



October 20, 2014

Mary Nichols, Chair
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Subject: Tesla Motors, Inc.'s Comments to Proposed Amendments to Sections 1962.1 and 1962.2, Title 13, California Code of Regulations

Dear Chair Nichols and Honorable Members of the Air Resources Board:

Tesla Motors, Inc., a California based company devoted solely to the mission of promoting and producing pure battery electric vehicles, has serious concerns about the proposed changes to the Zero Emission Vehicle ("ZEV") mandate. Specifically, and as outlined in greater detail below, the proposed amendments significantly weaken the ZEV standards and will have a material adverse impact on Tesla's business; a business that is directly advancing the goals of the ZEV mandate and supporting California's economy with over 7,500 jobs in the state.

The current Air Resources Board ("ARB") proposal will cut the intermediate volume manufacturer ("IVM") ZEV requirement by 54% and allow those manufacturers to delay their ZEV programs by an additional eight years, to 2026. These changes will take 120,000 plug-in cars off the road from 2018 to 2025, effectively negating the milestone that California just celebrated of 100,000 cumulative plug-in deliveries. Any changes to the ZEV mandate that move us away from Governor Brown's goal of 1.5 million electric vehicles should be carefully scrutinized and only allowed if supported by sound data and analysis. Furthermore, ARB should thoroughly explore all viable alternatives before making changes that will harm a California business that is creating thousands of jobs. We have analyzed the IVM situation in detail and see no compelling case to weaken the regulations at this time.

As elaborated in the remainder of this letter, we urge you to consider the following points that support the case that the ZEV mandate is achievable in its current form:

- I. IVMs have already demonstrated the ability to develop and launch plug-in vehicles
- II. IVMs are delivering plug-in vehicles in Europe and Asia in volumes that far exceed even the 2018 ZEV standards
- III. Manufacturers can partner to develop clean vehicles more quickly and with less cost
- IV. IVMs have billions of dollars in cash on hand to fund clean vehicle development
- V. IVMs can reduce their ZEV requirement by up to 50% with the GHG over-compliance option
- VI. The cost of hedging using ZEV credits is extremely small relative to IVM profits

In Section VII of this letter we also suggest updates to staff's analysis provided in the Statement of Reasons, which will improve accuracy and significantly impact the conclusions. In addition, as described in greater detail in Section VIII, Sections 11346.3 and 11346.5 of the California Government Code require ARB to assess the impact of regulatory changes on California business and consider alternatives that are less harmful to companies in the state. The adverse impact on Tesla and our California manufacturing operations was not considered when these amendments were formed. These negative consequences should be analyzed, as required by California law, and presented to the Board before a decision is made. Finally, as part of staff's

proposal, ARB should consider the ability of IVMs to comply using flexibilities in the regulations, such as greenhouse gas (“GHG”) over-compliance and ZEV credit trading, before making a decision to change the standards. This analysis was not addressed in the published Statement of Reasons.

I. IVMs have already demonstrated the ability to develop and launch plug-in vehicles

The ability to develop and produce battery-electric and plug-in hybrid vehicles is not out of the reach of the IVMs. One of the smallest of the IVMs has been delivering 100% battery electric vehicles in the U.S. since 2011, and two of the five IVMs receiving the proposed concessions have already launched plug-in hybrid vehicles (“PHEVs”). Moreover, Tesla is a fraction of the size of even the smallest IVMs and it has developed and launched electric vehicles, and has been delivering ZEVs in the U.S. since 2008. If the smallest IVMs, and Tesla, are able to launch these vehicles then certainly the larger IVMs can do so as well. Additional relief is not warranted. If manufacturers desire more time they can easily obtain it using flexibilities already built into the regulations.

Furthermore, Tesla Motors has made its patents available to any manufacturer that would like to use its technology. Any one of the IVMs could accelerate its EV development by using Tesla’s technology free of charge, and we invite the IVMs to reach out to us to pursue this opportunity.

