



August 15, 2008

Ms. Mary D. Nichols, Chairman
California Air Resources Board
1001 I Street
P.O. Box 2815
Sacramento, California 95812

Dear Chairman Nichols:

Subject: ZEV Rulemaking – 15-Day Notice Comments

The Large Volume Manufacturers¹ (LVMs) are pleased to provide the following comments with regards to the staff's 15-Day Notice on revisions to the 2008 Amendments to the California Zero Emission Vehicle Regulations.

A. Substantive Changes

In this section, our comments focus on items for which either lead-time is an issue and/or for which we have concerns about the contents of the changes themselves. The lead-time concern relates to implementation in the 2009 to 2011 model years for items which could impact production plans. It should be noted that production for the 2009 model year has already started, and the start of the 2011 model year is only one and one-half years from when manufacturers were first informed of these proposed changes via the release of the 15-day notice.

1. The reduction in the introduction multiplier for PZEVs that earn zero-emission vehicle miles traveled (VMT) allowance discourages manufacturers from early placement of new technology vehicles in the field. [1962.1(c)(7)(B)]

The 3X introduction phase-in multiplier for PZEVs that earn a zero-emission VMT allowance should not be changed, either by reducing the level of the multiplier to 1.25X or by adding conditions that the vehicles must be either sold or leased for three years with an option to lease for an additional two years, as proposed by Staff.

In regard to the level of the multiplier, the 3X multiplier was not a new proposal in the current rulemaking, but has been in place for years as applying during the 2009 – 2011 model years. The dramatic reduction in the level of the multiplier at this late stage does not provide sufficient lead-time for manufacturers to adjust product plans. The 3X multiplier also provides a significant incentive for manufacturers to bring qualifying technologies to market as quickly as possible, rewarding them for taking on the additional technical risk and cost of bringing these technologies to market in the 2009 - 2011 timeframe.

¹ The Large Volume Manufacturers are Chrysler LLC, Ford Motor Company, General Motors Corporation, American Honda Motor Company, Inc., Nissan North America, Inc., and Toyota Motors North America, Inc.

In regard to the conditions placed on the multiplier, this would also be a new requirement for this type of vehicle that does not apply under current regulations. Current regulations have no conditions relative to whether the vehicle be sold or leased for a specified period of time, but simply require that the vehicles be produced and delivered for sale in California. The most likely technology that will qualify in the enhanced advanced technology (AT) PZEV category, plug-in hybrid electric vehicles or PHEVs, is a new and emerging technology with many new components and systems, including advanced batteries. Manufacturers are already taking on significant technical risk and cost in producing these advanced technology vehicles by 2011 model year, and the early phase-in multiplier should reward them without conditions on how the manufacturer markets and sells the vehicle. Manufacturers want PHEVs to be successful in the market in the initial years that the vehicles are introduced as well as the longer term, and will market the vehicle in whatever manner provides the best chance for success. For example, it may be that uncertainty over the durability of the batteries of these earliest PHEVs results in shorter-term leases being the optimal marketing approach.

Finally, the LVMs would like to respond to issues discussed in the 15-day notice that prompted Staff to propose changes to the 3X multiplier. First, in regard to the current multiplier resulting in excess credits that in turn result in blackouts of enhanced AT PZEV vehicles, the LVMs do not believe this is a realistic concern. PHEVs are an emerging and rapidly advancing technology. The number of PHEVs produced will undoubtedly grow over time as manufacturers improve the technology, the supply base for key components such as batteries expands, recharging infrastructure expands, and education and acceptance by consumers grows. Second, in regard to ZEVs receiving fewer credits than enhanced AT PZEVs, the LVMs believe this concern can be addressed by providing a higher credit value for ZEVs (both battery electric and fuel cell electric vehicles) that are not used toward the "floor" requirements. This would have the added advantage of incentivizing intermediate volume manufacturers (and for that matter any manufacturer) to produce additional gold vehicles beyond the number required under the floor requirements.

2. Travel Provision [1962.1(d)(5)(E)]

a. The travel provision should not be changed until 2012MY because manufacturers already have begun implementing plans for ZEV requirements for the 2009 – 2011 Model Year period.

The Large Volume Manufacturers (LVMs) understand and acknowledge the concept of proportionality of the travel provision introduced at the ZEV Board Hearing. However, this change may require substantial adjustment to manufacturers' compliance plans.

