



May 10, 2024

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

Re: Comments on Proposed Low Carbon Fuel Standard Amendments, April 10 Staff Presentation
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) and questions raised at CARB's April 10th public workshop.

CATF is a global advocacy 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 additional time CARB staff has invested in considering strengthening the LCFS 2030 targets and proposing the important step of eliminating the current aviation fuel exemption for intrastate fossil jet fuel from the standard, as well as responding to and discussing our and others' concerns with the proposed LCFS revisions during its April 10th public workshop. We do not, however, believe that the suggested modifications of CARB's proposal sufficiently address the scale of the problem posed by the rapidly growing use of vegetable oil-based fuels, which poses unacceptable risks to food markets and the climate as well as other environmental impacts.

A critical sustainability principle that CARB has expressed at several workshops is that "biofuel production must not come at the expense of deforestation or food production."¹ Without adequate safeguards—which in our view should be some form of binding limit on vegetable oil in California fuel markets, and possibly on waste oils—the California LCFS, one of the largest markets for low-carbon fuels globally, is and will continue to impact food production and cause deforestation. Reiterating our concerns:

- Without adequate safeguards, strengthening and extending LCFS carbon intensity benchmarks will likely accelerate the rapid growth in demand for vegetable-oil based biofuels, directly and indirectly impacting food markets and increasing carbon emissions from land use changes;
- Including intrastate fossil jet fuel in the LCFS is an important policy signal for decarbonizing the aviation sector, but the current proposal will further increase demand for vegetable-oil based fuels, given that refining and hydrotreating bio-oils is currently the only commercially viable alternative to fossil jet fuel at scale; and
- The only proposed sustainability requirement for crop-based biofuels, beyond disqualifying palm oil feedstocks, is third-party certification that the feedstocks are derived from land that

¹ Staff presentation, Slide 51 <https://ww2.arb.ca.gov/sites/default/files/2024-04/LCFS%20April%20Workshop%20Slides.pdf>



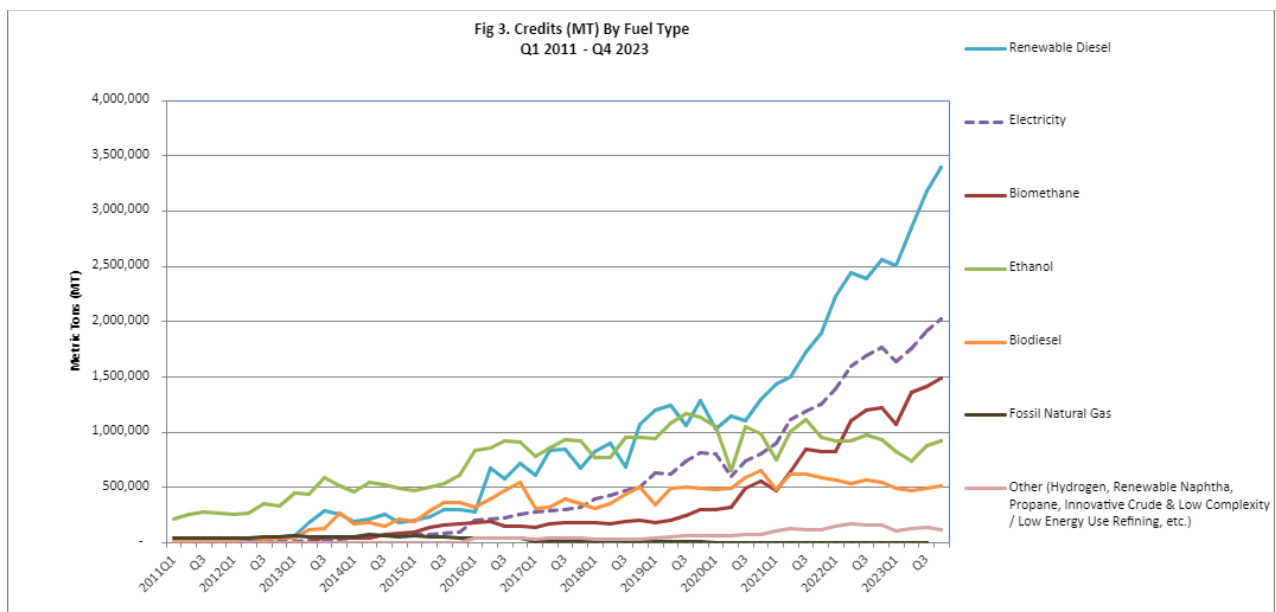
has not been forested since 2008, which is too narrowly scoped to serve as an effective constraint on climate-damaging land use change.

