



Don Gilstrap
Manager, Fuels Regulations

August 26, 2024

Rajinder Sahota
Deputy Executive Officer – Climate Change and Research
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Dear Ms. Sahota:

Re: August 2024 15-Day LCFS Proposal

Chevron appreciates the opportunity to review and comment on the subject Low Carbon Fuel Standard rulemaking proposal.

Chevron is a major refiner and marketer of petroleum products and renewable fuels in the state of California and a regulated party under the Low Carbon Fuel Standard (LCFS). Chevron is also an international producer of lower carbon intensity fuels with a global integrated procurement, distribution and logistics network and 11 biorefineries in the U.S. and Europe.

Key Messages

- Several proposals in this package are not sufficiently related to what was proposed in the original 45-day package to be included in a 15-day package.
- In three years of workshops, hearings, and written comments, no reasonable evidence has been presented that the production of crop-based renewable fuels is causing environmental or economic harm or that the projected growth in such production would lead to those harms. Both the sustainability guardrails and feedstock cap are unnecessary and harmful, without providing benefits to the environment or consumers.
- The proposed sustainability guardrails introduce sweeping changes to the agriculture industry in the United States with almost no time to prepare. Further, they are burdensome and redundant, given the existing indirect land use change factors under the LCFS and the EPA's feedstock documentation requirements under the Renewable Fuel Standard.
- The implementation of the sustainability guardrails in 2026 impacts feedstocks from the 2025 harvest year. This provides little to no time to implement tracking systems in the United States that do not currently exist.
- The proposed cap on fuels produced from soybean and canola oil is arbitrary and political, without basis in science. It has no place in a program that is meant to be market-based and technology-neutral.
- The proposals to limit hydrogen crediting and reduce infrastructure incentives are counterproductive in a time when the industry is facing serious economic headwinds.
- CARB's proposal to accelerate the reduction in biogas and renewable natural gas incentives threatens existing investments and runs counter to state and international climate goals.
- The proposed penalty on an exceedance of a verified CI is excessively punitive.



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Amendments Not Related to the Original Proposal

CARB has included several proposals in this 15-day package that significantly depart from the content of the original 45-day proposals in January. The 15-day comment period does not provide sufficient time for analysis and response warranted for newly introduced amendments that will result in significant impacts upon the regulated community. Consequently, several of the amendments appearing in the 15-day package are in violation of both the spirit and letter of the notice requirements of §11346.8(c) of the California Administrative Procedures Act. These include:

- **Proposed limits on soybean and canola oil-based fuels** – the original notice included a discussion of a potential cap on crop-based fuels and a reasoned rejection of the concept. No regulatory amendments were proposed related to capping these fuels. Therefore, the regulated community had no reason to anticipate the seismic reversal of this decision and the addition of this new section. A change of such substantial impact, the possibility of which was essentially rejected in the original proposed amendments, warrants a full 45-day comment period.
- **Cutoff for New Biomass-Based Diesel Pathways** – CARB's proposal to refuse the approval of new pathway applications based on ZEV adoption levels was not previously discussed or proposed.
- **Elimination of crediting for fossil hydrogen** – this is not a concept that was contemplated or proposed in the January notice. It is not appropriate for a 15-day package.
- **Restrictions on Hydrogen Refueling Infrastructure (HRI) Crediting** – sunseting the existing program prior to December 31, 2025 with the effective date of the 2024 amendments and requiring state and federal grant funding for program eligibility.
- **Awarding electricity credits to OEMs** – the proposal to divert base electric vehicle charging credits to OEMs was not part of the original notice and is not sufficiently related to any amendments that were proposed.
- **Increased credit for legacy rail** – the original package did not contemplate the change to crediting for pre-baseline fixed guideway systems.

These proposals should be withdrawn for potential consideration in a future 45-day package.

