



*August 27, 2024*

Liane Randolph  
Chair, California Air Resources Board  
1001 I St  
Sacramento, CA 95814

**Re: Comments on Proposed 15-Day Changes to Proposed Low Carbon Fuel Standard Amendments,  
posted August 12, 2024**

*Submitted via CARB's online Comment Submittal Form*

Dear Chair Randolph:

Clean Air Task Force (CATF) is pleased to submit comments on CARB's proposed amendments to California's Low Carbon Fuel Standard (LCFS), as posted on August 12, 2024.

CATF is a global nonprofit organization working to safeguard against the worst impacts of climate change by catalyzing the rapid development and deployment of low-carbon energy and other climate-protecting technologies.

We greatly appreciate the time and consideration CARB staff have invested in these proposed changes. Strengthening the 2030 carbon intensity benchmarks and adding benchmarks out to 2045 improves the potential of the LCFS to set California's transportation sector on a trajectory towards zero emissions by mid-century.

Most of the proposed 15-day changes are improvements to the regulatory amendments in the 45-day rulemaking package. We support CARB's proposal to limit the eligibility of vegetable oil fuel for generating credits on a percentage basis as an *interim measure*. However, we are very concerned about the decision to reverse course and exempt fossil jet fuel from inclusion under the standard. As discussed in a recent CATF analysis, the aviation sector will be difficult to decarbonize and the market for alternative jet fuel needs a performance-based economic policy such as the LCFS to scale in the magnitude and timeframe necessary.<sup>1</sup>

Furthermore, to be effective, the proposed vegetable oil cap needs to cover all bio-oil-based fuels (including alternative jet fuel) and all crop seed oil feedstocks. By applying the limit only to diesel fuel made from soy and canola oil, fuel producers could circumvent the limit by allocating surplus vegetable oils to other fuels (like alternative jet fuel or renewable gasoline) or by using other crop seed feedstocks. Additionally, if the proposed limit on vegetable oil feedstocks were extended to alternative jet fuel, it would help minimize the unintended indirect land use change consequences from including aviation fuel in the LCFS.

To address these concerns, we recommend CARB take the following actions in this rulemaking:

- Include fossil jet fuel, or commit to a public process for developing policies to prioritize the use of low-carbon aviation fuel in California;

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<sup>1</sup> [Decarbonizing Aviation: Enabling Technologies for a Net-Zero Future, CATF, April 2024](#)

- Expand the 20 percent credit cap on soy and canola oil diesel to all bio-oil-based fuels made from any crop seed oil<sup>2</sup>;
- For crop oil-based fuels in excess of the 20 percent credit cap, set their carbon intensity (CI) to that of the relative fossil fuel benchmarks to avoid incentivizing excessive use of vegetable oil fuels; and,
- Require third-party certification of waste oils and assess and report on the aggregate sustainability impacts of all certified bio-oil fuel pathways by feedstock and region of origin.

***California must meaningfully address aviation emissions by regulating fossil jet fuel under the LCFS***

CATF strongly supports removing the fossil jet fuel exemption and regulating aviation fuel under the LCFS. California’s aircraft activity is projected to grow by two-thirds by 2050.<sup>3</sup> Low-carbon alternative jet fuel is available and deployable, but without a performance-based economic incentive, such as the LCFS, its production and use cannot meaningfully or sustainably scale. Increasing the use of alternative jet fuel could also result in health benefits by reducing soot emissions now adversely affecting communities around airports, and airport workers. Furthermore, alternative jet fuel would impart climate benefits resulting from reduced contrail formation, especially on long, high-altitude flights.<sup>4</sup>

In its Summary of Modifications, CARB offers only a partial justification for excluding fossil jet fuel, citing comments that “aviation fuel suppliers who would generate deficits under the initial proposal could simply acquire credits to meet that compliance obligation” rather than directly reducing the carbon intensity of their fuels by blending alternative jet fuel.<sup>5</sup> Buying credits is, of course, part of the design of the LCFS. Nevertheless, including fossil jet fuel under the LCFS would incentivize alternative jet fuel production and sales in California, supported by federal tax credits like sections 40B and 45Z, as CARB modeled and presented in April.<sup>6</sup>

As a result, CATF strongly recommends that CARB obligate jet fuel in this round of amendments. Absent this outcome, CARB staff should commit during the November 8<sup>th</sup> hearing to developing policies for prioritizing the use of low-carbon alternative jet fuel in California.

***CARB’s proposed limited eligibility of diesel made from soy and canola oil in section 95482(i) should be expanded to all crop seed oils and to all bio-oil-based fuels***

CATF supports incorporating prudent and firm limits on fuels made from vegetable oils. As we have commented previously,<sup>7,8</sup> the use of vegetable oil feedstocks poses significant indirect land use change

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<sup>2</sup> Crop seed oil is bio-oil from seeds that are otherwise grown for food and personal care products.