II. IVMs are delivering plug-in vehicles in Europe and Asia in volumes that far exceed even the 2018 ZEV standards

IVMs are also capable of delivering plug-in vehicles in sufficient quantities to meet the ZEV standards. Two of the smallest IVMs are currently delivering plug-in hybrid vehicles outside of the U.S. Both companies delivered around 8,000 PHEVs in Europe in 2013, and one has delivered over 33,000 PHEVs worldwide. The current ZEV standards only require these same manufacturers to deliver 1,300 to 1,500 PHEVs in 2018. This means that the IVMs have over three years to bring their PHEV technology to the U.S. and deliver in volumes that represent just a fraction of what they are selling abroad today. Further relief from the ZEV mandate is not justified in light of this demonstrated capability.

III. Manufacturers can partner to develop clean vehicles more quickly and with less cost

As noted above, Tesla has made all of its patented technology available to manufacturers interested in contributing to the commercialization of zero emission vehicles. This proposal is not simply theoretical. Daimler and Toyota have already partnered with Tesla to launch 100% electric vehicles on expedited timeframes. For example, the development process for both the RAV4 EV and the B-Class EV took only about 2 years, and the electric powertrains were designed to fit within the architecture of existing vehicle platforms.

Other manufacturers could take the same approach, partnering not only with Tesla but also with Large Volume Manufacturers to launch their clean vehicle programs more quickly and with less cost. There is already a precedent for these types of partnerships for a variety of reasons. For example, Mitsubishi and Nissan announced plans to work together to develop EV technology. Toyota and Subaru partnered to develop the FR-S / BRZ sports coupe – surely a collaboration on a clean vehicle is possible just as much as collaboration on sports car. Undoubtedly, such collaborations are possible and readily available.

IV. IVMs have billions of dollars in cash on hand to fund clean vehicle development

Manufacturers have the ability to fund clean vehicle projects with existing cash balances, future earnings and debt and equity financing. Research and development budgets, mentioned in the Statement of Reasons as a limiting factor for the IVMs, are 100% discretionary and are not the best metric for gauging a company's ability to launch these programs. Furthermore, staff should analyze the financial results of the companies that own the IVM brands rather than just looking at IVM subsidiary financial data.

Tesla has far fewer resources than even the smallest of the IVMs, yet it was able to raise all of the funding needed to design an electric vehicle from scratch and scale its manufacturing capabilities as exemplified by the Tesla Roadster. For the IVMs, the cost of launching clean vehicle programs will be much less than it was for Tesla, as they can convert existing vehicle platforms to accept plug-in powertrains and they have infrastructure in place to build these vehicles. It is not sufficient to point to the fact that IVMs have smaller discretionary research and development budgets than LVMs to justify the proposed amendments. ARB must consider the full financial capacity of these companies and compare it to realistic costs of launching clean vehicle programs to determine whether the standards are achievable.

The IVMs receiving the proposed concessions reported cash balances of \$4 billion to nearly \$6 billion in their latest annual reports.⁽¹⁾ ZEV programs can be launched for far less than this, and the IVMs have access to billions of dollars in additional capital through debt and equity financing. For example, Tesla launched the fully electric Roadster for only \$125 million dollars, which includes all research and development costs and capital expenditures. In addition, Toyota paid approximately \$60 million for the development of a full electric powertrain for the RAV4 EV.⁽²⁾ The strong financial position of the IVMs demonstrates that compliance with the ZEV mandate is clearly within their reach, irrespective of historical research and development spending levels or their size relative to the LVMs.

V. IVMs can reduce their ZEV requirement by up to 50% using the GHG over-compliance option

Existing provisions within the ZEV mandate already provide sufficient flexibility for IVMs. Specifically, if manufacturers want more time to deliver ZEVs they can use flexibilities built into the current regulations. For example, ARB already offered significant flexibility in the form of GHG over-compliance. This option allows manufacturers to reduce their ZEV requirement by up to 50% by over-complying with the federal GHG standards. The GHG over-compliance incentive is in place through 2021, and gradually transitions from a 50% reduction in 2018 and 2019 to a 30% reduction in 2021.

