



May 14, 2024

Ms. Liane Randolph
Chair, California Air Resources Board
1001 I Street Sacramento, CA 95814

Submitted Electronically

Re: Comments on April 10th CARB workshop regarding updates to the Low Carbon Fuel Standard program (Updated 5/14/2024 with aviation comments)

Dear Chair Randolph,

Environmental Defense Fund appreciates the opportunity to provide comments on the April 10, 2024, workshop regarding updates to California's Low Carbon Fuel Standard. We are grateful for the continuous work CARB staff have put in to update this program, and we look forward to continuing to engage in this rulemaking and supporting the successful decarbonization of California's transportation sector.

As we have stated in previous comments, updating LCFS to increase the program's ambition and efficacy will be integral to ensuring California can deliver the outcomes and emissions reductions envisioned in the final Climate Change Scoping Plan, as well as achieve carbon neutrality by 2045. We are pleased to see that CARB is committed to making this program more ambitious and support the strengthening of the CI reduction benchmarks both pre- and post-2030. This will be a critical step to ensure California can realize the full benefits of LCFS. To that end, we provide the following comments and recommendations regarding the proposed modifications to crediting for medium- and heavy-duty vehicles and sustainable decarbonization for the aviation sector.

1. Crediting for Medium- and Heavy-Duty Vehicle Charging

Medium- and heavy-duty vehicles are responsible for a disproportionate amount of greenhouse gas (GHG) emissions and local pollution relative to the size of their population. In California, despite the fact that trucks are just seven percent of all vehicles in the state, they emit nearly 33% percent of particulate matter, 25% percent of nitrogen oxides (NO_x), and nearly 9% percent of greenhouse gas emissions¹ from the transportation sector; electrifying these vehicles will therefore produce outsized climate and local air pollution benefits. This is particularly important in the state's disadvantaged communities, because while the health impacts, which can negatively affect "every organ in the body,"² are experienced to some extent

¹ <https://ww2.arb.ca.gov/ghg-inventory-graphs>

² <https://www.ucsusa.org/resources/cars-trucks-buses-and-air-pollution#toc-effects>

all across the state, “low-income and communities of color...are often disproportionately affected by emissions from freight movement due to their proximity to transportation infrastructure,”³ such as ports, railyards, and freight corridors. Because of this disproportionate impact, there is an urgent need to electrify medium- and heavy-duty vehicles in these neighborhoods.

The proposed expansion of the Clean Fuel Reward program and the introduction of the medium- and heavy-duty vehicle Fast Charging Infrastructure credit will further incentivize and streamline the adoption of medium- and heavy-duty electric vehicles and help California achieve the full benefits of the Advanced Clean Trucks and Advanced Clean Fleets rules.

As noted in previous comments, EDF supports the proposal to provide rebates for heavy-duty fleets under the Clean Fuel Reward program heavy-duty rebate. The focus on new and used rebates for medium- and heavy-duty trucks that are exempted from the Advanced Clean Fleets regulation will chart a path towards electrification for the segments of the trucking sector that are most challenging to transition. This program will be particularly important for small fleets and independent owners/operators, for whom up-front purchase price can be a major barrier to electrification.

Ensuring that there is adequate charging infrastructure is a crucial step to ensuring California can fully realize the benefits of the Advanced Clean Trucks and Advanced Clean Fleets rules. As such, EDF views the introduction of a new medium- and heavy-duty vehicle Fast Charging Infrastructure (MHD FCI) credit as critical for this effort. The operational variation of medium- and heavy-duty vehicles necessitates a wide diversity of charging equipment and capabilities. Given the diversity of charging needs, the 10 years of crediting will be one of many state-supported funding solutions necessary to transition fleets effectively and affordably throughout the state.

The LCFS will play an important role in helping the state meet its zero-emission transportation goals and successfully implement recent regulations. To optimize the program’s advantages, we respectfully make the following recommendations.

CARB should remove the minimum nameplate power rating requirement for the MHD FCI program.

EDF recommends that CARB modify the proposed eligibility requirements for participating in the MHD FCI program to remove the requirement that each charger (also referred to as Fueling Supply Equipment or FSE) “must have a minimum nameplate power rating of 250 kW.” While some electric trucks and buses will rely on direct current fast chargers (DCFCs) with nameplate capacities of 250 kW or greater, many will not need this level of charging. This is particularly true for fleets operating out of and charging at private depots which may have shorter duty cycles and can spread their charging overnight and/or several daytime blocks with lower-power DCFC or level-2 charging. Removing the 250 kW requirement would allow these fleets to optimize their charging based on their own operational needs, resulting in grid-beneficial charging behavior, while still remaining eligible for the program.

CARB should remove or modify the limitation that no more than ten chargers per applicant per site would be eligible for credits.

