WSPA

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California Air Resources Board
1001 I Street
Sacramento, CA 95814

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Re: WSPA Comments on Proposed 2024 Low Carbon Fuel Standard Amendments

Dear Ms. Sahota,

The Western States Petroleum Association (WSPA) appreciates the opportunity to comment on the California Air Resources Board's (CARB) proposed amendments and related 45-day rulemaking documents for the Low Carbon Fuel Standard (LCFS) program. WSPA is a non-profit trade association that represents companies that import and export, produce, refine, transport and market petroleum, petroleum products, natural gas and other energy supplies in California and four other western states, and has been an active participant in air quality planning issues for over 30 years.

WSPA has engaged with CARB throughout the LCFS rulemaking process, and previously submitted comments in response to CARB's 2022 and 2023 LCFS workshops. Those comments are incorporated into this letter by reference and are also attached.[1,2,3,4,5,6]

GENERAL COMMENTS

Fiscal Impact of Proposed Amendments

CARB's proposed amendments are projected to significantly increase the cost of California gasoline, despite ongoing and serious supply constraints related to transportation fuels in California. CARB's Standardized Regulatory Impact Analysis (SRIA) estimates that the proposed amendments to the LCFS program will potentially increase the price of gasoline by an average of $0.37 per gallon between 2024 and 2030, and further increase the price of gasoline by $1.15 per gallon between 2031 and 2046.[7] While CARB's Initial Statement of Reasons (ISOR) describes its cost estimates as "conservative,"[8] CARB's analysis underestimates revenue impacts to the State's gas tax revenues. CARB estimates that tax revenues will decrease by $29.2 million[9] due to "increase[s] in volume of renewable gasoline, ethanol, and renewable diesel fuel sold in the State,"[10] but this estimate does not capture the significant revenue impacts associated with a 90% reduction in gasoline demand,

[1] Western States Petroleum Association. "WSPA Comments on CARB Workshop to Discuss Potential Changes to the LCFS," August 8, 2022.
[2] Western States Petroleum Association. "WSPA Comments on the August 18th CARB Workshop to Discuss Potential Changes to the LCFS," September 19, 2022.
[3] Western States Petroleum Association. "WSPA Comments on the November 9th CARB Workshop regarding Potential Changes to LCFS," December 21, 2022.
[4] Western States Petroleum Association, "WSPA Comments on CARB Preliminary Discussion Draft of Potential Low Carbon Fuel Standard Regulation Amendments and February 22, 2023 LCFS Workshop," March 15, 2023.
[5] Western States Petroleum Association, "WSPA Comments on CARB's Proposed Low Carbon Fuel Standard Auto-Acceleration Mechanism and May 23, 2023 Workshop," June 6, 2023.
[6] Western States Petroleum Association, "WSPA Comments on the Low Carbon Fuel Standard Modeling Updates Workshop," September 12, 2023.
[7] *See* SRIA at 58, https://dof.ca.gov/wp-content/uploads/sites/352/2023/09/LCFS-SRIA-to-DOF-ADA-Compliant.pdf.
[8] CARB LCFS ISOR at page 83 https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2024/lcfs2024/isor.pdf
[9] https://oal.ca.gov/wp-content/uploads/sites/166/2024/01/2024-Notice-Register-No.-1-Z-January-5-2024.pdf
[10] CARB, Low Carbon Fuel Standard 2023 Amendments, Standardized Regulatory Impact Assessment, September 8, 2023, at https://dof.ca.gov/wp-content/uploads/sites/352/2023/09/LCFS-SRIA-to-DOF-ADA-Compliant.pdf

which is the forecasted impact of the proposed amendments. The gas tax provides substantial funding for California's infrastructure projects, which will be needed to meet California's electrification goals and address associated increases in electricity demand. CARB has also adopted several rules designed to reduce gasoline demand (e.g., Advanced Clean Cars II, Advanced Clean Trucks, Advanced Clean Fleets), but has neither assessed the full impacts of this change nor has it addressed how to replace this funding, which leaves the State in a vulnerable position.

These significant cost increases conflict with ongoing efforts by the California legislature to ease cost burdens associated with California fuels. Senate Bill (SB) X1-2 (2023) directs State agencies to evaluate measures to ensure that petroleum and alternative transportation fuels are adequate, affordable, reliable, and equitable. The California Energy Commission (CEC) estimates that the LCFS Regulation already adds 11 cents per gallon to the cost of California gasoline.[11] The impacts of these price increases are significant for California consumers – California continues to face serious supply constraints for transportation fuels, leading energy affordability to be a pressing priority for many Californians. The legislature recognized the importance of these impacts in enacting SB X1-2. CARB must therefore ensure that its revised LCFS program does not further compromise the supply reliability of critical transportation fuels, a consequence of which could increase energy costs and further burden California drivers, conflicting with clear legislative priorities in SB X1-2.

CARB's proposed LCFS Amendments may exacerbate these cost issues by constraining the credit generation for fuels, such as crop-based biofuels and hydrogen, while simultaneously and significantly increasing and potentially accelerating program stringency. Credit prices are also approaching a maximum – CARB estimates that credit prices will reach the program ceiling in 2025 and 2026. As CARB emphasized in 2020, prices beyond this point would create "potential adverse impacts to California consumers."[12] CARB's proposed program amendments would add new limits to credit generating opportunities just as LCFS credit prices approach the price ceiling, exacerbating cost impacts. These combined measures undermine the program's cost-effectiveness, in violation of Health and Safety Code (HSC) § 38560, which requires CARB to ensure that its program amendments are cost-effective. Similarly, HSC § 43018 requires CARB to adopt only necessary, cost-effective, and technologically feasible regulations. California Government Code § 11346.2(b)(4) also requires CARB to consider "reasonable alternatives to the regulation that would lessen any adverse impact on small business," and reasonable alternatives that are "less burdensome." As part of these alternatives, CARB must consider "overall societal benefits, including reductions in other air pollutants, *diversification of energy sources*, and other benefits to the economy, environment, and public health."[13] To comply with these provisions, WSPA urges CARB to revise its proposed program amendments to create a more cost-effective, less burdensome regulatory program that protects a diverse energy portfolio.

As part of preserving a diverse energy portfolio, CARB must ensure that the proposed amendments do not burden ethanol development. As drafted, proposed § 95488.9(g)(1)(A) states: *"All feedstocks at the point-of-origin must be certified by January 1, 2028. Fuel quantities reported under fuel pathways utilizing feedstocks not certified by January 1, 2028, must be assigned the ULSD carbon intensity [(CI)] found in Table 7-1 of the LCFS regulation."* This requirement is overly broad and may require ethanol feedstocks to meet certification and tracking requirements, which would significantly increase the cost and burden of ethanol and disincentivize ethanol development. This would conflict with HSC § 38560's mandate that CARB adopt measures "to achieve the maximum technologically

[11] Based on CEC SB X1-2 data at https://www.energy.ca.gov/data-reports/energy-almanac/californias-petroleum-market/california-oil-refinery-cost-disclosure
[12] 2020 CARB ISOR pII-2. https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2019/lcfs2019/isor.pdf
[13] HSC § 38562.

feasible and cost-effective greenhouse gas emission reductions from sources." Ethanol is critical for achieving lower-CI for gasoline with limited to no substitutes for ethanol to achieve today's CI reductions. CARB should therefore clarify that these requirements ***do not*** apply to ethanol, and account for costs related to ethanol production and importation in assessing the program amendments.

Additionally, CARB should ensure that the program amendments preserve a *technology-neutral* approach in order to maximize cost-effectiveness. CARB's proposal to phase out avoided methane crediting and project-based crediting treats different low-CI technologies inconsistently, disincentivizing certain investments and foregoing important emissions benefits. For example, in Book-and-Claim accounting, low-CI process energy would need a direct connection, while low-CI electricity and hydrogen used in transportation would not require this additional step. Removing existing crediting mechanisms risks stranding assets while discouraging investments in other zero-emission and low-emission technologies, which will lead to increased program costs and will decrease emissions benefits associated with methane reductions. This approach also runs counter to existing programs incentivizing the development of projects to address Short-Lived Climate Pollutants. We encourage CARB to instead study the potential impacts of imposing deliverability requirements before adding untested regulatory restrictions.

