August 8, 2022

Clerks' Office
California Air Resources Board
1001 I Street
Sacramento, CA 95814

SUBMITTED ELECTRONICALLY TO: www.arb.ca.gov/our-work/programs/low-carbon-fuel-standard/lcfs-meetings-and-workshops

Re: Public Workshop on Potential Changes to the Low Carbon Fuel Standard ("LCFS")

To Ms. Laskowski and the Staff of the California Air Resources Board ("CARB") Transportation Fuels Branch,

Rivian Automotive, LLC, ("Rivian") valued the July 7, 2022, workshop on potential changes to the LCFS and appreciates this opportunity to submit feedback on the discussion. This letter builds on previous comments submitted by Rivian—both independently and in coalition with Audi of America, Bridge to Renewables Energy, and Tesla—on June 23, 2022, in response to the draft scoping plan, in which we also shared perspectives on strengthening the LCFS.

The scoping plan debate highlighted the important role the LCFS will play in helping the state achieve carbon neutrality, in part due to its benefits for electric vehicle ("EV") market growth. To maximize the policy's impact, CARB should set ambitious carbon intensity ("CI") targets and move ahead with proposals to expand the infrastructure crediting pathway in support of medium-/heavy-duty ("MHD") zero-emission vehicles ("ZEVs"). But CARB should also consider additional issues in any upcoming regulatory action, including amending the California Clean Fuel Reward ("CCFR") to fully align the rebate with policymaker intent and reforming the residential charging base credit pathway.

Keeping the World Adventurous Forever

Founded in 2009, Rivian is an independent company headquartered in California where we maintain office locations in Irvine and Palo Alto, as well as customer-facing service centers in several cities. Rivian's mission is to Keep the World Adventurous Forever and our focus is the design, development, manufacture, and distribution of all-electric adventure vehicles, specifically pickups, sport utility vehicles, and commercial vans. Key to the success of our mission, these vehicles will displace some of the most polluting vehicles on the road today.

Rivian brought the first electric truck to market last year when we launched the R1T pickup from our manufacturing facility in Normal, Illinois, followed shortly thereafter by the R1S SUV and a commercial fleet electric delivery van for Amazon. All our vehicles are considered medium duty for regulatory purposes and satisfy ZEV requirements under both ACCI and the Advanced Clean Trucks rule ("ACT"). The R1T and R1S provide all-electric options in segments where added utility is a necessity. The R1T has an EPA-certified

314-mile range and 11,000lbs of towing capacity, while the R1S is a seven-passenger full-sized SUV. Rivian is also building a network of DC fast and Level 2 chargers across the country, including at sites on public lands such as the Golden Gate National Recreation Area and Yosemite National Park.

CARB Should Make Changes to the LCFS that Maximize the Policy's Impact

California's LCFS is a proven emissions reduction tool and a powerful enabler of transportation electrification. To date, it has served a key role in the state's portfolio of complementary climate policies. It can and must continue to do so if the state wishes to achieve carbon neutrality. To that end, Rivian welcomes the discussion initiated by staff's July 7 workshop, including an evaluation of more stringent pre-2030 CI targets and capacity-based credit pathways for MHD fast-charging infrastructure. We support these concepts.

However, additional reforms and amendments are necessary to enhance the policy's benefits for EV market growth. Described in more detail below, these additional actions would address shortcomings in the CCFR and the residential charging base credit pathway. CARB should include these issues within the scope of the rulemaking that follows this workshop process.

Set Ambitious CI Targets

Rivian applauds CARB's consideration of more stringent pre-2030 CI targets, consistent with the direction of the draft scoping plan and the recent request of Governor Newsom.[1] The LCFS credit bank is currently at an all-time high while credit prices have declined significantly in recent months, a sign of the market's success in meeting the LCFS' requirements.[2] But this also shows that greater stringency is possible and indeed necessary. Tightening the LCFS' requirements would draw new investments into the clean fuels market, including in the development of electricity as a transportation fuel.