Therefore, the LVMs request that the travel provision proportionality commence from the 2012 Model Year at the earliest. Implementing the proportionality sooner than 2012 MY does not provide the lead time needed to adjust product plans for new, advanced technology vehicles. For example, many of the advanced components that go into these vehicles are linked to completed supply agreements that can not be adjusted for short-term capacity / volume changes. As stated previously, the 2009 model year has already started, and the start of the 2011 model year is only one and one-half years from now. This simply does not allow time for compliance adjustment.

b. Unintended Consequences of the Proportionality Calculation

The LVMs are concerned with the proportional calculation accurately tracking compliance in cases where a manufacturer elects to use credit carry-forward or carry-back. The following examples illustrate the LVM's concerns. The LVMs understand that the intent of the proportional calculation is that if a manufacturer produces and places into service in

California/177 States sufficient ZEVs to just meet the gold requirement in California, that will equate to sufficient ZEVs to just meet the gold requirement in all 177 states, regardless of any use of carry-forward or carry-back. The LVM's have not developed any specific regulatory language to address this issue, but look forward to working with ARB and the 177 states to make sure that the proportional calculation provision is implemented in a manner consistent with its intended purpose.

Example 1: Carry-Forward¹

| California | 2012 | 2013 | 2014 |
|---|-------------|-------------|-------------|
| CA Volume Subject to ZEV Regulations ² | 100,000 | 100,000 | 100,000 |
| ZEV Credits Earned in CA | 1,210 | 1,220 | 0 |
| ZEV Credits Required in CA (0.81%) | 810 | 810 | 810 |
| ZEV Credits Balance in CA | 400 | 810 | 0 |

| New York | 2012 | 2013 | 2014 |
|--|-------------|-------------|-------------|
| NY Volume Subject ZEV Regulations ² | 50,000 | 50,000 | 60,000 |
| ZEV Credits Earned in NY | 605 | 610 | 0 |
| ZEV Credits Required in NY (0.81%) | 405 | 405 | 486 |
| ZEV Credits Balance in NY (Cumulative) | 200 | 405 | -81 |

1. For simplicity, the impact of multiplying credits by the fleet NMOG average is not taken into account in this example, although this is another complicating factor that will need to be considered.
2. Assumes same model year method for determining volume of vehicles subject to ZEV regulations.

Example 2: Carry-Back¹

| California | 2012 | 2013 | 2014 |
|---|-------------|-------------|-------------|
| CA Volume Subject to ZEV Regulations ² | 100,000 | 100,000 | 100,000 |
| ZEV Credits Earned in CA | 0 | 1,220 | 1,210 |
| ZEV Credits Required in CA (0.81%) | 810 | 810 | 810 |
| ZEV Credits Balance in CA | -810 | -400 | 0 |

| New York | 2012 | 2013 | 2014 |
|--|-------------|-------------|-------------|
| NY Volume Subject ZEV Regulations ² | 60,000 | 50,000 | 50,000 |
| ZEV Credits Earned in NY | 0 | 610 | 605 |
| ZEV Credits Required in NY (0.81%) | 486 | 405 | 405 |
| ZEV Credits Balance in NY (Cumulative) | -486 | -281 | -81 |

1. For simplicity, the impact of multiplying credits by the fleet NMOG average is not taken into account in this example, although this is another complicating factor that will need to be considered.
2. Assumes same model year method for determining volume of vehicles subject to ZEV regulations.

c. Other Clarifying Changes to the Travel Provision

As indicated in the following mark-up of ARB's proposed regulatory language (1962.1(d)(5)(E)), the LVMs recommend replacing "any" with "all" for added clarity that the credits travel to all 177 states. The LVMs also recommend replacing "total sales" with "PCs, LDT1s, and LDT2s, as applicable, produced and delivered for sale". This change accomplishes two things. First, it makes it clear that just those vehicle classes subject to the ZEV regulations are included in the volume of vehicles used to calculate the proportional credit values. Second, it makes it clear that the vehicle volumes used in the proportional calculations are those vehicles produced and delivered for sale in the state, which is consistent with the basis for the ZEV requirements themselves.

(E) Counting Specified ZEVs Placed in a Section 177 State.