The LCFS program centers around a market-based approach to emissions reductions from all transportation fuels. Preserving flexibility in how credits are spent enhances the trading program and protects investments made by private companies to help make the program both successful and replicable. By contrast, imposing spending requirements, like those on electric vehicles, impedes private sector investment in alternative fuel technologies and infrastructure, such as hydrogen refueling and alternative uses for biomethane, which are essential for achieving California's greenhouse gas (GHG) reduction goals.[14,15]

Unsubstantiated Need for Crop-based Feedstock "Guardrails"

WSPA supports CARB's decision not to include arbitrary caps on crop-based feedstocks or fuels. As WSPA noted in prior comment letters, these caps would limit proven GHG reductions strategies that are delivering significant GHG reductions today. Any concept of a cap on a specific fuel type conflicts with Health and Safety Code § 38560's mandate that CARB adopt measures "to achieve the maximum technologically feasible and cost-effective greenhouse gas emission reductions from sources."[16] For the same reasons, any such cap would also likely run afoul of Health and Safety Code § 38562's requirement to consider "diversification of energy sources, and other benefits to the economy, environment, and public." Staff has also confirmed that CARB "received limited data, analysis and supporting documents" and that there was no majority of stakeholders presenting a compelling argument in favor of such a significant programmatic change.

While CARB has declined to include a "cap" on crop-based feedstocks, CARB is now proposing to impose "sustainability guard rails" that may limit the supply of crop-based feedstocks used in the production of biofuels. As part of these guardrails, the feedstock supply chain would be required to comply with a resource-intensive, duplicative third-party process to ensure that crop-based and forestry-based feedstocks are not sourced on land that was forested after January 1, 2008. This process would increase costs associated with biofuel production. CARB explains that these guardrails are intended to "reduce the risk that rapid expansion of biofuel production and biofuel feedstock demand could result in deforestation or adverse land use change."[17] However, CARB has

[14] California Transportation Commission's Clean Freight Corridor Efficiency Assessment (SB 671), November 22, 2023, at https://catc.ca.gov/-/media/ctc-media/documents/ctc-meetings/2023/2023-12/14-4-4.pdf
[15] Joint Agency Staff Report on Assembly Bill 8: 2023 Annual Assessment of the Hydrogen Refueling Network in California, December 22, 2023 at https://www.energy.ca.gov/publications/2023/joint-agency-staff-report-assembly-bill-8-2023-annual-assessment-hydrogen
[16] *See also* HSC § 43018.
[17] ISOR at 32.

not provided data demonstrating that there is a sustainability issue that needs to be addressed. The details of this concept were introduced late in the rulemaking process based on general concerns raised by commenters, and CARB has not received sufficient public input from key stakeholders – including California's transportation fuel producers who rely on crop-based feedstocks to support the delivery of alternative transportation fuels for Californians.

Existing LCFS program measures and related federal programs provide sufficient guardrails to address potential land use changes associated with crop-based feedstocks. The LCFS program "uses land use change emissions estimates…[to] make fuel pathways from crop-based feedstocks more carbon intensive," thereby discouraging the use of crop-based fuels and incentivizing "waste-and-residue-based" feedstocks.[18] In addition, the federal Renewable Fuel Standard (RFS) program[19] imposes mapping and tracking requirements for foreign sourced crops, as well as specific forest-based feedstock requirements. This program mandates that crop-based feedstocks be sourced from existing agricultural land cleared or cultivated prior to December 19, 2007. For feedstocks grown outside of the United States or Canada, entities must map and track the point of origin to ensure that this restriction is met.[20] For feedstock grown in the United States or Canada, EPA verifies compliance when it issues a Renewable Volume Obligation.[21] Regulated entities are also prevented from obtaining federal Renewable Identification Number (RIN) compliance credits for converting land not already in use as of 2007.[22] Further, all feedstock used to produce compliance renewable fuels must meet the definition of "renewable biomass." Given these existing requirements, CARB's proposed tracking and certification requirements would be duplicative.

The additional measures proposed by CARB will create an unnecessary burden for transportation fuel producers and may impact the availability of alternative transportation fuels. Requiring farmers to obtain third-party certification may increase feedstock prices, impacting biofuel production costs and increasing overall fuel prices in California. Requiring farmers to provide documentation that dates to January 1, 2008, would likely also impose an undue burden. This information will be 20 years old by the time these program revisions go into effect. By comparison, Canada's Clean Fuel Regulation only requires documentation to July 1, 2020.

Moreover, as written, if a feedstock supplier for ethanol production cannot obtain the required certification and that ethanol is transported into California, the default CI score of that ethanol is that of ultra-low sulfur diesel (ULSD). This would penalize the ethanol supplier by increasing the CI 6.61 points from the gasoline value, which would otherwise be the appropriate CI score for fuel ethanol acting as a gasoline substitute. Suppliers would therefore be disincentivized from transporting ethanol into California, and ethanol supply may decrease. Inclusion of ethanol into this provision may significantly limit ethanol supply and, thus, gasoline supply (as diesel does not have this requirement), because there are limited oxygenates on the market that meet CARB's requirements. Therefore, lowering ethanol supply by imposing burdensome new requirements may also constrain the supply of gasoline substitutes and may significantly limit gasoline supply.

If CARB retains these "guardrail" provisions, WSPA recommends the following revisions:

- **Definitions and Scope.** The proposed regulation fails to include important definitions – as identified later in the technical section of this letter – that will be necessary for implementation. CARB should clearly define the feedstocks covered by the feedstock sustainability criteria to ensure that certification requirements are narrowly tailored to address soybean oil and canola-based biodiesel and renewable diesel. The proposed amendments do not define crop- and

[18] CARB, Low Carbon Fuel Standard 2023 Amendments, Initial Statement of Reasons, December 19, 2023, at 32.
[19] See RFS Section 80.1454(c) and (g).
[20] See 80.1454(c).
[21] See 80.1454(g).
[22] Energy Independence and Security Act, Public Law 110-140 enacted December 19, 2007.

forest-based feedstocks. Without a definition, CARB's proposed tracking and certification requirements may apply to ethanol, which would likely impose significant burdens on alternative fuels that are critically important for achieving California's stringent gasoline formulation requirements.

- **Certification Process.** CARB should clarify procedures for entities to submit certifications under the proposed requirements. Section 95488.9(g) focuses on requirements for entities seeking to become approved certification systems, but gives little direction to entities complying with the sustainability standards. WSPA requests clarification on the following issues:
  - How and when will certifications be submitted?
  - Which party is responsible for submitting the certification – the feedstock supplier, the fuel pathway holder, or the fuel reporting entity?
  - Can this obligation transfer? The proposed regulation states that fuel quantities reported under fuel pathways utilizing feedstocks not certified by the deadline will be assigned the ULSD CI. However, this does not account for co-processed feedstocks, some of which may have certification and others that do not.

- **Certification System Approval.** CARB should define clearer criteria for certification scheme approval. Proposed § 95488.9(g)(1)(B)(2) states that the certification system "must consider environmental, social, and economic criteria." However, these criteria are overly vague and leaves too much discretion to the Executive Officer. Instead, CARB should ensure that the approval process includes a mechanism for incorporating input from the public and the regulated industry. This public review process would be more consistent with existing LCFS procedures for pathway applications.

WSPA believes that creating a new crop-based biofuel certification regime by 2028 will be daunting, unjustified, and will only further add to the administrative burden for CARB staff and regulated entities. The proposed LCFS Amendments should provide sufficient time to implement any substantive provisions that directly impact the production and certification of lower CI technologies – including sustainability certifications for crop-based biofuels – as obligated parties must be able to plan accordingly for technology investments and deployment. As such, CARB should defer adding these requirements until a future rulemaking when they can be more thoroughly vetted with stakeholders and address incorporating "climate smart" agricultural practices. If CARB decides to include these certification regimes, WSPA urges CARB to align requirements with programs in other jurisdictions, such as Canada's Clean Fuel Regulation, to ensure consistency and to preserve market stability.

Concerns Regarding Proposed Specified Source Feedstock Attestation Requirements

CARB's proposed attestation requirement is unnecessary. The specified source feedstock attestation requirements would unduly burden fuel producers with no significant benefit as existing regulatory provisions already require review and verification related to the chain of custody. Fuel pathway holders must submit to third party verification evidence of chain of custody for specified source feedstocks as well as provide a RFS separated food waste plan. Imposing additional attestation requirements on top of these existing provisions would significantly add to process workloads.