Sustainability Guardrails

We urge CARB not to finalize the changes made to the proposed sustainability criteria in section 95488.9 and land use change carbon intensity in section 95488.3 and believe they should be withdrawn. The proposed sustainability criteria and land use change penalty listed in these sections are effectively superseded by the federal Renewable Fuel Standard's aggregate compliance and traceability rules. We are unaware of any renewable fuels supplied in California that do not also generate credits through the Renewable Fuel Standard. As such, credit generating biofuels are already required to meet sustainability criteria under the federal Renewable Fuel Standard. Those rules require traceability and recordkeeping on the part of a biofuel producer for crop-based feedstock back to the individual farm if the cultivated land mass exceeds the acreage of cultivated land mass established in 2007 at 402 million acres.

In no time since aggregate compliance rules were established has the U.S. Department of Agriculture determined that the number of cultivated acreage in the U.S. exceeded the 2007 baseline. Satellite and land survey evidence suggests that land mass has been lost primarily due to urbanization and not cultivation. Cultivated land mass in the U.S. has been declining. The American Farmland Trust estimates that 11 million acres of cultivated land was

lost to the expansion of urbanization between 2010 and 2016.¹

For crops cultivated outside of the United States, federal traceability and record keeping requirements on behalf of biofuel producers apply. These rules require that biofuel producers document where the feedstock was cultivated to ensure that the crops were not sourced from lands not under cultivation prior to 2007. Assigning additional conservative land use change penalties for feedstock and fuel type from certain regions, as proposed in section 95488.3, are not needed.

We recognize that CARB currently assigns an indirect land use change penalty for crop-based biofuels. We encourage CARB to review the latest science concerning the indirect effect of land use change emissions. Estimated indirect effects may trend downwards. As an example, the most recent iteration of the Global Trade Analysis Project (GTAP) model assigns a carbon intensity penalty for soybean oil that is lower than previously modeled results based on economic data concerning global commodity trade flows.

The sustainability requirements for crop feedstock cultivation listed in 95488.9 (g)(1)(B) and included below are much too broad to be used for compliance by a third party. The requirements encompass specific agricultural practices that lack an appropriate definition or metric at which point compliance would be satisfied. Biofuel producers and growers need to know which specific agricultural practices apply, or do not apply, in order to maintain assurance of compliance with the proposed provisions. Adequate consideration of these cultivation practices is too onerous and complicated to undertake in this rulemaking. CARB should abandon this requirement and consider this approach through a separate rulemaking.

- (B) Biomass must be produced according to best environmental management practices that reduce GHG emissions or increase GHG sequestration, including but not limited to:
1. Maintain or enhance biodiversity habitat on agricultural or forested lands;
 2. Enhance soil fertility and avoid erosion or compaction;
 3. Apply fertilizers in a manner that minimizes runoff, and soil and water contamination;
 4. Reduce unsustainable water use, and minimize diffuse and localized pollution from chemical residues, fertilizers, soil erosion, or other sources of ground and surface water contamination.

Many of the other sustainability criteria are also unworkable in the timeframe included and CARB should instead consider each through separate rules. These proposed amendments include the ability to rely on certifications that meet the European Union's Renewable Energy Directive (EU RED), but still require location data for the farms where feedstock was cultivated to be passed to the fuel producer which is inconsistent with the EU RED. Under the EU RED, the fuel pathway holder is not the holder of the Attestation letter regarding the point of origin of the biomass. The First Gathering Point holds this and provides proofs of sustainability. The

¹ Source: [Home - American Farmland Trust](#)

proposed language in these provisions would therefore impose more stringent requirements than the EU RED currently requires. Additionally, GPS coordinates of farms per 95488.9(g)(2) are not required and a phase-in a requirement in 95488.9(g)(2) would not be applicable under an EU RED certification system in 95488.9(g)(3)(C).

A 2026 implementation deadline for a new requirement in 95488.9(g)(2) is not feasible since we are not aware of an existing global system that would satisfy the proposed requirement. Additionally, implementing the program by 2026 for the 2025 harvest will give producers less than a year to implement these new requirements without subject matter expertise on compliance, data collection systems, or agreements with primary suppliers. As such, a 2026 timeframe is unrealistic and may result in significant costs and difficulties for renewable fuels that could affect pricing in the market at large.