To address these concerns, CARB must implement effective sustainability guardrails in this rulemaking process by taking the following actions:

1. CARB must find a way to limit the use of vegetable oil-based fuel in California, which is already impacting domestic and international food markets. Below we suggest one possible method of limiting the share of high indirect land use change (ILUC)-risk vegetable oils used to make biofuels sold into the California market;
2. CATF supports CARB’s consideration that was included in its April 10th workshop slides of extending the sustainability criteria to used cooking and waste bio-oils, given potential substitution impacts (particularly food oil markets) when these waste oils are diverted to fuel markets, and urges their adoption in the final rulemaking package; and,
3. CARB must assess and report on the sustainability guardrails, including tracking overall compliance of a percentage-based limit (see #1 above) through existing auditing and reporting mechanisms.

The Proposed Amendments to California’s Low Carbon Fuel Standard Regulation² are likely to further accelerate the already unsustainable growing demand for crop-oil based biofuels.

While CATF supports CARB’s intention to strengthen the LCFS’ targets, the lack of adequate safeguards or limitations on crop-oil feedstocks used in producing diesel and aviation fuel will further accelerate an already unsustainable growth in demand for crop-oil feedstocks. According to CARB’s reporting, renewable diesel from bio-oils (mostly used cooking oil, tallow, and vegetable oils) are by far the largest and fastest growing source of credits in California’s LCFS.³



² [Proposed Amendments to the Low Carbon Fuel Standard Regulation, Appendix A-1, January 2, 2024](#)

³ [Low Carbon Fuel Standard Reporting Tool Quarterly Summaries-Graphs, CARB, October 31, 2023](#)



According to the most recently available data, bio-oil based diesel accounted for 68% of the California diesel fuel market as of the fourth quarter of 2023.⁴ Since CARB has tracked feedstock data, beginning in 2021, quarterly use of crop-oil based fuels has grown rapidly to account for 21% of the state’s diesel market in 2023.⁵

California demand for Renewable Diesel is unlikely to decline in the 2030s.

During the April 10th public workshop, CARB staff responded to concern about the growing use of crop-oil based renewable diesel fuel by asserting that: a) the supply of renewable diesel produced or imported into the U.S. will exceed future California demand, and b) vegetable-oil based renewable diesel will stop generating credits by the early 2030s, so the risk will be limited.⁶

CARB also projects that the use of renewable diesel will decline in the future as vehicle standard requirements tighten and the fuel begins generating deficits under the LCFS. CARB’s regulatory impact assessment, however, indicates that the *combined* in-state production of renewable diesel and bio-jet fuel alone will increase to more than 800 million gallons by 2040.⁷ Beyond in-state production of bio-oil fuel production, a recent study from UC Davis projects that strengthening California’s LCFS reduction target to 30% by 2030 could result in 100% of the state’s 3.5 billion gallons of diesel demand being met by bio-based diesel—most of which would be derived from vegetable oils, due to the relatively limited potential of waste-oil supplies.⁸ Such a massive influx of vegetable-oil based diesel fuel would not only pose very large indirect land use impacts and a *potential net increase* in GHG emissions, but could also substantially erode carbon credit prices, which CARB is trying to bolster.

Furthermore, there is no reason the transition from credit-generating to deficit-generating will stop or substantially slow the use of vegetable oil-based fuels relative to fossil diesel. Such fuels will still have a competitive advantage over fossil diesel in the LCFS market, potentially indefinitely, as fossil diesel will generate substantially higher deficits that will be more expensive in the future to retire.

The growth in vegetable oil-based fuels, including in California, is already impacting food markets.