If these provisions are retained, WSPA requests that CARB clarify procedural obligations associated with attestations. *First*, CARB must clearly specify which default emission factors supply chain entities are required to attest against. It is not possible to attest that a step within the supply chain does not meet a pathway CI unless the default emission factors CARB requires pathway holders to utilize are clearly understood by each entity within the supply chain. For example, using the terms "additional processing" is a broad category that fuel producers may interpret differently than CARB. WSPA does not view water removal and basic filtration at the point of collection as additional

processing. But separating out solids, removing soluble impurities, drying the feedstock and filtration using bleaching clay, diatomaceous earth and/or other filter agents may be considered additional processing.

Second, without some limiting factor, every entity within a supply chain could be pulled into attestation requirements. For example, for a used cooking oil supply chain, current provisions could be read to require that each individual restaurant maintain attestations, all the way back to the first collection point. WSPA recommends that CARB specify that attestation requirements begin at the physical feedstock aggregator where feedstocks are collected before any processing occurs upstream of the fuel producer to limit burdens associated with this requirement. This approach would be consistent with the limited attestation language provided in § 95488.8(g)(1)(D)(3), which contains information that only later entities in the supply chain would be able to attest to (specifically, that "the specified source feedstock has not undergone additional processing, such as drying or clean-up except as explicitly included in the pathway life cycle analysis and pathway CI").

Third, CARB should clarify that attestations will not be required to be passed down the supply chain from entity to entity, and that fuel pathway holders will not be liable for failure of supply chain entities to meet the attestation letter requirement. Such a requirement is unnecessary given the existing feedstock supplier auditing requirements, which ensure that both third-party verifiers and CARB have sufficient information to verify compliance. To address these procedural issues, WSPA recommends that CARB provide guidance documents, including examples, for regulated entities, supported by clear regulatory language. CARB already has third-party requirements on specified source feedstocks; however, as indicated above, the verification (or attestation) requirement belongs with the feedstock producer, not with the renewable fuel producer that purchases the feedstock.

Reporting Requirements for Newly Obligated Intrastate Fossil Jet Fuel

The proposed LCFS Amendments would eliminate the existing exemption for intrastate fossil jet fuel and make fuel importers and producers the First Fuel Reporting Entity beginning in 2028. WSPA strongly urges CARB to retain the exemption, or make aircraft operators (which include passenger airlines, aircraft cargo companies, and small aircraft owners) the First Fuel Reporting Entity instead, consistent with CARB's earlier proposal in considering program updates.

Fuel importers and producers lack sufficient information to meet these additional reporting requirements. Under the newly proposed reporting requirements, these entities would be required to report information on how fossil jet fuel is *used*, based on whether aircraft operators use fossil jet fuel only for intrastate flights (defined as flights that take off and land in California). Under other existing regulatory provisions, fuel importers and producers generate deficits at the time of importation or production – but CARB would now be imposing the point of deficit generation at end-use, past even the point of sale. It seems unlikely that a fuel importer or producer could manage this obligation. Airport storage facilities are typically jointly owned by the airlines, and the fuel in these storage facilities is not segregated out by airline. After delivery of the fuel into an airport storage facility, fuel importers and producers have no visibility into how individual airlines use the jet fuel. Requiring fuel importers and producers to report on usage would be extremely challenging, if not impossible.

Aircraft operators are far better positioned to report on fuel usage, and can better ensure that the reported information is accurate. Operators possess relevant information to support reporting, including:

- How each individual operators use the fuel supplied to the airport storage facility;
- Which plane the fuel is uploaded into; and

- The flight path of each plane (including those scheduled to take off and land within the State of California).

Some of this information may be considered confidential business information, which WSPA believes should not be shared with fuel producers and importers. The proposed amendments do not specify what information airlines must provide to fuel producers and importers or how information-sharing would work. Without access to this information, fuel suppliers cannot verify end use and cannot meet the proposed reporting obligations.

This information/reporting mismatch creates substantial challenges that extend well beyond logistical concerns:

- ***Overreporting*.** To account for lack of information on flight paths, fuel importers and producers may need to assume that any fuel delivered to an airport storage facility will be used in-State unless an aircraft operator explicitly states otherwise. Reporting would therefore unwittingly include interstate and international jet fuel, which the program is not intended to regulate. Further, it is unclear if the existing compliance reporting reconciliation timeline fits within any existing data collection process an aircraft operator utilizes to ensure deficits are not accrued for non-obligated uses.
- ***Increased Prices***. Without information on the intended use of the fuel at the time a transaction takes place, *all* fossil jet fuel may carry an obligation which may increase the price of jet fuels within the State.

The ripple effect of adding the intrastate jet fuel obligation may include aircraft operators re-optimizing flights to flight paths to include additional fueling outside of California, reducing intrastate jet fuel consumption; this would contribute to emissions leakage. Under Assembly Bill (AB) 32 (2006), CARB has an obligation to minimize leakage resulting from its regulatory activities.

As described above, fuel importers and producers have no ability to differentiate between intrastate, interstate, and international fuel usage in meeting proposed reporting obligations.[23] CARB also has not proposed a definition for intrastate jet fuel consumption, including an appropriate method for calculating the quantity of jet fuel consumed. Airlines have varying approaches to fueling operations, including visiting multiple stops between fueling (e.g., out-of-State, visiting multiple California airports without refueling). As written, CARB's proposal will sweep in a broad range of fueling operations outside intrastate jet fuel consumption and impose significant reporting burdens on entities that have minimal connections to California. CARB's proposal may therefore impermissibly burden *inter*state commerce in violation of the Dormant Commerce Clause doctrine. States cannot place burdens on interstate commerce that are "clearly excessive in relation to the putative local benefits."[24] By regulating aviation fuels, CARB's proposal impacts the instrumentalities of interstate transportation and impedes the flow of interstate commerce.

In sum, WSPA believes that the addition of intrastate fossil jet fuel deficits creates unique challenges and may not address the goal of encouraging alternative jet fuel use. If CARB proceeds with this addition, WSPA strongly encourages CARB to reconsider this proposed amendment and return to the proper reporting parties that *do* possess the knowledge required to accurately comply: the aircraft operators. CARB must also incorporate better definitions and clear compliance methodology, including the following:

[23] Interestingly, there is no consideration that some fossil jet fuel imported or produced in California may also be used in military applications. There is no evaluation of whether this is a legally permissible scope for LCFS or whether fuel producers and importers could reasonably expect to be provided with information about the end use of such fuel, given the classified nature of such information.
[24] *Pike v. Bruce Church, Inc.*, 397 U.S. 137, 142 (1970).

- The First Fuel Reporting Entity for intrastate fossil jet fuel use would be the aircraft operators (or Fixed Base Operator for general aviation use).
- A simplified reporting approach that does not rely on aircraft operators to track and report actual consumption. CARB should work with aircraft operators to determine a mileage-based multiplier or similar methodology.
- Clear verification parameters specific to intrastate jet fuel reporting.

LCFS Program Stringency

CARB is proposing several updates to increase the LCFS program stringency. *First*, the amendments would set more stringent CI reduction targets, increasing the 2025 CI target by 5%, increasing the 2030 CI reduction target from 20% to 30%, and adding a 2045 CI target of 90%. *Second*, the proposed amendments would add a triggering mechanism – the Automatic Acceleration Mechanism (AAM) – which would advance the CI standard in a given year to a future year if specified market conditions are met, in order to bridge periods of credit surplus and maintain a steadier program signal.

The proposed amendments increase program stringency while removing certain compliance tools and key flexibilities for fuel producers that mitigate program costs. Based on this confluence of factors, without certain protections in place, the AAM may compromise necessary market signals that incentivize the production of lower-CI fuels while preserving consumer choice and providing a level playing field for all technologies. To better understand potential market impacts, WSPA requests that CARB release information on how often the AAM could be triggered, using the modeling scenarios CARB developed with the CATS Model. In addition, we recommend that CARB incorporates a robust yearly review as a standard program feature to evaluate the impacts of these structural changes, including the annual status of the credit bank, and the effects on California energy prices. Energy pricing data is readily available, since LCFS-associated costs embedded into all wholesale gasoline sales are required to be reported on a monthly basis pursuant to SB 1322 and SB X1-2.[25] CARB should also incorporate a robust consultation process with relevant stakeholders (such as fuel providers and distributors) to better understand potential issues and consider possible unintended consequences during this annual review and before triggering the AAM.

