December 7, 2020

Clerk's Office
California Air Resources Board
1001 I Street, Sacramento, California 95814

Re: Proposed Fiscal Year 2020-2021 Funding for Clean Transportation Incentives

On behalf of Rivian Automotive, LLC, ("Rivian") I submit these comments in response to the Proposed Fiscal Year 2020-21 Funding Plan for Clean Transportation Incentives ("the proposal") as released on November 6, 2020. Specifically, these comments: (1) provide an overview of Rivian including our products between 8,500 and 10,000 pounds Gross Vehicle Weight Rating ("GVWR"), (2) highlight our interest in changes to the Clean Vehicle Rebate Program ("CVRP") and suggest changes to the Manufacturer Suggested Retail Price ("MSRP") caps for the medium-duty vehicle class newly added to the CVRP, and (3) describe the class 2b vehicles we plan to deliver in mid-2021 calendar year and the need to maintain vouchers in this class within the Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project ("HVIP"). Without changes to the proposal, despite being the first high-volume supplier of all-electric trucks, full-size SUVs and last-mile delivery vans, Rivian might not have any vehicles that qualify for California clean transportation invectives.

Founded in 2009, Rivian is an independent U.S. based California company dedicated to the production and distribution of Electric Adventure Vehicles™ – namely trucks and SUVs. These zero emission vehicles encourage consumers to enjoy the outdoors and seek adventure in environmentally friendly ways. In addition, we have a commitment with our investment partner, Amazon, to develop and produce 100,000 all-electric heavy-duty class 2b and 3 trucks by 2030 for last-mile delivery. With a substantial presence in California and Michigan, and a manufacturing facility in Normal, IL, the R1T truck, R1S SUV, and delivery van will go into production in calendar year 2021.

Rivian's line of vehicles supports our mission to Keep The World Adventurous Forever™, by offering compelling and clean all-electric alternatives to internal combustion engine technology. Rivian believes that environmental sustainability can only be reached with the electrification of all motor vehicle transportation sectors – including heavy-duty trucks. As a heavy-duty truck, our last-mile delivery van will displace stop-and-go operation of high emission diesel and gasoline powered vehicles typically operated in higher density population areas that disproportionately affect at-risk communities. In addition to criteria pollution reduction benefits, each delivery van will displace the carbon emissions equivalent to 8.7 gasoline powered passenger vehicles. Rivian vehicles together with state initiatives such as the California Clean Vehicle Incentive Programs will help California meet its environmental goals.

Rivian's Plans

As mentioned above, Rivian will be delivering trucks, full-size sport utility vehicles and last-mile delivery vans beginning in calendar year 2021. These calendar year 2021 vehicles will be between 8,500 and 10,000 pounds GVWR. Our 2021 calendar year vehicles will likely be classified as either Medium-Duty Passenger Vehicles ("MDPV") or class 2b trucks. The way the proposal currently sits, Rivian's all-electric vehicles might not qualify for the CVRP or HVIP. These comments offer suggestions for making vehicles between 8,500 and 10,000 pounds GVWR eligible for clean vehicle incentives.

CVRP

Rivian acknowledges California's leadership in all matters pertaining to environmental stewardship and expanding the role of electrification. The CVRP has helped many to choose electric when it comes time to buy a new vehicle. A few changes to the CVRP portion of the proposal could help drive more consumers to purchase electric trucks and full-size sport utility vehicle over the conventionally powered alternatives.

The proposal contains provisions for adding vehicles up to 10,000 pounds GVWR to the CVRP. While Rivian supports the addition of heavier vehicles to the CVRP, the current MSRP caps in the CVRP need to be revisited for these more capable and more costly vehicles that displace more emissions than electric passenger cars. The more capable vehicles being added to the CVRP represent an opportunity to convert new consumers to electric. This can be seen in Rivian preorders being predominantly first time EV owners. Re-examining the MSRP caps will help ensure these preorder customers, and additional non-traditional EV buyers, switch to electric.

When reexamining MSRP caps, CARB should consider that electric trucks and SUVs displace more emissions than passenger EVs by replacing conventional trucks and SUVs. Such vehicles are typically primary household vehicles given their greater utility and carrying capacity. In fact, these features have resulted in the growth of these segments as compared to passenger cars. Pickup trucks and SUVs now comprise well over half of all new vehicle sales in the United States today. Encouraging zero emission alternatives like Rivian trucks and SUVs, which have expanded capabilities like increased passenger and towing capacity, are desperately needed if California hopes to meet its pollution reduction goals. The existing MSRP cap discourages consideration of truck EV sales – especially given the fact that even the petroleum powered versions of these vehicles are generally more costly than passenger cars. The one-size fits all MSRP cap merely drives California families away from EVs and towards their petroleum powered counterparts. CARB should revisit the MSRP cap for vehicles above 8,500 pounds GVWR.