CARB needs to provide more time and receive more feedback from the grower community concerning certain elements of the proposed sustainability requirements. Most US and Canadian farmers do not currently participate in European sustainability systems and may be hesitant to do so. However, many may participate in a program recently established in Canada as part of the Canadian Clean Fuels Rules since Canada is a close trading partner with the United States. We also maintain that the 2028 deadline for implementing a sustainability system in 95488.9(g)(3) will be challenging unless it explicitly allows for the Canada Clean Fuel Regulation's Land Use and Biodiversity criteria to be an Approved Certification System in 95488.9(g)(3)(C).

Arbitrary Restrictions on Specific Feedstocks

We urge CARB not to finalize the proposed addition of section 95482(i) that would limit a producer's ability to generate credits from soybean and canola oil-based fuels to no more than 20 percent of total biomass based diesel (BBD). CARB has not provided any basis for the proposed limitation on biofuels derived from these oilseeds other than to claim that fuels derived from crop oils should be available to markets outside of California.

Soybean and canola oil-based biofuels are already available in markets outside of California including expanding volumes in Midwest markets and West Coast clean fuel standard incentivized states, along with growing volumes of biomass-based home heating oil in certain Northeast markets. California's LCFS is not hindering the availability of these products to other states.

Efforts to cap the use of soybean and canola oil-based BBD out of a desire to promote food security are misdirected. Raw food commodities, that include soybean and canola oil, comprise a small share of the overall cost of food production and contribute a small share of the retail price of food. Packaging, marketing and logistics make up over 80% of the retail cost of food items.² Growing volumes of soybeans and canola, owing to expanded yields and processing capacity, are additive to the food supply as most pressed soybeans and canola become meal for animal protein cultivation. Efforts to limit soybean and canola cultivation by capping the use of these feedstocks to produce credit generating fuel for the LCFS program may provide little benefit to promote food security.

The credit generating mechanism of the LCFS program provides additional financial incentives to supply the California marketplace with waste-based biofuels. According to recent LCFS quarterly report data, over 60 percent of the biodiesel pool in California is waste-derived while

² Source: [USDA ERS - Documentation](#)

nearly 70 percent of the renewable diesel pool is waste-derived. In addition, the anticipated transition from the federal blender's tax credit to a federal clean fuel production credit that rewards lower carbon fuels with greater federal tax credit will provide further financial incentives to expand the supply of waste-based biofuels. This transition is expected to occur in early 2025.

State and federal incentives that reward lower carbon biofuels are important factors that lead many companies, including Chevron, to invest in lower carbon feedstocks including intermediate crops such as winter canola, camelina and CoverCress. These oilseed crops are cultivated as an intermediate crop that meets the definition of a cover crop and are planted and harvested on land that would otherwise be idle in a rotation pattern between main crops or in a fallow rotation and is primarily intended to provide low carbon feedstocks to produce renewable biofuels and other end uses.

If the proposed 20% cap is finalized, CARB should update the regulatory language to make it clear that it applies to spring canola as a primary crop and not winter canola.

Further, the proposed restriction described in 95482(i) applies to production reported under the LCFS. This is problematic language as most of the renewable fuel delivered to the California market is never reported as production. Further, CARB has not addressed the source of its legal authority to regulate the full production of out-of-state facilities, much of which is delivered to non-California markets.

Due to the annual reduction in the overall carbon intensity benchmarks, biofuel from soybean oil is expected to become a deficit generator as early as 2033, according to previous staff analysis; or by 2030 if the proposed automatic adjustment mechanism is finalized and triggered. Prematurely limiting or capping the use of soybean and canola oil-derived biofuels would only limit near-term carbon reductions in the service of a political message.