In order to address any credits-to-deficit imbalance resulting from overly aggressive CI benchmarks or the AAM, CARB should also incorporate a reset mechanism. This mechanism would strengthen the credit trading market by providing greater regulatory certainty and strike an appropriate balance between achieving meaningful reductions offering sufficient business, technology, and financial support to industry, which would ensure these accelerated targets are durable and achievable. Such a mechanism should be available in several circumstances tied to market activity signals and statutory factors, including: a recession or an accelerated growth period in California, a significant unforeseen event (e.g., a global pandemic), and growing affordability and supply reliability issues. Incorporating a reset mechanism would better effectuate SB X1-2's directive for State agencies to evaluate measures to ensure that petroleum and alternative transportation fuels are adequate, affordable, reliable, and equitable, and would better fulfill CARB's duty under HSC § 38560 to ensure that its regulations are cost-effective. Consistent with SB X1-2, CARB must consider impacts to gasoline costs resulting from its regulations, including the LCFS program and other programs such as the Cap-and-Trade program. As the SRIA indicates that LCFS pass-through costs on gasoline will be well over $1.00 per gallon beginning in 2037,[26] CARB must mitigate additional costs in adopting LCFS program updates.

[25] Senate Bill 1322 (2022) and Senate Bill X1-2 (2023); data posted at: https://www.energy.ca.gov/data-reports/energy-almanac/californias-petroleum-market/california-oil-refinery-cost-disclosure
[26] CARB LCFS 2023 Amendments SRIA, September 8, 2023, Table 22 at https://dof.ca.gov/wp-content/uploads/sites/352/2023/09/LCFS-SRIA-to-DOF-ADA-Compliant.pdf

Program Streamlining Recommendations

WSPA appreciates CARB's ongoing efforts to streamline program implementation by updating existing Tier 1 calculators and creating a new Tier 1 calculator for hydrogen. WSPA encourages CARB to build on these efforts and address additional inefficiencies associated with the current pathway application review and approval process (for registration and renewals). The current system includes duplicative steps that increase workloads for both CARB staff and pathway applicants. To address these redundancies, CARB should work directly with regulated entities, who have significant experience navigating the application process and can readily identify improvement opportunities.

There are currently informal policies and processes in place that would benefit from formal direction via regulation. For example, for both Tier 1 and Tier 2 fuel pathway applications, CARB should streamline the fuel pathway application process when an applicant submits a fuel pathway that adds a new feedstock for an existing renewable fuel facility. In such case, CARB should allow the submission under the same fuel pathway application number as the original fuel pathway application, possibly with the original application number with a revision number (e.g., B0123-02). The review process by both CARB and the third-party should also be expedited and focus on the new feedstock. No site visit by the third-party verifier should be required. The Annual Fuel Pathway Report (AFPR) process would also be simplified by submitting a single AFPR for a renewable fuel facility that processes multiple feedstocks, rather than submitting a duplicated AFPR as is currently required.

WSPA urges CARB to adopt the following administrative improvements to streamline the program:

- ***Pathway Holder Deficit Obligation.*** CARB should lessen deficit obligations for pathway holders that exceed their CI in a 24-month period. Under the proposed amendments, pathway holders would incur a deficit 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. This penalty is disproportionate 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 is provided to the *importer*, not the pathway holder. Both the benefit *and the obligation* should be with the same party. CARB should lessen the severity of this obligation and either (1) impose the deficit on the importer, or (2) provide true up benefits to the pathway holder as well. Imposing deficit obligations on pathway holders who do not produce fuel in the State, import fuel into the State, or sell fuel into the State, may also unduly burden interstate commerce in violation of the Commerce Clause, by requiring out-of-State pathway holders to suddenly participate in the credit/deficit market, which creates significant new obligations compared to being a pathway holder participant. WSPA also requests clarity on when fuel pathway holders would need to register in the LCFS Reporting Tool and Credit Bank & Transfer System (LRT/CBTS) and when they would become subject to the reporting requirements in § 95491.

- ***Expiring Fuel Pathways.*** Consistent with WSPA's prior comment letters, WSPA urges CARB to keep pathway codes active for two quarters after their expiration date. Under the current LCFS Regulation, regulated entities can sell volumes up to two quarters after purchasing them. CARB should keep these pathway codes active for two quarters after their expiration date, to allow for follow-on downstream activity to be reported. Any new production would not be allowed to be reported during those two quarters. This would eliminate a substantial amount of ongoing rework when downstream parties report a legitimate resale of a pathway purchased, only to find later that CARB has deactivated it.

- ***Accelerate Approvals Where Feasible.*** CARB should accelerate temporary pathway approvals or provisional pathway approvals by creating a 30-day deadline to review a temporary fuel pathway request application and provide initial feedback. CARB is proposing to change the "deemed complete date" for Tier 2 applications; however, this date does little to streamline the

pathway application process or resolve the issues with fuel pathway processing, given that application reviews and validations are taking several months to complete. This means that credit generation is delayed while these reviews are ongoing. Ultimately, availability of the certified pathway often occurs multiple quarters, if not years, after the deemed complete date. Rather than merely deeming an application complete, the application should be automatically deemed complete *and approved* if CARB staff has not reviewed the application within 30 calendar days. CARB should also consider automatically extending temporary pathways for pathway applicants who have a Tier 1 or Tier 2 pathway application pending. Finally, WSPA notes that it is critically important that CARB ensure there are adequate resources to support the development and implementation of an efficient fuel pathway review process.

- ***Credit True Ups.*** CARB should revise the proposed regulatory language to specify that CARB "shall" perform a credit true up for a fuel pathway. As drafted, the current language states only that CARB "may" perform a credit true up for a fuel pathway, which creates uncertainty. WSPA also urges CARB to include credit true ups back to a facility's startup date and the approval of both temporary and provisional pathways from startup of renewable fuel production.[27]

- ***Verifications.*** WSPA encourages CARB to extend the proposed provisions allowing for "less intensive" verifications for entities that receive a positive verification result to other fuel suppliers and projects in order to reduce administrative burdens. In addition, WSPA urges CARB to limit site visit requirements for third-party verification. CARB should allow third-party verification site visits to be done remotely. Video conferencing and screen sharing are well-established technologies and should be sufficient for other types of verification, especially the verification of LCFS quarterly reports. CARB should also limit site visit requirements to an initial LCFS fuel pathway validation, and once every three years thereafter for LCFS fuel pathway verification. Lastly, CARB should work to incorporate a thorough evaluation process for new or converted facilities, followed by a more streamlined process for such sites for future reviews as part of one application process.

- ***Incremental Deficits.*** CARB should streamline crude CI determinations by eliminating the annual update requirement. Under the current program, CARB updates the Oil Production Greenhouse Gas Emission Estimator (OPGEE) Model and determines the average crude CI on an annual basis, which requires reporting entities to expend significant time and resources generating MCON reports and having the MCON reports verified by third parties. Compared to this significant effort, annual adjustments to the CARBOB and ULSD CI score have been very minor. Instead, reducing benchmarks has a comparatively outsized impact on deficit generation. WSPA recommends that CARB address any significant impacts on the crude CI to CARBOB and ULSD during the LCFS rulemaking process instead of requiring annual updates.

- ***MCON (Crude) Reporting.*** CARB should eliminate the requirement for refineries to report California crudes by field name in the MCON report. This reporting requirement is unnecessary, because CARB is using data from the California Department of Conservation instead. CARB should also eliminate verification requirements for California crudes.

- ***Information Technology (IT) Updates.*** WSPA recommends including an IT portal system that allows many separate entities to input their own CI data to generate a "create your own pathway score" tool. For example, if an entity wants to process feedstock through crushers and refiners (that are already in the system), the entity would be able to just allocate volumes across a refinery/crusher using the database.

[27] See Section 95488.10(a)(1).

- ***Enhanced Communication.*** CARB should provide regular status updates on temporary pathway applications that can be shared with counterparties. CARB should post a list of approved temporary pathways by company and by date of applicability.

- ***Reporting Deadlines.*** CARB should change the third quarter reporting deadline from December 31st to January 15th, to allow flexibility over the winter holidays.

- ***Crediting for Corrected Reporting Errors.*** CARB should allow credits to be generated for reporting errors that have been corrected. Corrections for commercial transactions and accounting adjustments are a routine part of business and regulated parties should not be penalized for improving the accuracy of reporting under the LCFS program.