CARB should revise the program's pre-2030 requirements. Ideally, CI targets would result in a perfect balance of credits and deficits (i.e., no bank of accumulated credits), which would indicate that the LCFS is achieving the maximum CI reductions possible. With this in mind, Rivian recommends that CARB implement a one-time step-function increase in the CI requirements for 2024, forcing a draw on the credit bank to rebalance the program, and then establish a curve in the years thereafter that would achieve significantly deeper cut in CI by 2030 than currently prescribed. Of staff's two proposed scenarios, **Scenario B—a 30 percent reduction by 2030—would achieve better outcomes.** But CARB should consider modeling even greater reductions as part of its deliberations.

For the post-2030 timeframe, investment certainty and alignment with California's climate goals requires that CARB signal clear intentions to continue a steady and ambitious CI reduction trajectory. In our

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[1] Office of the Governor, *Governor Newsom Calls for Bold Actions to Move Faster Toward Climate Goals* (July 22, 2022), available at: www.gov.ca.gov/2022/07/22/governor-newsom-calls-for-bold-actions-to-move-faster-toward-climate-goals/; California Air Resources Board, *Draft 2022 Scoping Plan Update* (May 10, 2022), available at www.arb.ca.gov/sites/default/files/2022-05/2022-draft-sp.pdf.

[2] California Air Resources Board, *LCFS Data Dashboard*, available at www.arb.ca.gov/resources/documents/lcfs-data-dashboard.

comments responding to the draft scoping plan, Rivian called for clear communication of plans to promulgate future rules achieving a CI reduction of 80 percent to 100 percent by 2045. We believe this will become even more important as other jurisdictions, such as Oregon, move ahead with post-2030 targets for their own programs. Nonetheless, we recognize that CARB must balance the benefits of long-term target-setting (regulatory certainty creating a durable market signal) with the challenges inherent in setting standards too far in advance (greater uncertainty surrounding potential technology and market developments in the outyears, and an associated loss of fidelity in modeling). To mitigate these concerns and ensure the LCFS is appropriately calibrated to market realities, Rivian recommends that CARB plan to review stringency, among other things, periodically in the program's outyears. In the July 7 workshop, staff sought input specifically on the concept of interim targets for the 2030-2045 period. To the extent that interim target-setting at five-year intervals would naturally build in opportunities for CARB to review the appropriateness of those targets, Rivian supports that approach. Overall, **we believe CARB should use this rulemaking to formally identify CI targets for the 2031-2035 timeframe, establish a 2045 goal, and commit to future rulemakings to determine CI targets for the intervening years later.**

Reconsider the Approach to Residential Charging Base Credits

As Rivian noted previously in our comments on the draft scoping plan, CARB should reconsider the provisions governing base credit generation for residential EV charging. Maximizing GHG reductions from the vehicle fleet requires both the sale and utilization of EVs to ensure maximal displacement of fossil fuels. The LCFS program contributes to this objective uniquely in that credit generation stems from alternative fuel use: the EVs that drive the most will therefore charge the most and thus generate the most credits. EV manufacturers are a critical piece of the value chain, investing billions of dollars in developing and selling compelling products that will meet consumer needs and supplant fossil fuel-driven alternatives. Despite this important role, current program rules only allow for vehicle manufacturers to earn incremental credits on residential charging—a small and shrinking portion of the credit pool.

CARB should evaluate structures that allow for EV manufacturers to share in base residential credit generation. Rivian's preferred approach would incentivize automakers to empirically substantiate its vehicles' residential charging activity with telematics data, with manufacturers earning a portion of base credits in return. This approach promises several benefits.