<sup>3</sup> [California Aircraft and Airports Fact Sheet - July 2024 0.pdf](#)

<sup>4</sup> [Non-CO2 Climate Impacts of Aviation: Contrails, CATF, 2023](#)

<sup>5</sup> [Notice of Public Availability of Modified Text and Availability of Additional Documents and/or Information \(ca.gov\)](#)

<sup>6</sup> [Recirculated Draft Environmental Impact Analysis for the Proposed Low Carbon Fuel Standard Regulation, CARB, August 16, 2024.](#)

<sup>7</sup> CATF 45-Day Comment Letter, Submitted February 20, 2024. <https://www.arb.ca.gov/lists/com-attach/6878-lcfs2024-UzAGYVAIBzIBWFlx.pdf>

<sup>8</sup> CATF Comment Letter for CARB’s Low Carbon Fuel Standard Workshop, Submitted April 10<sup>th</sup>. [https://www2.arb.ca.gov/system/files/webform/public\\_comments/11366/CATF%20LCFS%20Comments%20April%2010%20Workshop%20051024.pdf](https://www2.arb.ca.gov/system/files/webform/public_comments/11366/CATF%20LCFS%20Comments%20April%2010%20Workshop%20051024.pdf)

risks because of substitution effects in global markets that often result in deforestation and/or expanded palm oil production.

Given the current structure of the LCFS, we also support, on an interim basis, the proposed approach to limit the eligibility of vegetable oil fuel to generate credits on a percentage basis as a first step towards a comprehensive approach to minimizing the LCFS' impacts on food markets and ecosystems. However, in this rulemaking, we strongly recommend that the 20 percent credit cap apply to all bio-oil-based fuels and crop seed oil feedstocks that are otherwise grown for food markets. Otherwise, bio-oil fuel producers could exceed the limit by allocating surplus vegetable oil feedstocks to renewable gasoline and alternative jet fuel production. Similarly, limiting the credit cap to only soy and canola oil feedstocks would enable fuel producers to shift to alternative crop seed oil pathways, with potential market substitution effects and a net increase in deforestation and/or palm oil production.

Renewable diesel production continues to grow rapidly, underscoring the importance of limiting demand for all vegetable oil feedstocks. The process of hydrotreating vegetable and waste oils and fats (HEFA) can generate diesel fuel, alternative jet fuel, and renewable gasoline (as a byproduct) in adjustable proportions.

Accordingly, CATF suggests the following modifications to section 95482(i):

- Replace "Biomass-based diesel produced from soybean oil and canola oil" with "Fuels produced from crop seed oils";
- Replace "biomass-based diesel" with "bio-oil-based fuel" in "total ~~biomass-based diesel~~ bio-oil-based fuel annual production reporting";
- Replace "soybean oil and canola oil" with "crop seed oils" throughout the section;
- Replace "diesel" with "fuel" in "biomass-based ~~diesel~~ fuel pathways"; and,
- Replace "biodiesel and renewable diesel" with "bio-oil-based fuel" in "combined reported ~~biodiesel and renewable diesel~~ bio-oil-based fuel quantities".

In conjunction with the above changes, CATF suggests adding the following definitions to section 95481:

- "Bio-oil-based fuel" means biodiesel, renewable diesel, renewable gasoline and opt-in alternative jet fuel.
- "Crop seed oils" means first-generation vegetable oils pressed from seeds that are otherwise grown for food markets.

Because a percentage-based limit on credit generation will continue to allow substantial growth in the use of crop oil-based fuels and because of the potential for wide-spread substitution effects of using bio-oil feedstocks to make fuels, the risk of indirect impacts on food markets, land use change and associated emissions will remain. And while the proposed discretion for the Executive Officer to stop accepting new biomass-based diesel pathways beginning in 2031 could be helpful, a comprehensive framework of safeguards will be needed. Accordingly, CATF continues to recommend that CARB:

- Initiate a regulatory amendment process within one year of CARB board adoption of LCFS regulatory amendments in this rulemaking that focuses on developing a comprehensive set of safeguards;
- Design an overall limit on all bio-oil-based fuels in the LCFS;
- Analyze the impact of the CA LCFS on the global crop-oil markets, incorporating available data pathway applications and reports; and,

- Based on this analysis, develop criteria for suspending bio-oil-based fuel pathways based on adverse impacts to food markets and ecosystems and removing high-risk feedstocks from LCFS eligibility (as CARB has already proposed to do with palm oil).

***CARB should require third-party certification of waste oils and assess and report on the aggregate sustainability impacts of the bio-oil-based fuel pathways that are certified in Sections 95488.8(g) and 95488.9(g)***

As CATF has previously commented, CARB should require third party verification of waste oils listed in Section 95488.8(g)(1)(A)1., due to potential market substitution effects resulting in similar land-use change risks to those discussed above, as well as the potential for fraud. To ensure the efficacy of these requirements as well as additional requirements and limitations on biomass-based fuels, CARB should assess and report on the aggregate sustainability impacts by feedstock and region of biomass-based fuel pathways certified in Sections 95488.8(g) and 95488.9(g).

With great appreciation for the tremendous effort CARB staff have invested in developing and proposing important revisions to California's LCFS, we thank you for your consideration of these recommendations and would be glad to elaborate or discuss these issues further.

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