Specified model year ZEVs, excluding NEVs and Type 0 ZEVs, that are either certified to the California ZEV standards or as part of an advanced technology demonstration program and are placed in service in California or in a state that is administering the California ZEV requirements pursuant to section 177 of the federal Clean Air Act (42 U.S.C. section 7507) (hereafter "section 177 state") applicable for the ZEV's model year may be counted towards compliance in California and in all any section 177 states, with the percentage ZEV requirements in section 1962.1(b), including the requirements in section 1962.1(b)(2)(B) and (b)(2)(D), provided that the credits are multiplied by the ratio of an LVM's PCs, LDT1s, and LDT2s, as applicable, produced and delivered for sale~~total sales~~ in the state receiving credit to the LVM's PCs, LDT1s, and LDT2s, as applicable, produced and delivered for sale~~total sales~~ in California. The table below specifies the qualifying model years for each ZEV type that may be counted towards compliance in all any section 177 states.

3. Calculating the Number of Vehicles to Which the Percentage ZEV Requirement is Applied [1962.1(b)(1)(B)]

a. Previous model year method for 2012MY and Later ZEV obligation calculation should be based on a constant three years average as is done today.

The 15 Day Notice clarified that the production volumes for 2009 – 2011 model year are based upon the 2003 – 2005 model year three year average. The large vehicle manufacturers would like to request that the same three year average methodology be applied to subsequent three year periods such that the 2012 – 2014 production volumes would be based upon the 2006 – 2008 model year three year average and the 2015 – 2017 production volume on the 2009 – 2011 model year three year average. This has been the LVM's understanding based on the response to our questions in which the ARB indicated that "It was not staff's intent to change to a three year rolling average."

b. Selection of Three Year Averaging or Same Model Year Calculation Method

The LVMs appreciate the flexibility to select either the three year average or the same model year calculation on an annual basis and would like to confirm that this is proposed for 09 and later MY implementation.

4. Alternative Requirements for the 2009-2011 Model Years should be based on a constant 3 year average. [1962.1(b)(2)(B)1.b.]

This provision states that the Alternative Path requirement be based on "*either production volume determination method described in section 1962.1(b)(1)(B).*" This allows the Alternative Path volume to be established by either the "constant 3-year average" or the "same year" method. In the prior regulations and in the 45-day notice, the Alternative Path quantity has been determined solely by the constant 3-year average method. The reasoning was to allow significant lead time for manufacturers to plan and produce the required number of Alternative Path vehicles.

Therefore, the language in 1962.1(b)(2)(B)1.b. should read, ". . . 0.82 percent of the manufacturer's sales, using the three-year average of the manufacturer's volume of PCs and LDT1s, and LDT2s as applicable, produced and delivered for sale in California in the 2003, 2004 and 2005 model-years."

Additionally, 1962.1(b)(2)(B)1.b.ii. should be deleted.

5. The limitation on the use of "gold" transportation system credit removes any motivation to put these zero-emitting vehicles into transportation system programs. [1962.1(b)(2)(D)4.]

The ARB is proposing to eliminate the ability to use credits that were earned by placing a ZEV in a transportation system credit toward the ZEV ("Gold") obligation. We believe that transportation systems should be encouraged because there are significant societal benefits to these programs. As the ARB concluded in their report, "Recommendations of the Economic and Technology Advancement Advisory Committee (ETAAC)" that was presented to the Board on February 28, 2008, "Decreasing Vehicle Miles Traveled (VMT) is critical to meeting AB 32 GHG emission reduction goals". Transportation system programs provide a means to reduce VMT. The ARB should be encouraging manufacturer's early involvement in the establishment of these transportation system programs to set the ground-work for growing these programs. The placement of ZEVs in transportation system programs provides greater exposure to this technology, which is important in the early stages of commercialization. Furthermore, placing ZEVs in transportation system programs have the potential to provide consumers with a means of commuting while producing zero emissions. The existing regulations already limit the use of transportation system credits to 1/10th of the "Gold" obligation; we do not believe these credits should be eliminated altogether.