- **Accurate accounting of residential charging events.** Rather than relying predominantly on an estimation methodology to quantify residential charging, bringing automakers into the program allows CARB to leverage empirical telematics data to enhance the accuracy and environmental integrity of the LCFS.
- **Creating the conditions to address the issue of take-home fleets.** The LCFS provides clear allocation guidelines for electricity credits generated by fleets when charging takes places in non-residential contexts. However, some fleet EVs—both MHD vehicles like pickups and vans as well as light-duty cars and trucks—might charge often or mostly at private residences. Consistent with the principles at work in the non-residential context, Rivian believes that fleets should be eligible to earn at least a share of the residential credits generated in such circumstances. The importance of any associated credit revenue for the economics of fleet-switching should not be discounted. When California adopted the Advanced Clean Trucks rule, CARB assumed that commercial MHD vehicle owners/operators would realize charging credit revenue from the LCFS as part of cost-

benefit calculations for the rule. This will be impossible for take-home fleets under the LCFS' current construction. But a fresh approach leveraging telematics data opens the door to potential solutions. For example, EV manufacturers, in partnership with fleets and CARB, could harness their data to support fleets in reporting eligible residential charging events by fleet vehicles while avoiding double-counting.

- **Reflecting the contributions of multiple stakeholders while enhancing the incentives for automakers to invest in their EV products and technology.** The opportunity to earn base credits would incentivize automakers to make additional investments in the California EV market that go above and beyond what is required under the ZEV mandate, including the development of highly utilized, no-compromise vehicles that meet the full range of customer needs. This reflects the reality that each stakeholder has unique strengths in reinvesting meaningful credit revenue from electricity pathways under the LCFS. Utilities, for example, might be well positioned to make impactful investments in grid infrastructure, but automakers are best placed to invest in vehicle technology and growing the consumer-facing market.

We urge CARB to revisit the LCFS' base credit pathway and consider the benefits of a new approach.

If the CCFR Continues, Align it with Policymaker Intent

Recent developments call into question the stability of the CCFR. The program administrator halved the value of the rebate in late 2021 and as of this submission it appears that payments will pause beginning in September 2022.[3] On-again-off-again EV incentive programs of unpredictable or diminishing value provide no meaningful incentive to car buyers. In fact, they might even work against EV sales by encouraging customers to delay a purchase in the hope of waiting out a program pause. CARB should examine the issues facing the CCFR and consider how the rebate might evolve under various scenarios for the LCFS' future.

To the extent that CARB intends for the CCFR to continue, it should reward the full range of passenger vehicles driven by Californians that create value under the LCFS.[4] Unfortunately, the regulation currently defines the CCFR as a rebate for "light-duty" vehicles only—i.e., those with a Gross Vehicle Weight Rating ("GVWR") at or below 8,500lbs.[5] This excludes a growing lineup of passenger EVs coming to market with GVWRs exceeding that threshold. Rivian's R1T and R1S are among the first examples with a GVWR slightly greater than 8,500lbs. These vehicles technically qualify as medium-duty passenger vehicles ("MDPVs") primarily due to their long-range batteries and towing capability but when purchased by individuals or families are driven as personal vehicles and charge predominantly at owner residences, creating significant credit value under the LCFS. Absent a change to the regulatory definition of the CCFR, this critical class of vehicles and their customers will remain unfairly excluded from the program and unable to realize the value they generate.

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[3] California Clean Fuel Reward, *Frequently Asked Questions*, available at www.cleanfuelreward.com/.

[4] The LCFS regulation and subsequent decisions by the California Public Utilities Commission ("CPUC") obligate utilities to return the value generated by residential EV charging to EV owners, per 17 C.C.R. § 95483; California Clean Fuel Reward, *Annual Report 2021* (April 27, 2022), available at www.cleanfuelreward.com/sites/default/files/2022-05/2021_CCFR_Annual%20Report_Public_4-29-2022.pdf; and CPUC Decision 14-12-083.

[5] 17 C.C.R. § 95481.

As part of upcoming changes to the LCFS, CARB should amend the regulation to make MDPVs eligible for the CCFR. Based on Rivian's analysis, CARB can accomplish this with the following change to the regulation's definition of the CCFR (the underscored represents proposed new language):

(29) "Clean Fuel Reward" is a statewide program established by EDUs to provide a reduction in price on new light duty <u>and medium duty passenger</u> EV purchases or leases in California. The Clean Fuel Reward is funded exclusively through LCFS proceeds generated by EDUs from electricity fuel.

