

To: California Air Resources Board
From: Jeremy Martin, Daniel Barad, David Reichmuth and Don Anair
Date: August 27th, 2024
Subject: Comments on Low Carbon Fuel Standard 15-day changes

The Union of Concerned Scientists (UCS) is a long-standing supporter of the Low Carbon Fuel Standard (LCFS) and has been actively involved in its implementation for more than 15 years. We urge the California Air Resources Board (CARB) to modernize the LCFS to ensure it equitably meets the needs of Californians and supports the attainment of air quality standards. We appreciate the opportunity to comment on the 15-day changes, which include several useful changes aligned with our previous input, but also fail to address many of the substantial concerns we raised in our comments submitted in February¹ and May² this year. We reiterate our view, explained in detail in previous comments, that CARB should rapidly phase out counterproductive methane digester subsidies and rebalance supply and demand for credits by reducing credits that are misaligned with California's goals rather than focusing entirely on increasing stringency. We also have specific responses to several changes proposed in the 15-day change package.

The proposed limit on vegetable oil-based diesel fuels is a step in the right direction, but must be strengthened

We applaud CARB for acknowledging the harm caused by diverting food to fuel. We are resubmitting a letter which has now been signed by more than 50 experts in food markets, deforestation and energy policy calling on CARB “to immediately cap the use of vegetable oil-based biofuels and to strengthen safeguards within the Low Carbon Fuel Standard (LCFS) to ensure that the use of biofuels does not directly or indirectly contribute to global food price shocks, agricultural expansion, and deforestation.” A recent report from the US Department of Agriculture’s Foreign Agriculture Service highlights what is at stake, finding that “*the United States is rapidly expanding imports of animal fats and vegetable oils to both use as feedstocks for renewable diesel production and to backfill other feedstocks, like soybean oil, that have been diverted to renewable diesel production.*”³ Because of the renewable diesel boom, “*the United States became a net soybean oil importer for the first time in 2023.*” The report also concludes that “*the real driver for renewable diesel expansion has been the California Low-Carbon Fuel Standard.*”

While the proposal takes a step in this direction, it must be strengthened to effectively prevent food versus fuel conflicts and deforestation.

¹ <https://www.arb.ca.gov/lists/com-attach/6955-lcfs2024-Wi8CZ1MhUFwHYgFu.pdf>

² <https://ww2.arb.ca.gov/form/public-comments/submissions/11181>

³ US Department of Agriculture’s Foreign Agriculture Service. June 2024. U.S. Renewable Diesel Production Growth Drastically Impacts Global Feedstock Trade. <https://fas.usda.gov/data/us-renewable-diesel-production-growth-drastically-impacts-global-feedstock-trade>

For reasons we explained in our earlier comments and our 2022 briefing paper⁴ a policy change that only limits the share of soy and canola oil feedstock is a poor substitute for a cap on all lipid biofuel feedstocks based on sustainable availability. Even with limits on the share of vegetable oil used for bio-based diesel, California will continue to draw vastly more than its share from global lipid markets, importing used cooking oil and animal fat from around the world. The consequence is that California's LCFS policy can't be replicated by other states or countries. There simply isn't enough used cooking oil to go around, and capping one set of feedstocks with no limit on others can lead to counterproductive feedstock and fuel shuffling and carbon leakage. A more systematic and effective approach would cap all feedstocks based on a reasonable share of what is sustainably available, and implement this limit on obligated parties or the market as a whole, rather than individual fuel producers. While this approach might be more work to implement, it would yield a more stable and replicable policy over the long term. However, to focus on our comments on the 15-day changes we suggest ways the proposed mechanism could be strengthened within the general parameters proposed.

Cap the volume not the share: Limiting the share of bio-based diesel produced from vegetable oil will not put a firm cap on the diversion of food to fuel. According to the latest data (and excluding the unspecified other category) in 2023 vegetable oil made up a little less than 20 percent of bio-based diesel feedstock. A 20 percent cap may discourage the share of vegetable oil feedstock from growing, but the total volume of bio-based diesel fuel from all feedstocks has been growing rapidly. For example, renewable diesel grew 43% in 2023. Thus, the total amount of vegetable oil-based diesel fuel can keep growing even if the share of vegetable oil feedstock remains the same.

Global vegetable oil markets are not responsive to the share of bio-based diesel used in California but instead to the volume of food diverted to fuel. An effective cap should limit the volume not the share of vegetable oil used for fuel.

To convert the proposed cap into one that more effectively limits the volume of vegetable oil-based fuels, the cap should get more stringent over time in line with increases in the size of the overall lipid-based fuel pool. Thus, if the total volume of lipid-based fuels increases by 10 percent the cap should be reduced in the following period from 20 percent to 18 percent to keep the effective volumetric cap on vegetable oil-based fuels constant.

