

August 25, 2024

**Submitted electronically via <https://ww2.arb.ca.gov/applications/public-comments>**

Chair Liane Randolph and Board Members  
California Air Resources Board  
1001 I Street  
Sacramento, CA 95814

***RE: Tesla Comments on CARB's Proposed Amendments to the Low Carbon Fuel Standard (August 12, 2024)***

Dear Chair Randolph and Members of the Board:

Pursuant to the California Air Resources Board's (CARB's) Proposed Low Carbon Fuel Standards (LCFS) Amendments (Aug. 12, 2024) ("15-day Amendments"), Tesla respectfully submits the following comments. Tesla incorporates by reference its written comments in response to previous 2022 Scoping Plan and LCFS workshops and presentations.<sup>1 2 3 4</sup> Tesla continues to support CARB and the state of California in defending the state's authority to implement the LCFS. Tesla appreciates the work of CARB staff in putting together the 15-day Amendments and strongly supports many of the proposed amendments, which will greatly improve the LCFS program moving forward. This includes assigning base credits to electric vehicle (EV) manufacturers, and improvements to the Fast Charging Infrastructure (FCI) program. Detailed below are several additional amendments that Tesla believes will further improve the program and ensure its near- and long-term success. This includes a further increase to the step change, adjusting the time frame for the Automatic Acceleration Mechanism, harmonizing the FCI program for hydrogen and electric charging, raising the per site power rating, and updating the verification process for EV charging.

## **I. Background - Tesla's Mission**

Tesla's mission is to accelerate the world's transition to sustainable energy. Moreover, Tesla believes the world will not be able to solve the climate change crisis without directly reducing air pollutant emissions - including carbon dioxide and other greenhouse gases - from the transportation and power sectors.<sup>5</sup> To accomplish its mission, Tesla designs, develops, manufactures, and sells high-performance fully electric vehicles and energy generation and storage systems, installs, and maintains such systems, and sells solar

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<sup>1</sup> <https://ww2.arb.ca.gov/form/public-comments/submissions/3796>

<sup>2</sup> <https://www.arb.ca.gov/lists/com-attach/4195-scopingplan2022-BmVcO1IMAYMGYwBv.pdf>

<sup>3</sup> [https://www.arb.ca.gov/lispub/comm2/iframe\\_bccomdisp.php?listname=lcfs-wkshp-feb23-ws&comment\\_num=111&virt\\_num=98](https://www.arb.ca.gov/lispub/comm2/iframe_bccomdisp.php?listname=lcfs-wkshp-feb23-ws&comment_num=111&virt_num=98)

<sup>4</sup> <https://www.arb.ca.gov/lists/com-attach/7042-lcfs2024-AjBdb1VkVjcLP1Rk.pdf>

<sup>5</sup> See, Tesla, Master Plan Part 3 (Apr. 5, 2023) available at [https://www.tesla.com/ns\\_videos/Tesla-Master-Plan-Part-3.pdf](https://www.tesla.com/ns_videos/Tesla-Master-Plan-Part-3.pdf)  
[https://www.tesla.com/ns\\_videos/Tesla-Master-Plan-Part-3.pdf](https://www.tesla.com/ns_videos/Tesla-Master-Plan-Part-3.pdf)

electricity.<sup>6</sup> Consistent with this effort, in May, 2023, Tesla was ranked as the world leader in the transition to vehicle electrification.<sup>7</sup>

## **II. The 9% Step Change Should be Increased to 12%**

Tesla applauds CARB's long-term vision of setting a 90% reduction target by 2045. This cements California as the clear leader in the transportation decarbonization policy space, with the furthest-forward decarbonization target of any transportation decarbonization program globally. It also sets California on a path to reach Net Zero by 2045, as envisioned by Executive Order B-55-18. Currently, there are two principal factors in over-compliance that threaten the continuing stringency of the LCFS – the accelerating use of both renewable diesel and renewable natural gas. Tesla applauds the 15-day Amendments pushing for a 9% step change; however, Tesla continues to believe a higher step change is required and supports the adoption of a 12% step change.

As detailed in prior comments to the Board, the current LCFS market is not functioning in a sustainable manner. There is a glut of credits on the market that has driven down pricing, making the LCFS less supportive of electrification efforts in California. CARB's 9% step change proposal is unlikely to do enough to address this threat to the program. The clear near-term solution is implementation of a step change of at least 12%, as quickly as possible.

## **III. Trigger the Automatic Acceleration Mechanism (AAM) Off of 2025 Data**

The inclusion of an Automatic Acceleration Mechanism (AAM) is an important step towards balancing the safeguards in the program which already includes multiple safeguards to help rebalance the program if it is underachieving its targets, including a Credit Clearance Market, Advanced Credits, Carryback Credits, and Accumulated Deficits. The AAM is an important counterbalance safeguard for times when the program is overachieving its targets.