- ***Abnormalities.*** WSPA recommends that CARB provide guidelines to account for transient operations and abnormal conditions given the 24-month data requirement.

- ***Implementation of GREET 4.0.*** To maintain consistency in the program and minimize disruption, current pathways should remain open during the transition from GREET 3.0 to GREET 4.0. Please see further comments below regarding specific GREET 4.0-related issues and concerns.

Limiting Hydrogen Unnecessarily Constrains Investment and Deployment Opportunities

Incentivizing growth and investment in the hydrogen sector is critical for California's efforts to reduce GHG emissions while also providing affordable, reliable, and cleaner energy for all Californians. According to CARB's 2022 Scoping Plan Update[28] the State will need to add approximately 1,700 times the amount of the current hydrogen supply by 2045. Scaling up hydrogen production for California's energy systems requires development of a broad range of technologies, including steam methane reforming (SMR), autothermal reforming (ATR), and electrolysis using renewable electricity, as well as biogas, biomethane, and thermochemical conversion of biomass and waste feedstocks.[29]

Yet CARB's proposed program updates would inhibit hydrogen development by imposing new constraints on hydrogen eligibility within the LCFS program. Specifically, CARB should not propose to limit end-uses of program-incentivized hydrogen based on a "color" system, limit Book-and-Claim accounting for hydrogen, and impose a new 50% capacity cap. CARB should reconsider these proposals.

- ***Hydrogen End-Uses.*** Limiting end-uses of program-incentivized hydrogen will inhibit the development of additional hydrogen production. Instead, the LCFS program should continue to preserve consumer choice and provide a level playing field for all technologies, embracing fuel- and technology-neutral principles that focus on the meaningful and timely reduction of GHG emissions. WSPA urges CARB to adopt a technology-neutral approach that uses a CI score as the main driver to reduce emissions, rather than a "color" system that constrains uses. The color system creates regulatory uncertainty by facilitating subjective, changing definitions and interpretations of permissible uses, which stifles long-term investment and innovation.

  CARB assumes that limiting end-uses of hydrogen will funnel new capital investments to certain preferred hydrogen technologies such as electrolysis using renewables, a technology that is, by most estimates,[30] at least triple the cost of hydrogen currently produced by SMR.

[28] 2022 Scoping Plan Update https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents

[29] *See* CEC, "Roadmap for the Deployment and Buildout of Renewable Hydrogen Production Plants in California," June 2020. https://www.energy.ca.gov/publications/2020/roadmap-deployment-and-buildout-renewable-hydrogen-production-plants-california

[30] Justin Bracci, Adam Brandt, Sally M. Benson, Gireesh Shrimali and Sarah D. Saltzer, "Pathways to Carbon Neutrality in California: The

However, rapid growth across a broad range of hydrogen technologies must be incentivized to successfully scale up hydrogen production. Large-scale innovation and new investment in various industrial sectors relies on a diverse portfolio of resources. Arbitrarily restricting end-uses will stifle investments and innovation, and conflict with federal funding incentives.

By constraining end uses, CARB is failing to achieve the "maximum technologically feasible and cost-effective greenhouse gas emission reductions" in accordance with Health and Safety Code § 38560. A technology-neutral approach would better align with CARB's rulemaking obligations under Government Code § 11346.2(b)(4)(A), which requires CARB to consider performance standards as an alternative to mandating the use of specific technologies or equipment, or prescribing specific actions or procedures.

- ***Book-and-Claim Accounting***. The proposed regulatory updates would unnecessarily limit Book-and-Claim Accounting for hydrogen, which would likely constrain growth in hydrogen production and deployment. This conflicts with emission reduction measures in the 2022 Scoping Plan Update, which requires significant expansion of hydrogen production. As noted in WSPA's prior comment letters, the goal of the LCFS program is to incentivize the production of low carbon intensity fuels and energy sources for transportation, rather than fuel/energy dispensing infrastructure. All hydrogen production pathways should be considered based on their CI reduction potential. CI benchmarks should be used as the singular determining factor to drive CI reductions and credit values.

- ***Capacity Cap.*** CARB is proposing a new 50% capacity cap to incentivize more market participation without inflating the overall credit supply. However, this approach may instead nullify investor incentives and constrain future hydrogen development. A capacity cap is unnecessary – the LCFS program already includes a 2.5% limit on credits, and this segment has not yet come close to reaching the limit.

- ***Tax Credits***. CARB is proposing to model LCFS program updates on pending federal updates to tax credits under Internal Revenue Code Sections 45V and 48(a)(15). Imposing well-to-wheel CI limits of ≤55 grams per megajoule (gCO2e/MJ) for gaseous hydrogen and ≤95 gCO2e/MJ for liquid hydrogen for pipeline transfers to "align" with the US Treasury/IRS proposed rule on Section 45V "Clean Hydrogen Production Tax Credit" of the Inflation Reduction Act, is unnecessary and confusing. The Treasury/Internal Revenue Service (IRS) proposal was published on December 26, 2023, and will likely be finalized well after CARB finalizes these LCFS amendments. These regulations may significantly change before they become final. However, if CARB seeks to align these programs, then it should, at minimum, retain the IRS's technology-neutral approach.

SPECIFIC COMMENTS

Section 95481. Definitions and Acronyms

The proposed regulation is missing critical definitions that will make implementation challenging for CARB and regulated entities. This includes a definition for crop- and forest-based feedstocks as well as palm derivatives. For example, CARB is proposing to prohibit transportation fuels produced from palm oil or palm derivatives, based on deforestation concerns identified by the European Commission.[31] However, without a clear definition of "palm derivatives," this action may exclude

Hydrogen Opportunity," Stanford Center for Carbon Storage and Stanford Carbon Removal Initiative.https://sccs.stanford.edu/california-projects/pathways-carbon-neutrality-california.

[31] European Commission, Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on the status of production expansion of relevant food and feed crops worldwide. Brussels. March 13, 2019. https://eur-lex.europa.eu/legalcontent/EN/TXT/?uri=CELEX:52019DC0142 European Commission, Annexes to the Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee

fuels that can contribute to the objectives of the LCFS program, such as fuels derived from palm oil mill effluent (POME) oil, waste oil extracted from spent bleaching earth from palm oil refining (SBEO) or empty palm fruit bunches oil. These fuels are different from palm oil and are not considered high-risk feedstock. The European Union's REDII Annex IX Part A[32] considers waste generated by palm oil mills, such as POME oil, SBEO[33] and empty palm fruit bunches oil, as "advanced" raw materials. The European Union has also distinguished between the *types* of palm derivatives, including POME oil, SBEO, empty palm fruit bunches oil, and palm fatty acid distillates (PFAD). PFAD are excluded from the residue definition in European jurisdictions (e.g., Germany, Sweden, Norway), while POME oil and empty palm fruit bunches oil are included in the REDII as waste streams within either energy intensity or GHG reductions. These alternative fuels can significantly reduce GHG emissions – the International Council on Clean Transportation (ICCT) has indicated that renewable diesel derived from POME oil has a net GHG emission reduction of 71%.[34] CARB should narrowly define any restrictions for "palm derivatives" to facilitate feedstocks such as POME oil, SBEO and empty palm fruit bunches that can contribute to the stringent carbon intensity reductions contemplated in the proposed rule. CARB should also ensure that the scope of the certification requirements are clearly defined – the proposed amendments do not define "point-of-origin," which creates significant uncertainty on the point of certification requirement.

Other considerations in proposed definitions and acronyms include:

- *"Alternative Jet Fuel" means a drop-in fuel made from ~~petroleum or~~ non-petroleum sources, which can be blended ~~and used with~~ into conventional ~~petroleum~~ jet fuel~~s~~ without the need to modify aircraft engines and existing fuel distribution infrastructure."*
  - This amendment, to eliminate petroleum sources, would eliminate coprocessing and other means to produce Sustainable Aviation Fuel. CARB should remove the proposed strikeouts and restore the original wording.
- *"Break ground" means earthmoving and site preparation necessary for construction of the digestor system and supporting infrastructure that starts following approval of all necessary entitlements/permits for the project."*
  - This definition should be expanded to other projects. It should not singularly apply to digestor systems.
- *"Byproduct" means a secondary product with marginal economic value outside its use in a biofuel pathway.*
  - WSPA seeks clarification from CARB that a "byproduct" cannot be designated as a co-product.
- *"Clean Fuel Reward" is a statewide program established by EDUs to provide a reduction in price ~~on new light duty EV~~ purchases or leases for new medium- or heavy-duty electric vehicles that are not subject to the High Priority and Federal Fleets requirements as specified in, title 13, California code of Regulations, section 2015(a)(1) in California. The Clean Fuel Reward is funded exclusively through LCFS proceeds generated by EDUs from electricity fuel.*
  - WSPA requests that CARB confirms that the intent of this definitional change is to no longer generate Clean Fuel Rewards for light duty vehicles.
- *"Conservative" means reducing the estimated GHG reduction benefits of an operation or utilizing methods and factors that over-estimate energy usage or carbon intensity (90th*

of the Regions on the status of production expansion of relevant food and feed crops worldwide. Annexes 1 to 2. Brussels. March 13, 2019. Searle, S., Defining Low and High Indirect Land-Use Change Biofuels in European Union Policy. The International Council on Clean Transportation. November 2018.