According to the US Department of Agriculture and market analysts, crop-oil based diesel has impacted the soy oil market so significantly that for the first time in history, the U.S. imported more soy oil than it exported.⁹ Soy oil demand for biofuels has grown to an astounding 48% of soy oil use in the U.S. As the dominant market for renewable diesel in the U.S., California’s growing demand will draw more global vegetable oil supplies away from existing food markets and into the California fuel market.

These recent trends and CARB’s projections underscore the urgent need for careful safeguards in the LCFS amendments. Without adequate safeguards, the strengthening of the LCFS carbon intensity targets

⁴ Calculated from [Low Carbon Fuel Standard Reporting Tool Quarterly Summaries, CARB, October 31, 2023](#)

⁵ Calculated from [Low Carbon Fuel Standard Reporting Tool Quarterly Summaries, CARB, October 31, 2023](#)

⁶ CARB presentation, slides 37-40 <https://ww2.arb.ca.gov/sites/default/files/2024-04/LCFS%20April%20Workshop%20Slides.pdf>

⁷ Standardized Regulatory Impact Assessment (SRIA) of Proposed Amendments to the Low Carbon Fuel Standard Regulation, Table 47, CARB, September 9, 2023.

⁸ [Forecasting Credit Supply Demand Balance for the Low-Carbon Fuel Standard Program, Bushnell et al, UC Davis, August 2023.](#)

⁹ [US shifts to net soybean oil importer on biofuel boom, S&P Global, October 12, 2023.](#)



combined with the newly proposed Automatic Acceleration Mechanism could greatly accelerate the unsustainable growth of crop-oil feedstocks used for making renewable diesel and alternative jet fuel. The resulting and potentially massive increase in demand for crop oil-based fuels markets will contribute to higher food and feed prices, which in turn will accelerate climate-damaging land clearing to accommodate new crop production.

Recommendations

Given CARB's intention to strengthen and extend the carbon intensity benchmarks of the LCFS program and to obligate intrastate aviation fuels, and considering the unexpected, highly risky, and rapid growth of bio-oil based fuels that will be accelerated by stronger targets and obligating aviation fuels, CATF strongly recommends the following:

1. **CARB must find a way to limit the use of vegetable oil-based fuel in California, at a minimum by limiting the share of high-risk vegetable oils used to make biofuels sold into the California market.**

As explained in our previous comments, the best way to prevent the growth of unsustainable crop-oil fuels is to impose limits on the volume of diesel and aviation fuels sold in the state. Short of imposing volume limits at this time, CATF proposes a two-step process to implement safeguards in the LCFS program: (1) updating the regulation in the current rulemaking to limit the percentage of high ILUC-risk vegetable oil feedstocks (e.g. soy and canola oil) that can be used in the California fuel markets; and (2) in a future rulemaking, imposing volume limits on crop-based fuels.

- A. Step 1: In the current rulemaking, CARB should add safeguards within existing credit generating, reporting and tracking procedures to create percentage-based limitations on crop-oils.

As CARB staff and other experts have raised, demand for renewable diesel resulting from the LCFS program could have significant impacts on food markets and indirect land use change. CARB must find a way in this current rulemaking process to strengthen the proposed sustainability safeguards to limit vegetable oil feedstocks being drawn into California's fuel markets.

The rapid growth in the use of soy, canola, and other globally traded vegetable oils as biofuel feedstocks poses immediate and significant direct and indirect food and land-use impacts. While a fixed volume limit on all lipid-based fuels would be a more effective way to address this, another approach is to limit the percentage of high ILUC-risk vegetable oil feedstocks (e.g. soy and canola oil) that can be used in the California fuel markets. CARB could achieve this by simply adding a new subsection to limit crop-oil feedstocks, such as:

No more than [20%¹⁰] of the facility's average production yield derived from crop-derived oil feedstocks shall be counted as processed for a fuel pathway and included for credit generation. Crop-derived fuel production exceeding [20%] shall be assigned the same carbon intensity as

¹⁰ Crop-oil feedstocks currently comprise 20% of the diesel fuel sold in California.



conventional fossil diesel. Producers must adhere to the reporting requirements set out in 17 C.C.R. § 95491(d)(1)(C) to demonstrate they have met this cap and earn credits.¹¹