This simple reform will align the program with policymaker intent and ensure that all classes of vehicle creating value through residential charging benefit from any resulting rebate. CARB should amend the regulatory definition of the CCFR.

Extend Infrastructure Crediting to MHD Chargers

Rivian welcomes proposals to extend capacity-based infrastructure crediting to public fast charging infrastructure ("FCI") intended to support MHD ZEV operations. Capacity-based crediting can bolster the business case for FCI investments, which in turn will build confidence in the viability of MHD ZEV products and drive their sale and use.

In designing the MHD FCI pathway, CARB should recognize key operational realities and strive for a reasonable degree of flexibility. Rivian offers the following issues for consideration by CARB as it refines this proposal.

- While nameplate power is an important issue, physical operation requirements trump most other concerns with respect to public MHD charging; specifically, ensuring that a charging site offers adequate clearance, turning space, pull-through stalls, and so forth. We encourage CARB to work with industry and trade groups to define appropriate site parameters for qualifying FCI to ensure that creditable infrastructure meets the physical needs of MHD vehicles.
- Vehicle characteristics and power needs vary across the MHD segment. Expecting that all FCI installations meet the requirements of every MHD ZEV from Class 2b through Class 8 seems unreasonable. CARB could consider discrete requirements for FCI intended to support certain sub-segments of MHD vehicles.
- FCI that can serve both LD and MHD ZEVs should be eligible for capacity-based credits under this pathway but should not necessarily be held to the same design requirements as a dedicated MHD site. To avoid "double-dipping" with LD FCI credits, CARB could require applicants to claim credits under either the LD or MHD FCI pathway but not both.
- To maintain technology-neutrality, CARB should provide equal crediting periods to projects under both the FCI and hydrogen refueling infrastructure pathways. Rivian is concerned by CARB's growing tendency across several programs to provide special dispensation or additional incentives for fuel cell technology.

These issues among others merit further discussion and Rivian looks forward to future workshops.

Expand the Geographic Boundaries for Renewable Energy Certificate ("REC") Eligibility

To more cost-efficiently drive system-wide decarbonization, **CARB should expand REC eligibility for book-and-claim accounting to resources outside of California.** The price of eligible RECs has risen sharply to approximately $14 while LCFS credit prices have fallen. This has significantly reduced the incentive to pair charging sessions with zero-carbon electricity and generate incremental credits, threatening the viability of the incremental credit pathway overall. With customer energy bills already rising and SB100 further strengthening utility RPS requirements, high REC prices have the potential to put increased upward pressure on customer energy bills. As allowed in Oregon and proposed in Washington, Rivian encourages CARB to allow REC generation from anywhere in the Western Electricity Coordinating Council ("WECC") territory and not require out-of-state resources to transmit directly into the state to qualify. As a leader in environmental policy, California has the potential to shape policy and renewable energy development throughout the West which would help to stabilize the entire WECC and drive benefits to all. In addition, broadening REC generation eligibility to the entire WECC footprint would incentivize resource development where it can have a greater avoided emissions impact and protect against potentially unintended upward cost pressure on the California REC market that might result from limiting eligibility to only in-state resources. To ensure the program rewards new renewable energy development, CARB could consider limiting eligibility only to out-of-state RECs tied to resources that began operation after January 1, 2022. For all these reasons, CARB should expand the geographic boundaries governing eligible RECs for book-and-claim accounting.

Conclusion

Rivian applauds CARB's efforts to scope potential changes to the LCFS regulation. Thank you to the staff for initiating a thoughtful series of workshops and engagements. Rivian values this opportunity to provide feedback and is excited about the prospect of strengthening the LCFS. The LCFS is a powerful policy that, with the right revisions, can contribute even more to the state's efforts to address climate change and electrify transportation. We support proposals to strengthen the rule and expand the FCI pathway but recommend that CARB consider additional actions as part of any upcoming amendments.

Please contact me with any questions about this feedback. Rivian looks forward to continued discussion and formal consideration of amendments in 2023.

Sincerely,

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