[32] Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources. Source: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2018.328.01.0082.01.ENG&toc=OJ:L:2018:328:TOC

[33] See Annex 9A under part (g), Commission Implementing Regulation (EU) 2022/996, June 14, 2022, on rules to verify sustainability and greenhouse gas emissions saving criteria and low indirect land-use change-risk criteria.

[34] "Potential greenhouse gas savings from a 2030 greenhouse gas reduction target with indirect emissions accounting for the European Union.

percentile or highest value) or under-estimate produced fuel volumes (10th percentile or lowest value).
  - WSPA requests that CARB clarify this definition because under-estimating produced fuel volumes of CARBOB or ULSD is *not* a "conservative" estimate.
- *"Organic Waste" is material that meets both the LCFS definitions of "biomass" and "waste."*
  - WPSA requests that CARB provides some examples of what qualifies for organic waste and what does not.
- *"Renewable Naphtha" means naphtha that is produced from hydrotreated lipids and biocrudes, or from gasified biomass that is converted to liquids using the Fischer-Tropsch process. This includes the renewable portion of a naphtha fuel derived from co-processing biomass with a petroleum feedstock.*
  - CARB should extend the definition of renewable naphtha to any type of renewable feedstocks.

Section 95482. Fuels Subject to Regulation

- In (a)(11) CARB should remove fossil jet fuel. Otherwise, CARB should specify "intrastate" fossil jet fuel.
- In (c)(2) CARB should clarify by stating: Fossil jet fuel. Otherwise, CARB should specify "Fossil jet fuel produced or imported before 2028 or used for interstate or international flights in any year."
- In (f), CARB should confirm that this section does not apply to fuels such as used cooking oil from palm oil, and therefore used cooking oil from palm oil is eligible for LCFS credits. Please refer to comments above on palm derivatives definitions.

Section 95483. Fuel Reporting Entities – Jet Fuel

- In (a), the reference to "fossil jet" should be removed from this section. In (a)(C), the reference to "fossil jet" should be removed from this section as well.

Section 95484. Annual Compliance Benchmark

- In (b), Auto-acceleration Mechanism, (2) CARB needs to clarify the definition of $Credits_{20xx}$ and $Deficits_{20xx}$: does $Credits_{20xx}$ represent the cumulative total number of credits generated since 2011 ("the program") or does it represent the number of credits generated in a single year? Does $Deficits_{20xx}$ represent the cumulative total number of deficits generated since 2011 ("the program") or does it represent the number of deficits generated in a single year? WSPA requests that CARB explain the basis for the equation under 95484(2)(A). WSPA recommends that CARB conducts a formal annual program review which would consider not only historical data, such as the credit bank and the deficits and credits generated, but also a forecast of the fuel demand and production in the various category of fuels. This information would be used to assess how the benchmark would be set (higher, flat, lower) for the next compliance period(s). This would be more practical that borrowing credits from the future as described in section 95485 (c)(3)(C) (Advanced Credits).
- WSPA requests that CARB justify why the USLD baseline values increase by more than 5 gCO2e/MJ starting in year 2025 at 105.76 gCO2e/MJ from 100.45 gCO2e/MJ in the current regulation.

Section 95485. Demonstrating Compliance

- In subsection (c)(3)(c) Advanced Credits, WSPA appreciates that CARB is proposing to increase the limit of Advanced Credits from 10 to 30 million. However, as described in our other comments regarding benchmarks, it would be more effective if CARB "froze" the benchmarks instead of advancing credits from the future as described in this section.

Section 95486.1. Generating and Calculating Credits and Deficits Using Fuel Pathways

- In Section 95486.1, under deficit obligation for verified CI exceedance, the nature of a facility's operations will result in variation of CI with time, which could result in unintended situations where the certified CI is exceeded. To account for these operational variations, similar to the provision for the incremental deficit calculation associated with crude, CARB should consider only accounting for true ups (deficits or credits) when the difference exceeds a certain threshold.
- In (a)(1), CARB should remove the reference to fossil jet fuel.
- In (g) and (g)(1), Calculation of Deficit Obligation for Verified CI Exceedance, CARB should not apply a penalty of four to five times (when including the penalty for the pathway holder as a first reporter) the deficits if the fuel pathway CI is higher. This is excessive. CARB should apply one times the deficit and reset the CI score to the verified value and allow for rebalancing and readjustments by affected parties.

Section 95488.5. Lookup Table 7-1

- CARB should justify the significantly higher CI score for ULSD compared to the current rulemaking (105.76 vs. 100.45 gCO2e/MJ).

Section 95488.6. Tier 1 Fuel Pathway Application Requirements and Certification Process

- In section (b)(2)(A), the deemed completed date should remain when CARB approved the submission, *before* the fuel pathway application is routed to the third-party verifier. Otherwise, the fuel pathway applicant will likely need to report for an extra quarter with the temporary CI score.

Section 95488.7. Tier 2 Fuel Pathway Application Requirements and Certification Process

- In section (d)(3): The deemed completed date should remain when CARB approved the submission, *before* the fuel pathway application is routed to the third-party verifier. Otherwise, the fuel pathway applicant will likely need to report for an extra quarter with the temporary CI score.

Section 95488.8. Fuel Pathway Application Requirements Applying to All Classifications

- In section (g)(1)(D), WSPA requests more detail on how the feedstock producers should be responsible for the attestation letter, if CARB maintains this new requirement, and what at what frequency the attestation letter needs to be renewed.
- In section (i), CARB should allow book-and-claim accounting for low-CI electricity, biomethane, and low-CI hydrogen for the production of renewable fuels as well, such as the production of renewable diesel.

Section 95488.9(b). Special Circumstances for Fuel Pathway Applications

For Temporary CI Scores (Table 8), CARB should explain and justify why it proposes to increase the CI scores of the temporary pathways by 5 gCO2e/MJ for biodiesel and renewable diesel.

Section 95489. Provisions for Petroleum-Based Fuels

- In section (a), incremental deficit calculation for crude oil, WSPA notes that the equations for the baseline crude averages appear to be incorrect. Appendix E of the ISOR states that the equations for the three-year California Crude Average CI and California Baseline Crude Average CI contained in this section are being revised "*to be consistent with the updated Oil Production Greenhouse Gas Emission Estimator (OPGEE) model version, the updated Carbon Intensity Lookup Table for Crude Oil Production and Transport, and the implementation timeline of the amended regulation*." However, it appears that the existing CI factors continued to be used in the $CI_{BaselineCrudeaAve}$ calculations. These CI factors should be updated to reflect the revised factors derived using OPGEE 3.0b (which are assumed to be the updated factors

listed in the updated Table 9).

- In section (a), fossil jet fuel and deficit calculation, CARB also proposes to add the following language to the E^{xd} parameter: "*For fossil jet fuel (XD = "fossil jet fuel"), E^{XD} is either produced in California or imported into California during a specific calendar year starting in 2028 and sold, supplied, or offered for sale in California*." As drafted, this language would capture both intrastate and *inter*state jet fuel, which is expressly beyond the scope of CARB's proposal. The added language should be revised to clearly state that the parameter should only include intrastate fossil jet fuel.
- In section (e)(1)(G), CARB should maintain the eligibility criteria for a project that generates at least 10,000 credits not to discourage GHG reduction projects.
- In section (e)(5)(B), CARB should not arbitrarily disallow refinery investment credits after 2040. The LCFS standards will be very stringent then and will need many crediting sources.
- In section (f)(5)(B), CARB should not arbitrarily disallow renewable hydrogen refinery credits after 2040. The LCFS standards will be very stringent then and will need many crediting sources.