Apply the cap to all fuels, not just bio-based diesel: Because the cap covers only diesel fuels, and not gasoline and jet fuel, there is potential for additional use of vegetable oil-based fuels in other categories. This is a secondary issue today, but it could become a much bigger problem in the future if federal subsidies for bio-based jet fuel make it economically attractive. Recent experience with the renewable diesel boom shows how quickly booming markets can outpace expectations⁵ and how difficult and time consuming it is to establish safeguards once an unsustainable market is established. CARB should act now before a problem with vegetable oil-based jet fuel materializes.

The limits on vegetable-oil feedstocks should apply to all fuel types, including bio-based jet fuel and gasoline

⁴ O'Malley, Pavlenko, Searle and Martin. Setting a lipids fuel cap under the California Low Carbon Fuel Standard. August 2022. theicct.org/publication/lipids-cap-ca-lcfs-aug22/

⁵ For more details see Marti, Jeremy. Everything You Wanted to Know About Biodiesel and Renewable Diesel. Charts and Graphs Included. January, 2024. <https://blog.ucsusa.org/jeremy-martin/all-about-biodiesel-and-renewable-diesel/>

Treat fuels above the cap as equivalent to fossil diesel: Despite the proposed cap on credit generation, vegetable oil-based diesel fuels above the cap still provide obligated parties with substantial and growing compliance value because displacing fossil diesel with vegetable oil-based diesel will still reduce an obligated party's deficit generation, as well as reducing their obligations under Cap and Trade. As the standard gets more stringent, the relative importance of avoided deficit generation grows, and once the standard matches the CI of the vegetable oil-based fuel the proposed cap is no longer a disincentive at all.

A stronger safeguard would treat fuels above the limit as equivalent to fossil diesel in both the LCFS carbon intensity and under the Cap and Trade policy. This is how a similar cap is implemented in Germany. If the proposed cap is indeed a sufficient disincentive and no fuels above the cap are produced, then this change will have no impact on the market. But it will provide a more effective assurance that the LCFS does not lead to use beyond the proposed cap.

Sustainability certification requirements should apply to wastes and residues: The LCFS has already transformed global markets for oils and fats, and the 15-day changes may intensify this by limiting vegetable oils without any limit on fats and used cooking oil. Waste oils are closely linked with reporting fraud, which has been under increasing scrutiny in the U.S. and Europe. To ensure the LCFS does not exacerbate this problem it is essential that CARB expands third-party certification requirements to include biofuels made from wastes and residues. The following comments from the International Council for Clean Transportation lay out the evidence of the risks and implementation details.

Waste oils have made up the largest share of BBD credits since the start of the LCFS program and are incentivized due to their low CI value relative to crop-based fuel pathways. Waste oils are closely linked with reporting fraud, which has been under increasing scrutiny in the U.S. and Europe. EPA is currently investigating two renewable fuel producers for used cooking oil (UCO) fraud and the EU is undergoing similar investigations.⁶ A renewed focus on fraud comes after a sharp rise in UCO imports from Asia, which grew from 0.4 thousand tonnes to 718 thousand tonnes between 2022 and 2023 alone.⁷

UCO fraud is prevalent due to the difficulty in distinguishing between filtered UCO and vegetable oil during chemical testing. The European Anti-Fraud Office has investigated cases where virgin vegetable oil was fraudulently labeled as UCO to avoid anti-dumping fees and benefit from national-level renewable energy incentives.⁸ In 2020, the Dutch company Sunoil forged sustainability certification scheme (SCS) certificates that credited crop-based biofuels as waste-based biofuels.⁹ Similar fraud schemes have occurred in the U.S. in early years of the Renewable Fuel Standard (RFS) program where biodiesel producers forged quality tests for UCO biodiesel as well as overstated production quantities that received RIN credits.¹⁰ An ICCT study that compiled data on UCO trade, collection rates, and resource potential in various Asian

⁶<https://www.reuters.com/business/energy/us-epa-says-it-is-auditing-biofuel-producers-used-cooking-oil-supply-2024-08-07/>; <https://www.reuters.com/sustainability/climate-energy/france-germany-urge-tougher-eu-checks-biofuel-imports-fraud-probe-2024-05-31/>

⁷<https://comtradeplus.un.org/TradeFlow?Frequency=A&Flows=M&CommodityCodes=151800&Partners=842&Reporters=all&period=2023&AggregateBy=none&BreakdownMode=plus>

⁸ https://anti-fraud.ec.europa.eu/system/files/2021-09/olaf_report_2019_en.pdf

⁹ <https://op.europa.eu/en/publication-detail/-/publication/ec9c1003-76a7-11ed-9887-01aa75ed71a1/language-en>

¹⁰ United States Department of Justice, "Pennsylvania Biofuel Company and Owners Sentenced on Environmental and Tax Crime Convictions Arising out of Renewable Fuels Fraud," news release, October 20, 2020, <https://www.justice.gov/opa/pr/pennsylvania-biofuel-company-and-owners-sentenced-environmental-and-tax-crime-convictions>.

countries found that UCO exports may already exceed volumes that are plausibly produced and imported.¹¹ This risk is exacerbated if BBD demand continues to grow due to policy incentives from federal and state-level fuel programs.