VI. The cost of hedging using ZEV credits is extremely small relative to IVM profits

Manufacturers can also gain as much time as they want by purchasing ZEV credits from other manufacturers. ZEV credits are an important part of the regulations, as they create an incentive for manufacturers to deliver clean vehicles in excess of the mandated levels. ZEV credit trading enables the broader goals of the mandate to be achieved without forcing specific manufacturers to deliver ZEVs by a particular date. Credits never expire and can be banked at any time to hedge compliance in future years. Any

¹ Latest fiscal year-end (FYE) cash and cash equivalent balances of the companies that own the IVM brands. Amounts converted to USD using FYE spot rates. Volvo Cars is owned by Zhejiang Geely Holding Group Co., Ltd, which does not publicly disclose its financial information.

² <http://www.sec.gov/Archives/edgar/data/1318605/000119312510232709/d8k.htm>

credits purchased prior to MY2018 include a multiplier that covers all Section 177 state compliance simply by hedging the California requirement. In fact, one of the IVMs that would benefit from the proposed concessions has been trading its ZEV credits to other manufacturers rather than banking them for future compliance.

The automotive industry is currently holding over 150,000 pure ZEV credits in California alone.⁽³⁾ If the IVMs were to purchase ZEV credits they could hedge the entire difference between the current and proposed standards from 2018 through 2022 for less than \$80 per vehicle delivered in the ZEV states.⁽⁴⁾ The cost of hedging is so small relative to the profits of the IVMs that we see no compelling reason to reject existing flexibilities in favor of weakening the mandate.

VII. Charts and tables in the Initial Statement of Reasons for Rulemaking should be revisited

Figure 1 of the published Statement of Reasons shows that 44% of IVM sales would need to be PHEVs in order to meet the 2025 ZEV standard. This chart should be updated to reflect more realistic assumptions. Specifically, the current chart assumes that the IVMs can only produce a 20 mile range PHEV in 2018, with no improvement in electric range from 2018 – 2025 and no growth in sales volume over that period. Current PHEV technology already exceeds 20 miles of range, and manufacturers can build fewer PHEVs by increasing the range of the models they sell. Advancements in battery energy density are contributing to a 7% annual improvement in electric range, not to mention the fact that range can be improved through design changes such as reducing vehicle weight and improving aerodynamics. Lastly, IHS projects 2% sales growth for the IVMs over this period, which should be factored into the model.

Exhibit A shows a comparison of the chart listed in the Statement of Reasons versus an updated model that assumes IVMs deliver a 40 mile range PHEV in 2018, with 5% annual range improvement and 2% average sales growth. Under these conditions, only 25% of IVM deliveries would need to be PHEVs in 2025. Alternatively, the IVMs could deliver battery electric vehicles representing only 11% of their fleet in 2025 and fully comply with the standards.⁽⁵⁾

³ ARB reported balances: <http://www.arb.ca.gov/msprog/zevprog/zevcredits/2013zevcredits.htm>

⁴ Represents total hedging cost divided by total ZEV state deliveries over the period. Assumes credit pricing equals the \$5,000 fine value listed in Health & Safety Code Section 43211, and that IVMs bank credits prior to 2018 to receive the 177 State multiplier.

⁵ Assumes starting point of 100 mile range BEV in 2018 with 5% annual range improvement.

Exhibit A:

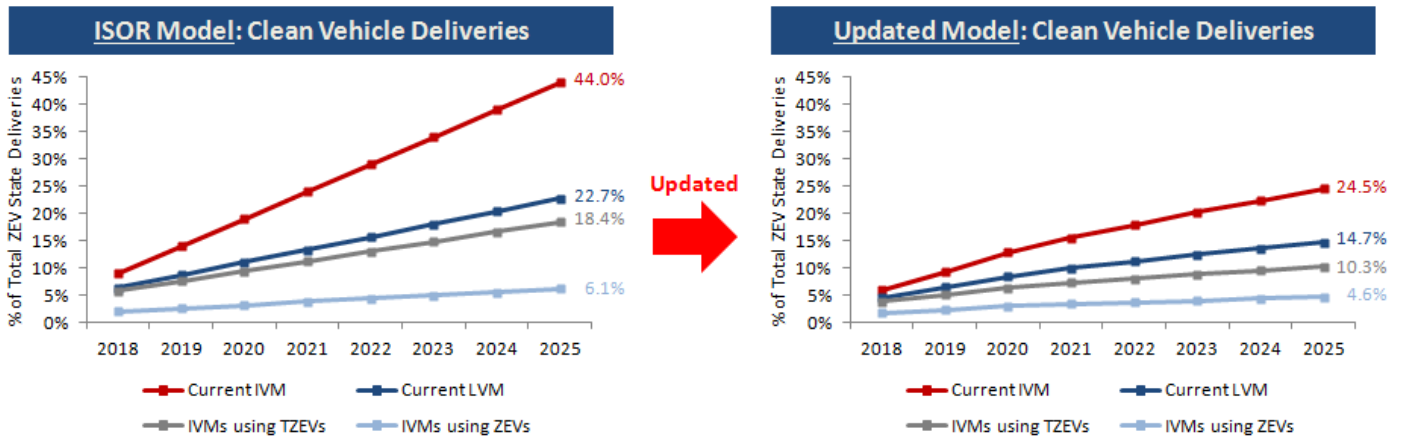


Table 3 in the Statement of Reasons shows that only 25,840 plug-in cars would be lost as a result of the proposed changes. This figure does not include the effect of the changes on the nine other states that have adopted the ZEV regulations. This figure is also based on EMFAC 2011 data, which no longer reflects current ZEV state delivery volumes or the latest IVM sales projections. Our analysis includes the effect of the proposed amendments on all ZEV states, and incorporates Polk registration data and current IHS projections to estimate sales volume. Using this approach we conclude that 120,000 plug-in cars will be lost from 2018 – 2025 if the proposed changes are approved.

VIII. Initial Statement of Reasons for Rulemaking does not fully address Sections 11346.3 and 11346.5 of the California Government Code

Section 11346.3 requires that state agencies assess the potential for adverse economic impacts on California business when proposing to amend regulations. The proposed changes will have a material adverse impact on Tesla. Specifically, the changes will hinder Tesla’s ability to sell the ZEV credits it earns from delivering 100% zero emission vehicles in California and other ZEV states. ZEV credit revenue helps Tesla offset the cost of clean vehicle research and development, as well as the cost of California-based manufacturing. Tesla’s sales volume represents just 2% of the average sales volume of the five IVMs lobbying for these concessions, so the impact on Tesla of passing these amendments is far greater than the impact on the IVMs of keeping the regulations intact. ⁽⁶⁾

Section 11346.5 requires state agencies to consider alternatives that are less burdensome on California business when proposing regulatory changes. As we have already mentioned, GHG over-compliance and ZEV credit trading are viable alternatives for manufacturers to obtain more time to launch their ZEV programs. These alternatives provide substantial flexibility for the IVMs and minimize the impact on California business. These alternatives were not addressed in the published Statement of Reasons.

⁶ Average 2013 IHS global delivery data for the parent companies of the five IVMs versus Tesla’s 2013 global delivery volume.

Conclusion

ARB should not feel obligated to provide automakers with concessions today simply because concessions were extended in the past. A close look at the IVMs and the current ZEV landscape reveals that the standards are achievable, and that flexibilities built into the regulations provide more than enough time for manufacturers that want to postpone the launch of their clean vehicle programs. Indeed, the actions of the IVMs today, including launching plug-in vehicles, selling in volumes that exceed the regulatory standards and even selling credits earned from the delivery of these vehicles, demonstrates their ability to meet the existing regulatory requirements. We urge you to delay decisions to weaken the ZEV mandate until there is compelling data and analysis to support such a change.

Thank you for considering our comments. We look forward to continuing to work with ARB on these important matters. For any questions or follow up regarding this comment, please feel free to contact Ken Morgan (kmorgan@teslamotors.com) or (650) 681-5630) or me.

Sincerely,



James C. Chen, Vice President of Regulatory
Affairs & Associate General Counsel