



Comments on the LEV III Amendments to the Advanced Clean Cars Program

Fisker Automotive appreciates the opportunity to respond to the California Air Resources Board (ARB) as it considers the LEV III amendments to the Advanced Clean Cars program. Fisker Automotive is a privately owned auto manufacturer headquartered in Anaheim, California. We build environmentally conscious vehicles with passion, style and performance for the global market. Fisker's first vehicle is the Karma, an electric vehicle with extended range (EVer™) that began first customer deliveries late last year.

Fisker Automotive employs more than 600 people at our Anaheim facility. California is home to our global headquarters and is our largest single market. We have partnered with six retailers throughout California, representing a strong sales tax base. We also believe that our vehicles have special appeal to the California driver, whose renowned sense of style and desire for personal mobility is increasingly balanced by an awareness of environmental impact.

In the sections that follow, we wish to offer four major comments to the rulemaking process:

- 1) Support ARB's trend-setting efforts to reduce emissions in California
- 2) Encourage continued coordination with EPA regarding Tier 3 emission standards
- 3) Consider the upstream emissions possibilities given ARB's cap and trade program
- 4) Urge recognition of electric VMT in accounting for criteria pollutants

Fisker thanks ARB for the opportunity to comment on this rulemaking and would like to remain engaged throughout this regulatory process and future policy-making activities.

1) Support Efforts to Reduce Emissions

- **Fisker Automotive supports ARB's efforts to reduce vehicle emissions**
- **Fisker vehicles embody the guiding principle behind the regulation**

California has a well established leadership role in setting standards for both smog-forming criteria pollutants and greenhouse gas emissions. Fisker Automotive commends ARB for maintaining that leadership with the present rulemaking by requiring continual emissions reductions from the automotive fleet. We believe the proposed standards for both criteria pollutants and greenhouse gas emissions are stringent yet achievable in the timeframe proposed.

As stated in the Initial Statement of Reasons for the LEV III amendments, one of the goals of the Advanced Clean Cars program is to assure "the development of environmentally superior cars that will continue to deliver the performance, utility, and safety vehicle owners have come to expect." Fisker Automotive fully agrees with this sentiment. Our electric vehicle with extended range (EVer) powertrain enables all-electric driving and eliminates the range anxiety that represents a hurdle to some electric vehicle buyers. By packaging this powertrain in a vehicle that delivers world-class luxury and performance, Fisker Automotive is demonstrating that environmental responsibility and driving passion need not be mutually exclusive.



2) Encourage Coordination with EPA

- **Harmonization reduces regulatory burden**
- **We support harmonization with EPA GHG standards**
- **We encourage harmonization with EPA Tier 3 standards**

Fisker Automotive is pleased to see indications that ARB and the U.S. Environmental Protection Agency (EPA) are coordinating their efforts to harmonize their respective standards. Harmonization ensures that the regulatory burden placed on auto manufacturers is not unreasonable, and the effectiveness of the proposed targets is not undermined as a result. Fisker Automotive encourages continued harmonization to the fullest extent possible. As a newly established manufacturer, dedicating the resources to develop fleets that comply to separate California and federal standards would prove extremely burdensome.

As stated in the Initial Statement of Reasons for the LEV III amendments, the greenhouse gas emissions targets for 2017-2025 were developed jointly by ARB, EPA, and the National Highway Traffic Safety Administration (NHTSA). We are pleased to see that this close coordination has resulted in proposed greenhouse gas targets by ARB and EPA that are identical. Likewise, we support the provision that would allow automakers to choose between federal compliance and California compliance to accommodate a difference in crediting provisions for advanced technology vehicles between the two regulations.

The coordination between ARB and EPA regarding criteria pollutant standards is less evident. While we can presume that ARB and EPA will be driving emissions standards to the same levels, the lag time between this rulemaking and EPA's upcoming Tier 3 rulemaking suggests there could be differences in the implementation timeline in addition to any conceptual differences. For example, while ARB has proposed a certification fuel with 10 percent ethanol by volume, EPA may propose a certification fuel with up to 15 percent ethanol by volume. Fisker Automotive encourages ARB to allow flexibility that would accommodate differences between the two regulations.