Hydrogen Fossil Fuel Feedstock Ineligibility

Chevron objects to the 2031 crediting restriction proposed for hydrogen from fossil feedstocks. Further, it is inappropriate to substitute the hydrogen carbon intensity with that of fossil diesel. Producers who can demonstrate a lower EER-adjusted CI than the substitute fuels' baseline, even if produced from fossil feedstock, should still be eligible to obtain credits in line with a technology-neutral, science-based approach. Many EER-adjusted pathway CIs for fossil-derived hydrogen are well below the conventional ULSD CI in table 7-1. If the proposed change is finalized, CARB should update the ULSD CI reference to Table 2 rather than table 7-1 to address this concern. This will mitigate an arbitrary market distortion and will keep costs down for consumers to enable FCEV technology adoption.

Over 95% of US production of hydrogen is produced from steam methane reforming of natural gas.³ While new technologies have promise, it will take considerable time to develop these commercially on a large scale. Construction of large-scale facilities takes, at minimum, a 10-year cycle time for full capital project execution. Given that there are virtually no large-scale projects through final investment decision and permitting in California today, 2031 is far too early to create an artificial crediting restriction, much less turn hydrogen into a deficit generator as proposed. The LCFS program already has the proper mechanisms in place to drive the development of renewable hydrogen production.

³ [USDOE FE Hydrogen Strategy July2020.pdf \(energy.gov\)](#)

Hydrogen Refueling Infrastructure Crediting

The modifications to the hydrogen refueling infrastructure (HRI) crediting program as part of the 15-day package do not address the concerns raised during the last comment cycle regarding incentivizing hydrogen infrastructure development. The hydrogen retail industry in California has hit a historic crossroads with high retail prices, falling vehicle sales, and station closures due to supply.^{4,5} This is not the time to be limiting zero emission vehicle fueling infrastructure enablement if CARB staff wishes to meet ACCII, ACT, and ACF milestones as well as goals laid out in AB8 reporting.⁶

Chevron urges CARB to alleviate the following constraints to enable meaningful progress in infrastructure development: 50% capacity limit for public stations, requiring state and federal grant funding for program eligibility, shortening crediting to a 10-year window, the increase in required renewable content from 40% to 80%, and the requirement to disclose all cost and revenue data. If CARB does not relax these constraints, this will hinder infrastructure development in the state as the prospect of lower returns will limit program participation. In addition, applicants should still be allowed to participate in the existing program through 2025 as many infrastructure projects currently under development have been operating under the assumption that the existing program would be in place through December 31, 2025.

The rationale that limiting HRI crediting to 50% of capacity will encourage wider scale growth is flawed. The current LD HRI program does not have a capacity constraint, yet it has still fallen short of hitting the 2.5% obligation maximum each quarter due to the economic, technological, and permitting challenges of building hydrogen infrastructure. Shell's recent announcement that they will close several stations is illustrative of the challenges faced in this space². For heavy duty (HD) fueling stations, these challenges are only amplified due to the high capital requirements, lack of available fueling technology, and large land use requirements. Combining LD and medium duty (MD) stations into one program doesn't address these challenges.

Chevron requests that CARB work with industry to develop a realistic solution to differentiate reporting between vehicle classes for HRI crediting purposes. Since these are public access locations, there are little to no means for tracking hydrogen vehicle size to identify if the vehicular weight is less than 8,500 lbs, or within 8,501 lbs to 14,000 lbs GVWR. Also, unlike CNG, separate nozzles are not used for light duty vs. MHD vehicles today. The newly developed NREL heavy duty fueling protocol may allow for separate nozzles for fueling, however it will take many years for the industry to transition.

For the HD program, requiring that stations receive capital funding from a State or Federal competitive grant program discourages private investment in the state, increasing taxpayer burden. In addition, requiring cost and revenue data for HD HRI crediting will similarly limit participation due to the onerous requirements for reporting and record keeping relative to the incentive provided by the program. These are both arbitrary requirements and do nothing to further CARB's goals as outlined in AB8 Reporting.⁴

The requirement to increase renewable hydrogen content from 40% to 80% is arbitrary, increases costs for end consumers, and creates a market distortion. The increased costs will

⁴ [California's Hydrogen Economy Dealt A Hammer Blow By Shell's Exit \(forbes.com\)](https://www.forbes.com)