However, absent a stronger step change proposed above, CARB should set up the AAM to trigger off 2025 data, allowing for the first year of AAM implementation in 2026, rather than 2027 as proposed in the draft regulations, and unchanged by the 15-day Amendments. This would ensure that credit prices rebound and the program continues to support transportation electrification in a meaningful way.

## **IV. Assignment of Base Credits to Original Equipment Manufacturers is Critical**

Tesla strongly supports the 15-day Amendments allowing the Executive Officer to assign a portion of base credits to Original Equipment Manufacturers (OEMs). Tesla has long argued that OEMs should play a larger role in turning base credits for residential charging into drivers of additional adoption of electric vehicles (EV) and appreciates CARB staff's efforts to allow the Executive Officer to assign base credits to OEMs. CARB's proposal will lead to increased direct investment in EV deployment in California.

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<sup>6</sup> See, Tesla, Impact Report 2022 (Apr. 24, 2023) available at [https://www.tesla.com/ns\\_videos/2022-tesla-impact-report-highlights.pdf](https://www.tesla.com/ns_videos/2022-tesla-impact-report-highlights.pdf)

<sup>7</sup> See, ICCT, The Global Automaker Rating 2022: Who Is Leading the Transition to Electric Vehicles? (May 31, 2023) available at <https://theicct.org/publication/the-global-automaker-rating-2022-may23/>

While the Notice of Public Availability of Modified Text and Availability of Additional Documents and/or Information is relatively clear cut in stating that the Executive Officer can act if “model year 2024 ZEV sales for vehicle classifications subject to the Advanced Clean Cars regulation are less than 30 percent of new vehicle sales,”<sup>8</sup> the actual regulatory language is less clear, stating that the Executive Officer may act “if the share of new zero emission vehicle sales for model year 2024 zero emission vehicles certified under California Code of Regulations, title 13, section 1962.2 is less than 30 percent.”<sup>9</sup> Tesla recommends modifying the regulatory language to add clarity: “if the share of new ~~zero emission~~ vehicle sales for model year 2024 **that are** zero emission vehicles certified under California Code of Regulations, title 13, section 1962.2 is less than 30 percent.” CARB should also clarify that this trigger for the Executive Officer to act is a one-time event and that OEMs will continue to receive base credits through the life of the program, or until there is a public amendment process.

In addition, the current language is discretionary when regulatory certainty is necessary. Instead of giving the Executive Officer the discretion (“may”) to direct base credits to OEMs for “up to 45%” of those credits, Tesla believes the regulation should affirmatively state that if zero emission vehicles do not make up 30% of Model Year 2024 sales in California, the Executive Officer *shall* direct 45% of base credits to eligible OEMs. Clarity is essential when designing a market-based program for all participants and the public and Tesla encourages CARB to create that certainty by making the above suggested amendments.

## **V. Existing Amendments to the Fast Charging Infrastructure Program Should be Approved**

Tesla supports several of the amendments made to the Fast Charging Infrastructure (FCI) Program made in the 15-day Amendments. In particular, Tesla supports:

- extending the program application deadline for the Heavy-Duty (HD) FCI program to December 31, 2035;
- extending the minimum distance from an existing or pending electric vehicle Federal Highway Administration Alternative Fuel Corridor to five miles instead of one mile;
- removing the ten charger cap;
- matching the credit life of the FCI and hydrogen refueling infrastructure (HRI) programs at 10 years; and
- raising the MW cap per site.

Under these amendments, this program will accelerate deployment of charging infrastructure for HD electric trucks throughout California.

### **a. Proposed Additional Amendments to the FCI Program**

#### *i. Harmonize Hydrogen and EV Charging CIs for Capacity Credits*

CARB should continue to focus on parity between incentives for EV charging and hydrogen fueling. As such, FCI and HRI programs should have the same formula for calculating credits. The formula for a shared HD-HRI station includes a 50% factor and a private HD-HRI station includes a 25% factor. However, a shared HD-FCI charging site has a 20% factor and an FSE at a private HD-FCI charging site has

<sup>8</sup> [https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2024/lcfs2024/15day\\_notice.pdf](https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2024/lcfs2024/15day_notice.pdf) at 4.

<sup>9</sup> [https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2024/lcfs2024/15day\\_atta-1.pdf](https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2024/lcfs2024/15day_atta-1.pdf) at 48.

a 10% factor. CARB should continue to harmonize the HRI and FCI programs by amending these factors to be the same for both programs.

Second, CARB currently gives preferential treatment to hydrogen stations – despite showing no signs of commercial success – over EV charging stations when assigning the CI for capacity credits. Hydrogen stations utilizing the HCI pathway receive a CI of the “Company-wide weighted average CI for dispensed hydrogen during the quarter or 0 g/MJ, whichever is greater” while electric vehicle charging stations utilizing the FCI receive a CI of the “California average grid electricity carbon intensity” regardless of whether the EV charging company is utilizing 0 CI RECs for the rest of their charging. CARB should treat hydrogen fueling and EV charging equally by either giving hydrogen HRI capacity credits a CI of the last reported industry average, or by allowing EV charging FCI capacity credits to be generated off of a 0 CI if the company is using REC matching for the rest of their charging.