3) Consideration of Upstream Emissions

- **With cap and trade program, ARB has controls in place for upstream emissions**
- **Inconsistencies between regulatory bodies creates public confusion**

Fisker Automotive applauds the Air Resources Board for approving a cap and trade program that will reduce greenhouse gas emissions in California under AB 32. By establishing controls for greenhouse gas emissions due to electricity generation (in the first compliance period of 2013-2014) and fuel distributors (in the second compliance period of 2015-2017), ARB has an opportunity to elegantly separate its regulation of upstream emissions and downstream (tailpipe) emissions due to vehicle use.



Different regulatory bodies take differing approaches to tailpipe emissions. The European Commission (ECE-R 101) recognizes electric driving as contributing zero tailpipe emissions, which results in a CO₂ rating of 51 g/km (or 82 g/mi) for the 2012 Fisker Karma. In contrast, the same vehicle under the proposed LEV III amendments would receive a CO₂ rating of approximately 140 g/mi, based on the calculation for model year 2016. The difference between these two ratings is partially attributable to the different handling of upstream emissions.

Another example: the 2012 Fisker Karma receives a Global Warming Score of 5 under California's Environmental Performance Label, which includes upstream emissions, and a Fuel Economy & Greenhouse Gas Rating of 10 on the EPA's revised Fuel Economy and Environment Label, which does not include upstream emissions. (As a side point, there is also a discrepancy between the Smog Scores on the two labels). While we applaud ARB's decision to accept the EPA's new label as compliant with California's labeling requirement, we point out this discrepancy to illustrate that different approaches to upstream emissions can create confusion in the eyes of the public regarding the environmental benefit of electric vehicles.

4) Recognition of EV Range

- **Encourage fair accounting of emissions reductions due to electric capability**
- **NMOG+NO_x contribution factor partially captures benefits**
- **Urge consideration of UF-based approach for level playing field**

Fisker Automotive believes that enabling zero emission driving has important benefits for the environment and human health. We also believe that a fair accounting of vehicle emissions will provide new powertrain technologies – such as electric vehicles with extended range – the best possible chance for success in the marketplace.

Fisker Automotive recognizes that ARB has included in its LEV III amendments a NMOG+NO_x Contribution Factor for Off-vehicle Capable HEVs that factors in a Zero-emission VMT Allowance in calculating a manufacturer's fleet average NMOG+NO_x emissions. Fisker appreciates this provision in that it allows manufacturers that produce all-electric-capable vehicles to account partially for the reduced emissions of their vehicles. However, we would be interested to learn how ARB arrived at these contribution factors; it appears that a VMT Allowance of greater than 1 would reduce the SULEV20 HEV Contribution Factor to a value of less than zero.

We would also be interested in discussing with ARB ways in which a vehicle's zero-emission vehicle miles travelled (VMT) may be accounted for more generally in the criteria pollutant regulations. An electric vehicle with extended range is currently certified at the emissions level that characterizes its range-extending engine. The certification in essence assumes that the engine will be operating at all times – a worst-case scenario – with the same emissions profile as a conventional vehicle. This assumption has two negative effects: 1) it creates confusion in the marketplace as to a vehicle's relative environmental impact, and 2) it requires automakers to design for the worst-case scenario



as well; emissions equipment, for example, must be assumed effective for a full useful life in which a driver never utilizes the vehicle's all-electric range, no matter how unlikely this scenario may be.

ARB's greenhouse gas emissions standards in the LEV III amendments incorporate a utility factor (UF) to calculate the fraction of VMT spent in all-electric range. Fisker Automotive would encourage ARB to consider aligning its utility factor-based accounting of greenhouse gas emissions with its approach to criteria pollutants. The utility factor approach, which is itself based on data from transportation surveys, could be refined with actual in-use data from vehicles as this data becomes available. Fisker Automotive does not wish to make undue allowances for any vehicles; at the same time, we believe it is in the state's best interests to level the playing-field for all vehicles, especially those that enable zero-emission driving.

Fisker Automotive thanks ARB for allowing us to provide a response to the LEV III amendments to the Advanced Clean Cars program. We remain overall strongly supportive of ARB's efforts to reduce emissions from vehicles, and urge continued harmonization with EPA as well as consideration of how best to account for upstream emissions and electric VMT. We hope to remain in close dialogue with ARB staff as we work to deliver premium electric vehicles with extended range (EVer™) to drivers in California and around the world.

For more information regarding these comments, please contact our public policy analyst, Kellen Schefter, at kschefter@fiskerautomotive.com or 714-485-1335.