⁵ [Logistical woes and high pump prices stall California H2 market development | S&P Global Commodity Insights \(spglobal.com\)](https://www.spglobal.com)

⁶ [2023 Annual Evaluation of Fuel Cell Electric Vehicle Deployment \(ca.gov\)](https://www.ca.gov)

hurt FCEV adoption in the state and artificially penalizes hydrogen technology when BEV electricity generation is not held to the same renewable volume percent standards. CARB should focus on a technology-neutral approach focused on carbon intensity to keep costs down for consumers and drive adoption. Baseline CI requirements are already sufficient to drive the right outcomes. With the added cost for renewable content and a lack of willingness to pay from consumers, hydrogen retailers will forgo participation in the program due to these economic pressures.

Biomethane Pathway Life and Deliverability Restrictions

Chevron disagrees with the sunset of avoided methane crediting for biogas pathways under the LCFS. This is a demonstrated, significant reduction in greenhouse gas emissions that would otherwise be released to the atmosphere. Additionally, limiting incentives for biogas and renewable natural gas producers to reduce methane emissions is inconsistent with the Subnational Methane Action Coalition's statement of purpose, the 2021 Global Methane Pledge, and threatens the additional 2.4 MMTCO₂e reductions needed per SB 1383 and California's Greenhouse Gas and Short-Lived Climate Pollutant Policy framework.⁷

Chevron does not support deliverability requirements. The current approach to book-and-claim accounting is practical, aligns with other U.S. policies, and provides the most effective means of reducing GHG emissions, which are global in nature. This language is not an improvement in reporting that would somehow provide greater accuracy, or certainty that imported RNG molecules can be traced to California Natural Gas Vehicle (NGV) fuel tanks.

The development of a system map utilizing 2020-2023 data to impose deliverability requirements in 2037 is arbitrary relative to the 2041 date previously established. It is simply an arbitrary requirement—with no additional environmental benefit or grounding in the physical gas system. This has the potential to deter growth and cause backsliding.

Restricting established pathway renewals from 30 years to 20 years is an arbitrary change that devalues biomethane and biomethane production assets. Projects that came online before 2030 assumed full crediting in the project evaluation. If new programs do not arise to direct biogas and renewable natural gas to stationary sectors, we urge CARB to revisit this proposal in a future rulemaking to avoid backsliding.

Fuel Pathway Applications

Biomass-based diesel pathways: In § 95488(d), CARB proposes to allow the denial of new biomass-based diesel pathways beginning in 2031 if Class 3-8 ZEV registration exceeds 132,000. This is an inappropriate change as it is contrary to the technology-neutral design of the LCFS. Fuel types and vehicle technologies should be allowed to compete freely in the California market without artificial and arbitrary barriers like this. It is also possible that emerging low-CI feedstocks will become commercially viable after 2031 and arbitrarily cutting off new pathways will deny the opportunity to further reduce the carbon intensity of the diesel fuel consumed in the state. There is also no language around future BBD pathway registrations under subsequent versions of CA-GREET which raises concerns about what will happen to BBD participation in the future.

Furthermore, this change was not part of the original proposal under this rulemaking and is an inappropriate inclusion in a 15-day package.

Credit True Ups: We appreciate the clarification that credit true ups after annual verification

⁷ [Dairy Sector Workshop Presentation \(ca.gov\)](#)

will include the period during which a temporary pathway was in place. This is critical to addressing the extended time period that can take place while operating data is collected and CARB staff reviews submitted pathway applications prior to establishing a provisional pathway.

Regarding the added language requiring complete operational data to be eligible for a true up, it is critical that CARB clarify that this includes quarters during which an approved alternative method is used to represent any missing or invalid data. This can occur over very short periods and for perfectly valid operational reasons (e.g. the replacement of a meter for calibration). It would be wrong to deny a true up for a full quarter in such circumstances.