6. Credit levels in 2018MY do not recognize the significant differences in technology types, costs, or commercialization-readiness. [1962.1(d)(5)(C)]

The credit values for Type V from 2018 on need to be reconsidered. The implication of having ZEV Types II through V in the 2018+ timeframe all earning 3 credits suggests an equal level of technology development, technology maturity, performance, utility and cost. We believe strongly that the advantages of Type V ZEVs are significant, while the state of their development after 2018 will, in all likelihood, still need support - as reflected in the need for higher credits. We also expect a technology review will be conducted, which will evaluate these ZEV technologies in terms of performance, status, and cost. The technology review findings should also be considered in assessing changes to the credit values.

7. Emissions regulations should not set non-emissions related, customer-driven performance requirements for NEVs, or any other vehicle type. [1962.1(d)(5)(F)]

We do not believe it is appropriate for the ARB to set non-emissions related, customer-driven performance, battery and warranty requirements for NEVs to receive ZEV credit. These vehicle attributes are not related to emissions and should not be included as a requirement. Customers will decide which NEVs will provide them with the performance, utility and warranty specifications that they need. All NEVs are zero emitting and displace vehicle miles traveled (VMT) from other emitting vehicles; therefore, all NEVs should receive ZEV credits.

B. Confirmation Items

The comments in this section reflect those items which are being clarified.

1. There is no need to require a manufacturer to make up ZEV deficits within the production-period because the two year carry-forward / carry-back provisions will prevent long black-out periods. Furthermore, this requirement is inconsistent with the previous section which allows deficits to be made up by the end of the third model year. [1962.1(g)(8)]

In this section the wording was changed from "specified time" to "production-period" where production period is defined as each three year interval with a unique Minimum ZEV Requirement per 1962.1(b)(1)(A). The concern of the manufacturers was that this change

appears to be in contrast to the intention of ARB to provide a two-year make up period for ZEV compliance as defined in 1962.1(g)(7)(A).

It is our understanding that the two-year make up provision was the concept adopted by the Board. The wording in section 1962.1(g)(8) should be changed to avoid the conflict with 1962.1(g)(7)(A). This would further suggest the definition for "Production-Period" listed in section 1962.1(i)(9) may be removed.

2. The 17% LDT2 phase-in in 2007MY should be removed. [1962(b)(1)(C)]

In a letter dated January 16, 2007, ARB informed auto manufacturers that it would not be enforcing the LDT2 phase-in requirement in title 13, CCR, section 1962(b)(1)(C) as it applies to the 2007 model year. For consistency, ARB should use this current rulemaking as an opportunity to remove the 2007 LDT2 phase-in percentage (i.e., 17%) from the regulations as well as from the corresponding section in the test procedures document (i.e., section C.2.1(c)).

3. AT-PZEV obligation should be changed to be consistent 2.19% or 93.25%. [1962.1(b)(2)(D)]

Section 1962.1(b)(2)(D)1. states that "no more than 92.5% may be met with Enhanced AT PZEVs and NEVs, as limited in section 1962.1(g)(6)." The 92.5% value should be changed to 93.25% to reflect the Enhanced AT PZEVs or NEVs percentage allowance of 2.19%, which is stated in 1962.1(b)(2)(D)3.

4. It should be made clear how Type 0 credits may be used. [1962.1(b)(2)(D)]

In section 1962.1(b)(2)(D)1. and 2. both NEVs and Type 0 ZEVs are excluded from satisfying the ZEV requirements (there is no longer an Alternative Path) in 2012 through 2014 model years and in 2015 through 2017 model years.

While these sections exclude Type 0 ZEVs from meeting pure ZEV requirements, it is not clear which requirements may be met with Type 0 ZEVs. The language in 1962.1(b)(2)(D)1. should read "No more than 93.25% may be met with Enhanced AT PZEVs, Type 0 ZEVs, and NEVs, as limited in section 1962.1(g)(6)." Similar changes should be made to section 1962.1(b)(2)(D)2. and 1962.1(b)(2)(D)3.

The Large Volume Manufacturers sincerely urge you to consider these comments and issues resulting from the 15-day Notice of Proposed Amendments to the ZEV Regulation. We remain committed to the goals of the ZEV program and look forward to working with ARB in maintaining the success of the ZEV mandate.

Very Truly Yours,

Chrysler LLC
Ford Motor Company
General Motors Corporation
American Honda Motor Company, Inc.
Nissan North America, Inc.
Toyota Motors North America, Inc.