*ii. Raise the Total FCI Power Rating at One Address to 3,000 kW*

The EV charging industry is growing rapidly but in the last few months there have been more and more reports of charging congestion, particularly during holiday travel or around specific large events. A recent article in Bloomberg aptly noted that the “US charging network is also entering its post-scarcity era” which will lead to “charging’s next challenge - redundancy.”<sup>10</sup> As such, charging providers need to build larger and larger sites to ensure that during these high traffic events or peak travel times there is adequate charging to ensure customers are not waiting for long periods of time. Tesla anticipates that the average post count per site will continue to rise, leading to a growing number of sites with an installed capacity surpassing 2,500kW. To continue to support charging infrastructure deployments, CARB should consider amending the total FCI power rating for all LMD-FCI FSEs at one address to 3,000 kW from 2,500 kW.

## **VI. Update the Light Duty Battery Electric Vehicle Energy Efficiency Ratio (EER)**

While not included in the 15-day Amendments, Tesla believes CARB should update the Energy Efficiency Ratio (EER) for Light Duty Battery Electric Vehicles. The current 3.4 EER was adopted by CARB in 2011 and has not been updated since then. California lags other jurisdictions which have more accurate EERs, such as The Netherlands (4.0 EER),<sup>11</sup> the European Union (4.0 EER),<sup>12</sup> and Canada (4.1 EER).<sup>13</sup> As described in previous comments, a more thorough analysis would likely result in an EER over 4.0.<sup>14</sup>

In addition, CARB should allow an OEM to apply for an EER based upon that OEM’s real-world fleet. CARB has created a precedent for this by approving the Lime scooter Tier 2 pathway which included a

<sup>10</sup> <https://www.bloomberg.com/news/articles/2024-08-20/america-s-ev-charging-network-faces-its-next-challenge-congestion>

<sup>11</sup> <https://www.rijksoverheid.nl/documenten/kamerstukken/2022/12/22/beantwoording-kamervragen-over-wijziging-van-de-stimuleringsfactoren-in-de-regeling-energie-vervoer>

<sup>12</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32023L2413&qid=1699364355105>

See also, [https://www.europarl.europa.eu/doceo/document/ITRE-AM-729929\\_EN.pdf](https://www.europarl.europa.eu/doceo/document/ITRE-AM-729929_EN.pdf)

<sup>13</sup> Page 86 of the Specifications for Fuel LCA Model CI Calculations, <https://datadonnees.az.ec.gc.ca/data/regulatee/climateoutreach/carbon-intensity-calculations-for-the-clean-fuelregulations/en/Resources/?lang=en>

<sup>14</sup> <https://www.arb.ca.gov/lists/com-attach/7042-lcfs2024-AjBdb1VkJcLP1Rk.pdf>

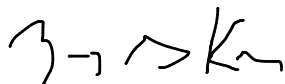
company-specific EER factor.<sup>15</sup> Allowing OEMs to submit applications for company-specific EERs would better reflect the actual efficiency of electric vehicles in the market and allow those vehicles to be properly credited. This would also incentivize each OEM to focus on improving vehicle efficiency.

#### **VII. Remove the Unnecessary Third-Party Verification for Non-Residential EV Charging**

Proposed section 95501 of the original amendments includes a proposal to expand third-party verification for EV charging transactions. While Tesla appreciates the intent of CARB staff's proposal, it is unnecessary to create a separate third-party verification program regime for non-residential electricity transactions related to EV charging. Commercial EV charging infrastructure transactions fall under the purview of the CA Department of Agriculture, Division of Measurement Standards (DMS), under its state weights and measures program. CA DMS is responsible for verifying the accuracy of commercial EV charging infrastructure in California. This includes both a field verification process carried out by the CA counties as well as type evaluation program. While unchanged in the 15-day Amendments, it is unnecessary for CARB to add additional verification requirements for LCFS given the accuracy of commercial EV charging transaction is already regulated and verified in CA. We therefore recommend that no additional third-party verification is necessary for EV charging transactions.

Tesla appreciates the opportunity to express support for many of the 15-day Amendments to LCFS and urges CARB to incorporate the additional amendments described above to ensure continued success of the program and help meet California's transportation electrification policy goals.

Respectfully submitted,



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<sup>15</sup> [https://ww2.arb.ca.gov/sites/default/files/classic/fuels/lcfs/fuelpathways/comments/tier2/b0467\\_cover.pdf](https://ww2.arb.ca.gov/sites/default/files/classic/fuels/lcfs/fuelpathways/comments/tier2/b0467_cover.pdf)