We also request that CARB clarify in the regulatory language that these true ups would apply for the full period during which a temporary or provisional pathway was used, even if the associated compliance periods have passed. That appears to be the intent, but it should be stated in the regulatory language to avoid confusion.

Intrastate Jet Fuel

Chevron supports CARB decision to withdraw the proposal to add deficits to the LCFS for fossil jet fuel for intrastate flights. As we noted in our past comments, this would not have added any incentive for alternative jet fuel adoption.⁸ Instead, it would have added cost to air travel and shipping in California, introduced unnecessary complexities in the jet fuel supply chain, and impacted the cost of interstate and international transportation as well.

Exceedance of Verified CI Penalty

Chevron remains concerned that no changes were made to the verified CI exceedance language between the ISOR Proposed Rule and the 15-day proposal. As defined in §95486.1(g)(1), pathway holders would incur a deficit of **four times** the amount of the annual excess CI generated – and have excess credits invalidated – which effectively creates a penalty of **five times** the amount of the annual excess CI generated. We believe this penalty is excessively punitive to the severity of the violation and will likely have an outsized impact on pathway holders, particularly since any true up benefit in a CI goes to the importer of the fuel. It also seems to conflict with the eight statutory factors that CARB must consider when assessing civil penalties.⁹ We recommend that, if the verified CI is higher than the certified CI, the project should simply repay CARB for any excess credits claimed, and not be subject to any further enforcement liability (unless there is malfeasance or other such cause).

Late Filings and Reporting Corrections

CARB's policy of denying credits for report corrections or late reports is an egregious penalty for the correction of errors or delays in reporting, which can both occur for a number of reasons, many of which can be outside the reporting party's control. The proposal to only withhold valid credits at a rate of 25% per day for late reports is an inadequate correction to this policy. CARB should remove the restriction on crediting for late or amended reports and rely on existing enforcement powers to address any egregious or intentional misrepresentations that may occur.

Fixed Guideway Crediting

Chevron opposes the proposal to increase crediting for pre-2011 fixed guideway transit systems. Much of the equipment that generates credits has been in existence for decades. As

⁸ <https://www.arb.ca.gov/lists/com-attach/6150-lcfs2024-B2RQPgZiBCElf1U6.pdf>

⁹ California Health and Safety Code § 43024

such, only the incremental increase in electricity usage relative to the 2010 baseline should be allowed for credit generation. The regulation partly acknowledges this inconsistency by not allowing the use of an Energy Economy Ratio (EER) when calculating the amount of fuel energy displaced. Removing that limitation now is arbitrary and has no rationale in policy or science.

Furthermore, this change was not part of the original proposal under this rulemaking and is an inappropriate inclusion in a 15-day package.

Low-CI Electricity Balancing Period

Chevron requests that CARB modify the balancing period for low-CI electricity projects that supply renewable electricity to renewable fuel production facilities as described in § 95488.8.(h)(1) from a monthly balancing period to a quarterly balancing period. This would provide more flexibility to account for seasonal variations in renewable electricity production to reflect CI reductions taking place. This is a more modest window than the three quarters provided to low-CI electricity supplied as transportation fuel seen in § 95488.8.(i)(1) and would provide a greater incentive for additional low-CI electricity projects.

Lifecycle Analysis Modeling

We appreciate the opportunity to provide feedback on the updated LCA models and calculators. We are submitting comments separately through the LCA public comment portal.

Rulemaking Timing

Finally, it must be noted that CARB has released this notice and set the comment period during a time when regulated parties are focused on completing verification audits for the LCFS and the Clean Fuel Program in Oregon, all of which are due August 31st. These are complex, resource-intensive audits and the personnel with the expertise to comment on this package are very much engaged with that work. Compliance must take precedence. We hope that CARB will recognize this and consider any supplemental comments they may receive following the August 27th deadline.

Thank you for the opportunity to comment on these matters. If you have any questions regarding our comments, please contact me at (925) 842-8903 or DGilstrap@chevron.com.

Sincerely,

A handwritten signature in dark ink, appearing to read 'DGilstrap', with a stylized, cursive script.