As this proposed language indicates with the reference to 17 C.C.R. § 95491(d)(1)(C), the LCFS already requires fuel producers to delineate different feedstocks in their facilities. As a result, the above language could be added as subsection (c) to 17 C.C.R. § 95491(d)(1)(C)(1)—which explains how to calculate the carbon intensity for fuels produced from multiple feedstocks—thereby limiting excessive credits generated from vegetable oils from entering the market in the first place. Current 17 C.C.R. § 95491(d)(1)(C), “Fuel Transactions and Compliance Reporting” provides:

If a fuel production facility simultaneously processes multiple feedstocks, the producer or fuel reporting entity shall associate a portion of the fuel produced with each feedstock, using the production facility’s average production yield and one of the methods provided in section 95491(d)(1)(C). The producer or fuel reporting entity must then label each feedstock-specific subdivision of the total fuel quantity produced with the certified CI associated with that feedstock.

Given that the LCFS already requires feedstock-specific reporting within a fuel facility, CARB could use this reporting mechanism to enforce a new percentage-based limitation.¹² In addition, to ensure this provision captures as much crop-oil feedstocks as possible, CARB should strike “simultaneously” from 17 C.C.R. § 95491(d)(1)(C) where shown above: “If a fuel production facility ~~simultaneously~~ processes multiple feedstocks, the producer.”¹³ Otherwise, fuel producers might be allowed to sidestep this limit by running separate, feedstock-specific fuel production lines.

- B. Step 2: In future rulemaking, CARB must consider imposing hard volume caps on crop-based oils in the LCFS.

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 wide-spread substitution effects, especially internationally, of using waste oil feedstocks from fuels, a comprehensive framework of safeguards is urgently needed. After adopting an interim limit, such as the one we describe above, we recommend the following:

- Initiate another rulemaking process within one year following the update of the LCFS focused on developing a comprehensive set of safeguards;
- Design an overall limit on lipid-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,

¹¹ If CARB implemented this recommendation, it should also ensure that the requirement is applied to facilities that coprocess petroleum with biomass feedstocks.

¹² CARB should also change the language in § 95488.4(c) from “may” to “shall” to fully enforce this new requirement.

¹³ “simultaneously” is also referenced, and we recommend should be stricken, with regard to coprocessing multiple feedstocks in sections § 95488.4.(c)(1), § 95488.4.(d), § 95491(d).



- Based on this analysis, develop criteria for suspending 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).

We cannot emphasize more strongly that CARB, in this current rulemaking process, find a way to strengthen the proposed sustainability safeguards to limit vegetable oil feedstocks being drawn into California’s fuel markets.

2. Track and report on overall compliance of such a percentage-based limit through existing auditing and reporting mechanisms.

For the purpose of recordkeeping and auditing (§ 95491.1.), all Fuel Pathway Holders and Applicants are required to retain records on “the quantity of feedstocks purchased to produce the fuel” sold in California “under the certified pathway.” As this data is already tracked and reported in quarterly detail, CARB should be able to track and enforce this new provision within existing protocols. CARB should also assess and report annually the market impacts on crop prices, acreage, and exports that result from diverting bio-based feedstocks to biofuel production and imports obligated under the proposed Sustainability Requirements.

3. Extend the sustainability criteria beyond crop oils to used cooking oil (UCO) and waste oils and assess and report on the sustainability impacts of the pathways.

We support CARB’s consideration of extending the sustainability tracking requirement to UCO and waste oils. While these feedstocks are preferable to and have lower carbon intensities than crop oils, there are existing markets for these oils that will otherwise turn to crop-based oils when UCO and waste oils are used to produce biofuels for use in California, which also results in land-use change impacts. Furthermore, instances of fraud of crop oils, such as palm oil, being passed off as waste oil have been reported and investigated.¹⁴¹⁵ Given the number of pathways that CARB has approved for imported waste oils, CARB should require 3rd party certification for these feedstocks.

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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¹⁴ [Calls for tighter rules on biofuels imports to root out palm oil fraud, The Guardian, December 14, 2023.](#)

¹⁵ [Suspicious Frying Oil From China Is Hurting US Biofuels Business, Bloomberg News, May 7, 2024.](#)