A. MSRP Caps Do Not Take Into Account Comparable Vehicles

As stated in the proposal, the clean vehicle incentives program is intended to accelerate the introduction and deployment of zero-emission technologies to meet California's longer-term air quality, carbon neutrality, and climate change goals including that 100 percent of sales of new passenger vehicles and trucks in the State be zero-emission by 2035. MSRP caps originally intended for passenger cars and light-duty vehicles, if applied to more capable trucks and full-size SUVs, effectively exclude the large and growing pickup truck and SUV segments due to their higher price points. Specifically, for September of 2020, Kelly Blue Book placed the average sticker price of petroleum powered pickup trucks at $54,854. This price represents a 149% increase over the cost of the average compact car of $21,945 and a 104% increase over the cost of the average midsized car (where current EV offerings exist) of $26,899.[1] Attempting to apply a blanket MSRP cap on electric trucks and SUVs without considering the class of vehicles involved only exacerbates the price parity gap between these more capable classes of EVs and their respective ICE vehicles. CARB should reexamine MSRP EV rebate caps on vehicles over 8,500 pounds GVWR in light of cost differences in similarly equipped ICE segments.

B. Incentivizing Truck and Full-Size SUV EV Segments

Nationally, sedans represented only 22.1 percent of U.S. auto sales in 2019, whereas the segments that include SUVs, vans and pickups make up 72 percent of light-duty sales[2]. Americans are choosing to purchase pickup trucks and SUVs because they require or desire the features and capabilities of these larger vehicles. With features like an electric motor at each wheel, up to 400 miles of driving range on a single charge, 0-60mph times of 3.0 seconds, the ability to tow up to 11,000 pounds (R1T), and room for a family of seven (R1S), the Rivian R1 all-electric vehicles will introduce new classes of EVs to the market that fill the needs of many consumers who currently own pickup trucks and full-size SUVs. Although consumers are willing to pay more for trucks and full-size SUVs that suit their needs, they are also price sensitive and would respond to incentives. The successful use of incentives in the truck segment is evident in the well-publicized "pickup truck wars" between completing truck manufacturers[3]. CARB should reexamine the MSRP cap on the more capable 8,500 to 10,000-pound GVWR vehicles now being

[1] Kelly Bluebook Press Release, Dec. 1, 2020, https://mediaroom.kbb.com/2020-12-01-Average-New-Vehicle-Prices-Up-1-3-Year-Over-Year-in-November-2020-Down-1-2-from-Last-Month-According-to-Kelley-Blue-Book
[2] Tom Voelk, *Rise of S.U.V.s: Leaving Cars in Their Dust, With No Signs of Slowing*, N.Y TIMES, May 21. 2020, https://www.nytimes.com/2020/05/21/business/suv-sales-best-sellers.html#:~:text=%E2%80%9CS.U.V.s%20made%20up%2047.4%20percent,was%20not%20so%20long%20ago.
[3] Matt DeLorenzo, This Week in Car Buying: Pickup Truck Wars, Kelly Blue Book, February 15, 2019 https://www.kbb.com/car-news/this-week-in-car-buying-pickup-truck-wars/

added to the CVRP program to motivate price-sensitive owners of gasoline and diesel-powered SUV and trucks to purchase electric alternatives.

C. EV Trucks Displace More Emissions Than EV Passenger Cars

Incentivizing the newly added 8,500 to 10,000-pound GVWR electric trucks and SUVs to meet emission reductions goals is sound environmental policy. Rivian's R1T and R1S, as well as larger EVs announced by other manufactures, will displace more GHG and more criteria pollutants by replacing the higher emitting petroleum powered pickup trucks and SUVs versus the petroleum powered compact and mid-size passenger cars that passenger car EVs replace(including small SUVs built on car platforms). These additional GHG and emission reduction benefits should be considered when applying electrification incentives. For example, an average gasoline powered pickup emits about 63% more CO2 than an average compact or mid-sized passenger car. For 2019, EPA projected pickup trucks would on average emit 466 grams of CO2 per mile (real world) compared to 286 grams per mile for cars.[4][5] Incentivizing trucks and full-size SUVs like Rivian's vehicles would help supplant the greater GHG emissions from the larger vehicles. Rivian requests that vehicles with a GVWR between 8,500 to 10,000 pounds either temporarily have no MSRP cap or have a MSRP cap that reflects the respective higher cost and greater environmental benefits.

In addition to the general emissions profile, more capable EVs also have an increased chance of being driven the greater distances that further offset more gasoline and diesel emissions than smaller EVs. Based on pre-order demographics, Rivian expects the R1T and R1S to be the primary household vehicle for those customers. Whereas some smaller and less expensive electric cars might be seen as "compliance" vehicles that are sometimes used as secondary vehicles in a household fleet, the R1T and R1S are less likely to become a secondary or optional vehicle that is not driven enough to realize criteria and GHG benefits. Although not quantified here, the potential vehicle-miles traveled related benefits of a household's primary vehicle should also be considered as the new class of vehicles (8,500 to 10,000 pounds GVWR) is added to the CVRP. CARB should consider the greater emissions reductions from replacing conventional trucks and full-size SUVs over the lifetime of the vehicle, including second and third owners, and eliminate or increase the MSRP rebate caps on vehicles over 8,500 pounds GVWR.

[4] Trends Report 2019, U.S. Environmental Protection Agency, https://www.epa.gov/automotive-trends/download-automotive-trends-report#.