Section 95491. Fuel Transactions and Compliance Reporting

- In section (b)(2) and table 12, CARB should change the third quarter reporting deadline as January 15, as the current deadline of December 31 is conflicting with holiday vacations.

GREET 4.0 Update Issues and Concerns

- **Modifications Incorporated in CA-GREET 4.0.**
  - A backhaul energy intensity was added to ocean tanker transport for Brazilian sugarcane. Though Appendix B indicates that this is based on data provided by fuel suppliers, this does not apply to all fuel suppliers. WSPA requests that pathways should determine whether a backhaul is included and verify it as part of the verification process. Additionally, barges and tugboats that move them within California waters since the passage of the 2022 Commercial Harbor Craft (CHC) Regulation are utilizing renewable diesel. The CO2 potion of the emissions from the CHC should not be counted as part of the emission factor for the use of barges in GREET. Like backhaul, pathway holders should be able to petition CARB to reduce emissions from the use of barges within California water as part of the verification process.

  - **Density and Carbon Content Inputs.** From CA-GREET3.0 to CA-GREET4.0, the density and percent carbon content in fuels changed with updates from GREET2016 to GREET2022. The fuel low heating value (LHV) has also been updated separately in CA-GREET4.0 to match the LRT-CBTS reporting system. These data points are then used to determine the tailpipe CO2 emissions of various fuels. For California diesel, the changes result in a ~2 g/MJ increase of the baselines default values. We are uncertain of whether the combination of LHV and density/percent carbon content reported in CA-GREET4.0 are accurate as they are obtained from different sources. The LHV is dependent on the density and percent carbon content of the fuel and therefore, CARB should be using a consistent basis when updating the values.

  - **Tailpipe Emission Factors.** It appears that CARB updated GREET2022 transportation and tailpipe emission factors with data from the EMFAC2021 (v1.0.2) model, which reflects significant changes in ULSD tailpipe nitrous oxide (N2O) emissions, from 0.724 g/MJ in CA-CA-GREET3.0 to 3.49 g/MJ in CA-GREET4.0. However, it seems tailpipe N2O emissions for lower emission fuel pathways, such as biodiesel and renewable diesel, are based on a different data source and consistent with the CA-GREET3.0 data. We request that CARB explain this choice as CARB should treat all fuels under a consistent framework for model input and output accuracy.

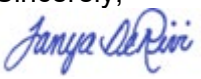
  - **Natural Gas.** CARB should update the methane fugitive factors by using GREET 2022, not the obsolete factors from GREET 2014.
  - **Tallow energy use.** CARB should update the tallow energy use with the data from GREET 2022, not the obsolete value from GREET 2016.

- **Expirations.** WSPA is concerned with any potential of pathways that were developed under CA-GREET 3.0 expiring as CARB transitions to CA-GREET 4.0. To maintain consistency in the program and minimize disruptions, current pathways should remain open during the transition from GREET 3.0 to GREET 4.0.

- **Data Assumptions.** WSPA requests that CARB provide data sources used to update electricity transmission and distribution losses in the model.

WSPA appreciates the opportunity to provide comments. If you have any questions regarding this submittal, please contact me via email at tderivi@wspa.org.

Sincerely,



Tanya DeRivi
Senior Director, California Climate and Fuels

Jim Verburg
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August 8, 2022

Sent via e-mail and upload to: https://www.arb.ca.gov/lispub/comm/iframe_bcsubform.php?listname=lcfs-wkshp-jul22-ws&comm_period=1&_ga=2.85577753.167319428.1658172472-237475923.1631295388

Dr. Cheryl Laskowski
Branch Chief – Low Carbon Fuel Standard
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Re: WSPA Comments on CARB Workshop to Discuss Potential Changes to the LCFS

Dear Dr. Laskowski,

Western States Petroleum Association (WSPA) appreciates the opportunity to comment on the staff presentation at California Air Resources Board (CARB) Workshop to discuss potential changes to the Low Carbon Fuel Standard (LCFS) held on July 7, 2022. WSPA is a trade association that represents companies that provide diverse sources of transportation energy throughout the west, including California. This includes the transport and marketing of petroleum, petroleum products, natural gas, renewable fuels, and other energy supplies.

Provided below is WSPA's initial feedback on CARB's proposed changes in the LCFS Program as presented to stakeholders by CARB staff on July 7, 2022:

LCFS is a Critical Part of California's Climate Portfolio - The last bullet point on Slide 9 of the CARB staff presentation states: *"Providing long-term price signals needed to support transition to ZEVs and decarbonizing remaining liquid fuel demand."* The LCFS program should remain fuel/energy carrier neutral and not privilege ZEV technology to the detriment of liquid or gaseous fuels. The carbon intensity (CI) is the referee in the LCFS program, so if a liquid or gaseous fuel with low CI values can compete with ZEV technology, CARB should ensure these technologies remain available in the program and are treated fairly, as enablers of carbon reductions.

Accelerating 2030 Target to 25% or 30% - The CARB staff presentation (Slide 12) introduced a proposal to potentially accelerate the LCFS (CI) reduction targets to 25% or 30% by 2030. WSPA is concerned that this proposal has been presented to stakeholders without the illustrative compliance scenarios necessary to demonstrate potential pathways to achieving these targets. WSPA encourages CARB to hold a series of workshops focused on this topic and direct engagement with stakeholders as soon as possible. The illustrative compliance scenarios should, at minimum, include an assessment of the demand for low CI fuels among the western states and Canada as multiple low carbon fuel programs drive competition.

Post-2030 CI Targets - While setting aspirational long-term targets can be a signal to encourage investment in low-carbon alternatives, these targets would be arbitrary and established without sufficient underlying analysis and thus are unlikely to be effective. It is also important to note that the Scoping Plan already serves to provide direction for programs like the LCFS. As one of the key elements for a successful Scoping Plan, the LCFS should be focused on nearer-term goals that are supported by peer-reviewed analysis and proven technologies.

WSPA recommends that CARB set LCFS targets no further out than 2030 and consider setting targets for years that are currently more than 10 years out with the next rulemaking.

Market Signals versus Market Disruptions - CARB has built the LCFS program with an intent to provide a market signal for investment. WSPA member companies are working to support California's policy goals and reduce emissions in the transportation sector. WSPA is concerned about the broader impact of CARB's proposal to remove forklifts as a credit generator. This proposal tells regulated entities CARB is reviewing and determining which technologies are in or out of the program based on the metric of "maturity" without discussing the criteria it used to make this assessment. In 2015 when CARB brought into the LCFS the forklift crediting provision it did so with no expiration, subsequent credit provisions bolted onto the program have included expirations and limits that signal CARB's intent to monitor the adoption rates and perceived maturity of a technology. By introducing the concept that a credit provision can simply be stripped from the program creates a disruption. A logical follow up question is "what comes next?" WSPA opposes the concept of using an arbitrary term like "maturation" in the LCFS program, without any discussion on the criteria used to determine if a technology is mature.

MHD HRI/FCI Crediting - For both hydrogen refueling infrastructure (HRI) and fast charging infrastructure (FCI) crediting, WSPA encourages CARB to pursue a practical approach to calculating refueling facility capacities. It was suggested by CARB staff during the workshop that infrastructure credits would be assessed separately for light duty (LD) vehicles and medium/heavy duty (MHD) vehicles. CARB staff's current methodology for applying this distinction is to require separate infrastructure at each fueling location, meaning separate storage, piping, and dispensers for each vehicle type. This is an impractical, inefficient use of resources that will discourage facility expansion. If infrastructure credits are to be a part of the LCFS, they should be applied equitably and efficiently. WSPA urges CARB to work with stakeholders to find a practical solution for assessing the capacity of facilities serving both LD and MHD vehicles.

Arbitrary Pathway Caps - WSPA opposes arbitrary caps on fuel pathways. An example is crop-based biofuel. While we share CARB's concern for food security and any unintended consequences from low carbon fuel programs, a compelling case has not been presented for this proposal. Setting such limits requires a thorough, independent analysis that demonstrates a measurable impact to land use due to crop-based feedstocks used for fuel production. WSPA encourages CARB to continue prioritizing sustainability as part of the LCFS, but objects to any further limitations. CARB already establishes indirect land use change (ILUC) values for crop-based biofuels which is in addition to the production and transportation emissions that together makes up the CI value of the renewable fuel produced from crop-based feedstocks. Therefore, CARB should not create an additional penalty or set an arbitrary limit on the volume of crop-based feedstocks in the program. CARB should work to incentivize the production and use of feedstocks produced sustainably, not limit one of the most important and effective tools CARB has to reduce emissions from the transportation sector.