³ https://ww2.arb.ca.gov/sites/default/files/2021-09/Proposed_2020_Mobile_Source_Strategy.pdf

Consistent with this recommendation, CARB should also remove or modify the limitation that no more than ten chargers per applicant per site would be eligible for credits. The proposed 10 MW cap per customer per site is a sufficient constraint on individual customers accumulating credits while retaining the flexibility for applicants to deploy chargers in number and capacity consistent with their needs. Otherwise, applicants would potentially be incentivized to oversize chargers' nameplate capacity to maximize credit eligibility.

2. Sustainable Decarbonization of the Aviation Sector

For almost a decade, EDF has been working to reduce harmful pollution from aviation to mitigate climate change and deliver public health benefits by utilizing alternative fuels. This includes engagement in climate policy at the International Civil Aviation Organization (ICAO), leading and participating in expert working groups developing ICAO's Sustainability Framework for Sustainable Aviation Fuel (SAF) – an effort that builds heavily on California's Low Carbon Fuel Standard (LCFS). We were also deeply involved in the inclusion of SAF tax credits in the federal Inflation Reduction Act (IRA).

LCFS significantly impacts California's efforts to decarbonize the aviation sector and any proposed programmatic changes warrant thorough consideration. Expanding the scope of the Low Carbon Fuel Standard (LCFS) program to include aviation fuels beyond the existing voluntary opt-ins for alternative jet fuels⁴ is a necessary step towards achieving carbon neutrality in California by 2045 and will likewise support collective climate ambition. The structured deployment of sustainable aviation fuels (SAF) in California is crucial for the civil aviation sector to reach the International Civil Aviation Organization (ICAO)'s global goal of net-zero climate impact by 2050.

In light of federal preemption risks associated with intrastate flights, CARB should consider a “fall-off provision” with alternative coverage.

We are pleased to see CARB taking steps to sustainably transition from uptake of conventional fossil jet fuel to uptake of alternative jet fuel in California. However, the emphasis on intrastate flight coverage may trigger a legal dispute on the grounds of federal preemption, posing a tangible risk of invalidating CARB's intrastate aviation provisions. Therefore, EDF encourages CARB to consider proactively addressing this potential scenario by incorporating a “fall-off provision” to ensure at least an alternative measure applies in case the intrastate provisions are invalidated. This approach would increase the likelihood of successfully safeguarding CARB's efforts to regulate aviation emissions.

The following amendments to § 95482(b) provide an illustrative fall-off provision. The amendments, denoted by the red text, constrain the ability of alternative jet fuels to opt-in when their volumes exceed 500 million gallons of gasoline in a calendar year. If all provisions related to intrastate flights are invalidated, *all* fossil jet fuel and alternative jet fuel uplifted in California would be subject to the LCFS. To avoid changing the overall ambition of the program, a follow-up condition would ensure the intensity benchmarks for gasoline, diesel, and jet fuel are updated to target, in the aggregate, the same total absolute reductions that would have been achieved with the annual carbon intensity benchmarks set forth in sections 95484(d) through(f).

⁴ Important to note, ‘alternative jet fuels’ denotes a broader category than does ‘SAF.’ Per definitions established at the federal and international levels, ‘SAF’ refers solely to fuels produced using renewable energy sources, wastes and residues and meet sustainability criteria.

Section § 95482(b) “Opt-In Fuels. Each of the following alternative fuels (“opt-in fuels”) is presumed to have a full fuel cycle, carbon intensity that meets the compliance schedules set forth in sections 95484~~(b)~~ (d) through ~~(d)(f)~~ through December 31, ~~2030~~2045. A fuel provider for an alternative fuel listed below may generate LCFS credits for that fuel only by electing to opt into the LCFS as an opt-in fuel reporting entity pursuant to section 95483.1 and meeting the requirements of this regulation:

- (1) Electricity;
- (2) Bio-CNG;
- (3) Bio-LNG;
- (4) Bio-L-CNG;
- (5) Alternative Jet Fuel, unless the volume of alternative jet fuel that opts-in is greater than 500 million gasoline gallon equivalent, in which case an updated set of annual carbon intensity benchmarks will be posted on May 15 of the following year the Executive Officer announces that that condition has been triggered. The updated intensity benchmarks for gasoline and fuels used as a substitute for gasoline, for diesel fuel and fuels used as a substitute for diesel fuel, and fossil jet fuel and fuels used as a substitute for fossil jet fuel will target in the aggregate the same total absolute reductions that would have been achieved with the annual carbon intensity benchmarks set forth in sections 95484(d) through(f); and
- (6) Renewable Propane.

Finally, 95484(f) needs to be corrected to include both fossil jet fuel and fuels used as a substitute for fossil jet fuel.

Thank you for your consideration of these comments. EDF looks forward to supporting the California Air Resource Board as it works toward transportation decarbonization, achieving net-zero greenhouse gas emissions by 2045, and delivering long-overdue environmental justice for local communities and their right to breathe clean air. If you have questions or would like to discuss any of these recommendations, please contact Katelyn Roedner Sutter at kroedner@edf.org.

Sincerely,



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