[5] Note that these averages include a small percentage of electric vehicles plus pickup trucks and truck SUVs that are not nearly as capable as the R1T and R1S.

HVIP

Rivian recognizes the strong role HVIP has taken in encouraging electric truck investment and increasing electric truck sales. We also realize the economic circumstances in which we live and the corresponding budgetary constraints. In addition to HVIP playing a strategic role in meeting Governor Newsom's Executive Order N-79-20 to set a course for a zero-emission future, a HVIP voucher structure is needed that provides assurances of voucher availability for current and future electrification investments throughout the year.

A. Clarification of 8,500 to 10,000 Pound GVWR Vehicles

The proposal lists class 2b truck incentive amounts as "to be determined" ("TBD"). The proposal also states that vehicles under 10,000 pounds GVWR would be moved to the CVRP program. Rivian requests that the apparent dichotomy be explained since class 2 vehicles are 8,500-10,000 pounds GVWR. If class 2b trucks are to be in the HVIP program, the proposal should list a suggested voucher amount. If class 2b trucks, or a portion vehicles with a GVWR between 8,500-10,000, are to be in the CVRP, then the MSRP cap should be increased for such vehicles reflective of their higher cost, increased utility, and greater environmental benefit as compared to light-duty vehicles. Furthermore, if there is no pathway for clearly commercial 2b vehicles (such as step-in delivery vans) to request HVIP vouchers, then a CVRP "fleet cap" should be expanded to match that of any HVIP fleet cap.

B. Class 2b Voucher Recommendations

The proposal lists a set of recommended voucher amounts. The proposal also says that CARB continues to analyze component costs for HVIP eligible vehicles. Without disclosing confidential information, Rivian would suggest that voucher amounts in Classes 2b-4 should be more closely tied to relative differences in battery size/cost. Beyond the initial cost to design and build a given architecture, the relative cost between class 2b-4 vehicles that share similar architecture correlates highly to battery size. To avoid "up-massing" class 2b and 3 vehicles, the lighter heavy-duty vehicles should have more similar vouchers relative to one another. Rivian suggests less incremental change in voucher amounts between classes 2b through 4 and perhaps even for heavier vehicles. The proposed voucher amounts are $60,000, $45,000 and TBD for classes 4, 3, and 2b. Rivian recommends a flatter approach of perhaps 90% and 80% of the class 4 voucher amount for classes 3 and 2b, respectively.

C. Voucher Certainty

As mentioned earlier, the proposal suggests voucher amounts for all heavy-duty classes but 2b. The proposal also states concern over how budget shortfalls and frequent waiting lists adversely impact the market for advanced technologies by creating uncertainty and by artificially starting and stopping demand. To assist in decreasing the uncertainty in voucher availability and thereby preserving demand, Rivian believes all HVIP voucher amounts should be drastically reduced to allow businesses the ability to more confidently account for vouchers in their planning.

In alignment with the reduced voucher amounts, fleet and manufacturer caps should be increased or eliminated. If the clean vehicle incentives are, together with regulations and large-scale investments, to "support the goal to electrify the heavy-duty sector", HVIP should not limit the availability of vouchers from a given manufacturer that is successful in delivering electric trucks at scale over boutique builders to the extent that inefficiency is rewarded. Similarly, HVIP vouchers should not be limited such that fleet owners are dissuaded from going beyond their voucher limit. Furthermore, given the pace and volume of 8,500+ pound GVWR vehicles that Rivian plans to build, implementing a "soft manufacturer cap" would be difficult. If a manufacturer "soft cap" is meant to preserve vouchers for vehicles more likely to be built in a timely manner, perhaps shorter delivery time requirements would suffice. Rivian believes manufacturer and fleet caps run counter to CARB's clean air mission and should be revised or completely dropped from the proposal.

Conclusion

Rivian supports California's leadership and efforts to transition to a zero-emissions fleet including CARB's Advanced Clean Truck Rule, CARB's Zero Emission Vehicle regulation, and Governor Newsom's recent Executive Order N-79-20. Rivian agrees with CARB staff that some medium-duty vehicles should be eligible for the CVRP and that the HVIP program needs to be adapted to accommodate reduced funding. To best meet CARB's goals within today's budgetary constraints, Rivian requests that CARB update the CVRP and HVIP proposal before adoption.

Rivian requests that the 8,500-10,000 GVWR vehicles newly added to the CVRP have either no MSRP cap or have the existing cap extended for the more expensive, more capable vehicles that have a greater potential for positive environmental impact than passenger car EVs. Rivian also requests that class 2b trucks, to the extent they are not in the CVRP, have voucher amounts closer to class 3 and 4 trucks due to the primary reason for a cost differential between these classes being battery size. And finally, Rivian asks

that HVIP manufacturer and fleet caps be eliminated or reduced and that CARB instead look at reducing HVIP voucher amounts across the board to ensure rebate availability.

Please let me know if you have any questions. Rivian looks forward to working with the State of California and the California Air Resources Board.

Sincerely,

Chris Nevers,
Director of Environmental Engineering and Policy