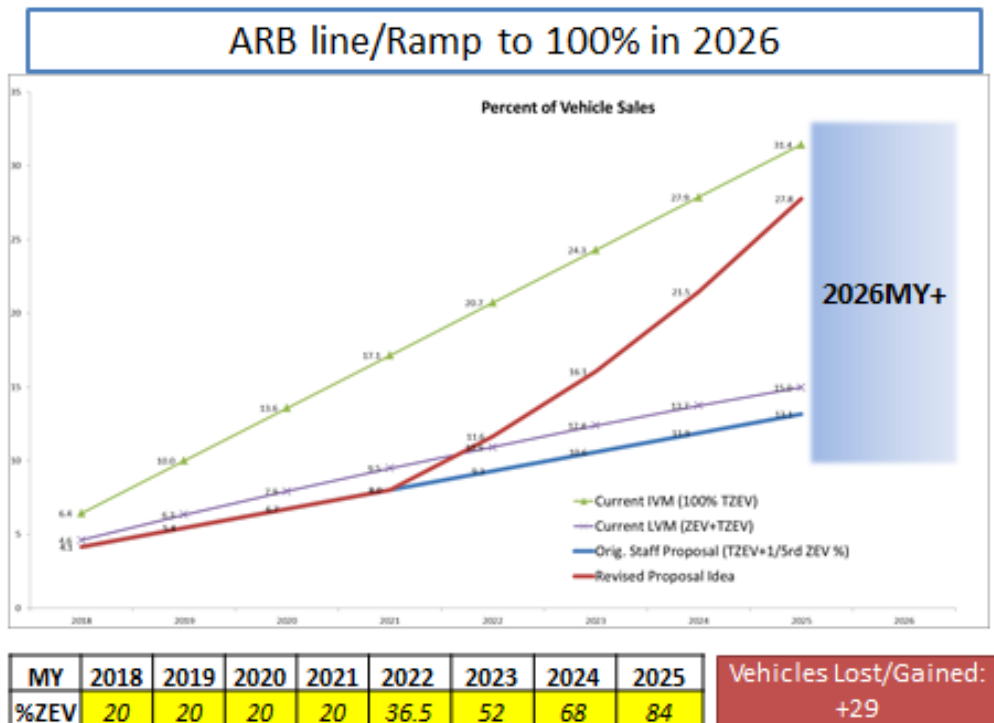
Historically, ARB Staff and Board have publicly concluded that the IVM5 are significantly different than LVMs justifying different requirements. Since the existing regulation does not provide an effective difference in stringency, the IVM5 repeat our request for an IVM specific compliance requirement.

The IVM5 has held numerous discussions with ARB and other stakeholders attempting to create a reasonable compliance requirement. Based on the comments from the October Board meeting and these subsequent discussions, we established two principles for the compliance requirement:

- A. Must maintain the momentum of the ZEV Program – any compliance requirement must be projected to provide as many, if not more, vehicles as the Base Case. We also acknowledge that the ultimate success of the ZEV program does not rest solely on IVM5 contributions, as in total we only represent 7% of the new vehicle market.
- B. Provide the IVM5 a sufficient time period to successfully transition into full compliance with all requirements of the ZEV Program. This includes:
 - (1) Development time for all IVMs to create their own ZEV technologies.
 - (2) Time for their dealer network to learn how to market ZEVs and to build sales experience.
 - (3) Once vehicles and sales network is developed, the compliance requirement should allow IVMs time to build a modest credit balance to prevent future credit deficits.

Historically, the ZEV Program has made changes to allow the LVMs to successfully comply with the Mandate. We request that IVMs be permitted a similar transition period.

To this goal, IVM5 created the following compliance requirement:



This proposal meets the two principles - 1) it assures that the ZEV Program momentum is maintained - the project sales volumes will exceed the Base Case, and 2) it provides IVMs an opportunity for a successful transition.

There are two phases of the program - from 2018 - 2020 model years and 2021 - 2025 model years.

- 2018 - 2020MYs - this phase focuses on providing a modest compliance requirement to allow IVMs to develop pilot and low volume vehicle programs to develop the technology and educate the dealer network.
- 2021 – 2025MYs – the second phase is a ramp up to an equivalent compliance requirement to LVMs in 2026MY. This requires IVMs to successfully market significant quantities of ZEVs. This challenging requirement will probably require IVMs to each develop and market more than one model of ZEV. This will lead to diversity in the marketplace and supports the key goal of the ZEV Mandate – a sustainable ZEV market.

Therefore, the IVM5 request the ARB Staff to consider a compromise similar to the above proposal that provides IVMs an appropriate compliance requirement with respect to their resources to develop and successfully market ZEVs.

After thorough review of the 15 Day Notice, the IVM5 request clarification of the following items:

In the ADDITIONAL ANALYSIS AND CONSIDERATIONS, Notice of Public Availability of Modified Text, (page 7 and 8), ARB Staff compares the TZEV-only to other possible technologies and found the TZEV-only option:

- (1) \$182 million more expensive than if IVMs just produced and marketed fuel cell vehicles,
- (2) \$82 million more expensive than the LVM expected mixture of BEVs, FCVs and TZEVs (the Base Case)
- (3) Requires IVMs to market 57,500 more vehicles than the Base Case.

The IVM5 are unaware of any study that makes this analysis. We are very interested to learn the details of how these calculations are performed and the assumptions. We also have the following questions:

- Are the cost calculations for a single IVM or for all IVMs combined? If a single IVM, what are the assumed annual sales volumes?
- Does the \$182 million savings for the FCV include the R&D of the technology?
- More specifically, how are the costs quoted calculated? For the Base Case, does the calculation include the R&D of three separate vehicles and associated technologies – a BEV, a FCV and a PHEV?

Adjustments to the credit requirements for IVMs must be addressed in the coming Mid-Term Review.

The IVM5 are appreciative of the focus and work that has been done on the ZEV rule with respect to IVMs. As previously expressed by the Board and Staff, the IVM issues were not fully considered or analyzed in the 2012 rulemaking. The 15 Day changes considered now, if adopted, is a step in the right direction, but the work needed to fully address IVM issues will not be complete. The staff proposal put forth in October 2014 was a complete, holistic approach that addressed all of the acknowledged issues of the IVMs. The revised staff proposal, in omitting changes to the compliance requirements, leaves the job unfinished.

Conclusions:

The 15 Day changes to the ZEV regulations put forth by the ARB staff reflect a great deal of thought, analysis, and investigation. For IVM companies, four elements of this proposal are step in the right direction, and we support them. But it does not completely solve all of the market equality issues we raised in a fair manner.

Changing the IVM definition, allowing some additional lead time, allowing for pooling in the Section 177 states, and allowing for an option of three year credit recovery all set the stage for IVM regulations that are fair and reflect the now well understood differences between IVMs and LVMS. However, without changes to the compliance requirements for IVMs, we will still be required to meet the same ZEV credit requirements as the LVMS.

As IVM companies work towards doing their part to support California's clean air goals, it is imperative that staff's proposed regulatory changes be adopted in May 2015. But to complete the IVM regulations, ***it is imperative that the Board direct the staff to review the IVM credit compliance requirements and create a standard that maintains the ZEV Program momentum and allows IVMs to successfully transition into the full ZEV Program. Specific changes to the compliance requirements for IVMs should be a part of the mid-term review that will be reviewed in the fall of 2016. This is necessary for changes to be effective in 2018.***

The IVM5 thank staff and the Board for their work on these regulations and look forward to continuing work in this important area.



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