The use of third-party auditors such as those approved under CORSIA and the EU Renewable Energy Directive (RED) can help mitigate the risk of reporting and testing fraud; however, they cannot eliminate this risk entirely.¹² However, a third-party certification can still help to improve the integrity of waste oils credited within the LCFS. For example, the RSB certification for advanced biofuels includes detailed requirements for traceability of waste biomass, specifying that 1) collectors and aggregators in the waste supply chain maintain data and a mass balance system to track their material flows, 2) that collectors maintain evidence to track material back to its point of origin, and 3) that points of origin can be accessed and audited.¹³

EV base credits should be prioritized to support medium and heavy-duty electrification

The proposed language to issue base credits to light-duty vehicle OEMs is concerning and is a significant departure from CARB's initial proposal, which was to support truck electrification by updating the Clean Fuels Reward program to focus on new and used medium and heavy-duty vehicles (MHDV). Medium and heavy-duty vehicles are at an earlier stage of adoption than light-duty vehicles and their pollution has an outsized impact on freight-impacted communities. UCS continues to support using the base credits for MHDV electrification efforts under a revised Clean Fuel Reward Program or focusing on other electrification efforts that specifically advance equity in EV deployment.

The proposed amendments allowing the Executive Officer to return base credits to light-duty vehicle OEMs have several shortcomings, including:

- (1) The language as proposed would provide the Executive Officer with enormous discretion as to how base credits worth potentially hundreds of millions of dollars would be allocated with no oversight or public input on how the associated revenue would be spent.
- (2) It is unclear how the Executive Officer would allocate credits between OEMs. If credits are simply based on estimates of residential charging as a fraction of OEM market share or EV vehicle stock, this program will send the majority share of funds to dominant EV manufacturers like Tesla whose vehicles represent the largest share of EVs on the road. It is unclear how this distribution of funds would help the EV market overall.
- (3) The list of potential investments is extensive, ranging from rebates to marketing expenses. These are all activities which OEMs undertake in the normal course of business. While OEMs would need to disclose how they plan to spend the funds, there is no guarantee these investments would result in net increases in overall support for EV deployment (i.e. shuffling of OEM investments could occur).
- (4) A 7% administrative allowance is proposed with no justification. Utilities using holdback credits to implement equity-focused programs have indicated higher levels of administrative expenses. There are no equity program requirements for OEMs under this proposal and no justification for providing a 7% administrative allowance.

¹¹ https://theicct.org/wp-content/uploads/2023/02/US-UCO-potential_fs_final.pdf

¹² https://theicct.org/wp-content/uploads/2023/02/US-UCO-potential_fs_final.pdf

¹³ <https://rsb.org/wp-content/uploads/2020/06/RSB-STD-11-001-01-010-v.2.1-RSB-EU-RED-Standard-Adv-Fuels.pdf>

- (5) There is no sunset date for these provisions, meaning OEMs could continue to receive credits under these provisions in perpetuity regardless of the progress towards electrification.

While we do not support CARB moving forward with the proposed amendments, the issues stated above must be resolved should CARB decide to move forward. CARB should ensure OEM investments provide additionality by limiting the types of investments allowed and focusing on those that advance equitable EV deployment. Additionally, allowing MHDV OEMs to participate would allow for increased support of electric truck deployment. Sunsetting the provisions would ensure a future public opportunity to evaluate and revisit the program to ensure electricity credits are being used effectively to support an equitable transition to electric cars and trucks.

Add safeguards to direct air capture provisions

We are concerned that the lack of guardrails around the direct air capture provisions (DAC) could destabilize the LCFS and undermine its ability to support low carbon transportation fuel and California's climate goals. Federal subsidies or other private support for DAC could lead to a flood of credits that destabilize the LCFS credit market. We urge CARB not to wait until a problem occurs but to proactively limit credit generation for DAC to a small share of deficit generation, not more than 2.5 percent. Additionally, we urge CARB to adopt stringent requirements for low carbon electricity used for DAC to ensure the projects do not increase emissions elsewhere on the grid. We are concerned that the proposal "to harmonize the matching period for book-and-claim accounting for low-CI electricity for direct air capture projects [...] with the matching period for electricity used as a transportation fuel." will increase the matching period from one quarter to three, increasing the risk of increased emissions elsewhere on the grid.