Pathway Approvals - WSPA believes that the current pathway application review process has inefficiencies that are cumbersome in workload burden to both CARB staff and pathway applicants. A significant restructuring of the process is recommended with input from regulated parties. At minimum, enhancements may include credit true-ups back to a facility's startup date and the approval of provisional pathways from startup of the renewable fuel production. WSPA requests that CARB adds in the LCFS regulatory language a deadline for CARB staff to review a pathway application. If CARB has not reviewed the pathway application within 60 days, the pathway application shall be deemed complete and opened for third-party verification.

Renewable Hydrogen Definition - WSPA believes that all renewable light hydrocarbons, not only biomethane and renewable natural gas (RNG), should have the same consideration as RNG in the LCFS regulation, including for the production of hydrogen. Renewable feedstocks should not be limited to pipeline quality biomethane and RNG in the production of renewable hydrogen. As such, facilities that produce both renewable fuels and hydrogen will utilize internally produced fuels like renewable ethane, renewable propane, renewable butanes, renewable pentanes, and renewable C6+ as feedstocks to produce hydrogen and should qualify for the production of renewable hydrogen. WSPA requests that the definition of renewable hydrogen be expanded to include the use of renewable light hydrocarbons for the production of renewable hydrogen. In addition, renewable hydrogen produced from renewable light hydrocarbons should qualify under the Hydrogen Refueling Infrastructure provision of the regulation for lower emission factors than hydrogen produced from fossil natural gas. The provisions above should apply regardless of whether the renewable feedstocks used to produce renewable light hydrocarbons are waste oils, fats, used cooking oil, distiller's corn oil or "fresh" vegetable oils, such as soybean or canola oils.

Verification - With verifications nearing completion for the second year under the LCFS, CARB should engage regulated parties and verifiers to seek feedback on the process and identify opportunities for improvement.

Aviation Fuel - WSPA would appreciate seeing more details regarding the proposal to obligate intrastate fossil jet fuel (i.e., where the point of obligation would be and how it would be executed). In general, WSPA believes that CARB cannot obligate jet fuel used for intrastate flights.

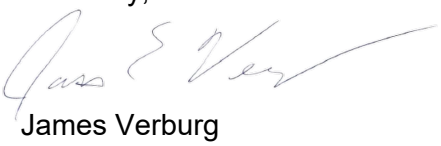
Much of the aviation industry is inherently interstate and international, making this sector particularly appropriate for the federal government to regulate. As such, 42 U.S.C. § 7573 preempts states from adopting or enforcing *"any standard respecting emissions of any air pollutant from any aircraft or engine thereof unless such standard is identical"* to USEPA's standards. On January 11, 2021, USEPA adopted new greenhouse gas (GHG) emission standards that apply to apply to civil subsonic jet airplanes and larger civil subsonic propeller-driven airplanes.[1] Notably, the standards are equivalent to the airplane carbon dioxide standards adopted by the International Civil Aviation Organization in 2017.[2] In the preamble to the final rule, USEPA notes, *"These standards will ensure control of GHG emissions, maintain international uniformity of airplane standards, and allow U.S. manufacturers of covered airplanes to remain competitive in the global marketplace."*[3] Thus, CARB should account for emission reductions in the aviation industry due to compliance with the new federal GHG emissions standards for airplanes, but should not presume that it can impose more restrictive emission standards than exist at the federal level.

In addition, intrastate fossil jet fuel represents a small fraction of jet fuel supplied in California and jet fuel suppliers do not know how much of the fuel is consumed intrastate versus interstate or out of the country. This makes compliance with the proposed obligation extremely complicated.

[1] Control of Air Pollution From Airplanes and Airplane Engines: GHG Emission Standards and Test Procedures, 86 Fed. Reg. 2136 (Jan. 11, 2021).
[2] *Id.* at 2137.
[3] *Id.* at 2138.

WSPA appreciates the opportunity to provide comments on this important regulatory process. If you have any questions regarding this submittal, please contact me at (360) 296-0692 or via email at jverburg@wspa.org.

Sincerely,



James Verburg
Director, Fuels
WSPA

Jim Verburg
Director, Fuels

September 19, 2022

Sent via e-mail and upload to: https://www.arb.ca.gov/lispub/comm/iframe_bcsubform.php?listname=lcfs-wkshp-jul22-ws&comm_period=1&_ga=2.85577753.167319428.1658172472-237475923.1631295388

Dr. Cheryl Laskowski
Branch Chief – Low Carbon Fuel Standard
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Re: WSPA Comments on August 18th CARB Workshop to Discuss Potential Changes to LCFS

Dear Dr. Laskowski,

Western States Petroleum Association (WSPA) appreciates the opportunity to comment on the staff presentation at California Air Resources Board (CARB) Workshop to discuss potential changes to the Low Carbon Fuel Standard (LCFS), held on August 18, 2022. WSPA is a trade association that represents companies that provide diverse sources of transportation energy throughout the West, including California. This includes the transport and marketing of petroleum, petroleum products, natural gas, renewable fuels, and other energy supplies. Provided below is WSPA's initial feedback with references to the staff presentation slides[1] on CARB's proposed changes in the LCFS Program as presented to stakeholders by CARB staff on August 18, 2022:

Pathway Streamlining – Deemed Complete Date (Slides 9-13) – WSPA appreciates CARB's efforts to streamline LCFS program implementation. Although the alignment of deemed complete status reduces some confusion, changing the "*deemed complete date"* for Tier 2 pathway applications does little to streamline the pathway application process or resolve the issues with fuel pathway processing. Currently, for Tier 2 applications, the deemed complete date has little effect on credit generation, given that application reviews and validations are taking several months to complete. Ultimately, availability of the certified pathway often occurs multiple quarters after the deemed complete date. To achieve substantive changes in application processing, WSPA recommends that CARB incorporate into the regulation a deadline of 30 calendar days for CARB to review fuel pathway applications. If the applications are not reviewed within 30 days, the pathway application process should move on to the next step, such as the third-party validation step or the fuel pathway certification step. WSPA also recommends that CARB set staffing levels such that smooth and effective fuel pathway review processes can be achieved.

Temporary Pathway Credit True-Up (Slides 14-18) – WSPA supports the CARB staff proposal to true-up temporary fuel pathways with provisional and operational CI values. As CARB staff develops the draft regulatory language to implement this true-up element, we offer several factors to consider:

- The true-up should cover all volumes reported back to the first quarter during which the temporary pathway was used. Slide 16 suggests that it would be the first "full" quarter. This is an unnecessary limitation.

[1] https://ww2.arb.ca.gov/sites/default/files/2022-08/August%202022%20Workshop%20Slide%20Deck%20Presentations.v16.pdf – Accessed 9-12-2022

- True-ups should be automatic. Once CARB has certified a provisional or permanent pathway, credits should be added to the applicant's LRT-CBTS account without any administrative approval step.

- It is possible that a pathway holder may not be the fuel reporting entity for their pathway. In that case, they should have the option to designate another party to receive the true-up credits as part of their pathway application.

- True-ups should be applicable to pathways under review at the time that the regulatory changes take effect, including pathways still under provisional status.

WSPA also supports the proposal made during the public comment period to extend true-ups to the annual fuel pathway reporting process as well. Following verification, fuel pathway holders should be rewarded for incremental improvement in their operational carbon intensity. Doing so on an annual basis would reduce the need for pathway holders to reapply for their pathways to capture the value of operational improvements.

Hydrogen Tier 1 Calculator (Slides 19-23) - WSPA supports the establishment of a Tier 1 calculator for hydrogen. For a rapidly growing segment of the California LCFS program, this proposal may serve to streamline hydrogen applications so that focus can be placed properly on other complex Tier 2 pathways. For hydrogen pathways produced by steam hydrocarbon reforming, WSPA requests that CARB incorporate into the Tier 1 calculator all renewable hydrocarbons, (other than biomethane or renewable natural gas) as acceptable components to produce renewable hydrogen. An illustrative example is a renewable fuel facility that produces renewable propane as a co-product resulting from the conversion of renewable feeds to produce renewable diesel and/or alternative jet fuel. The renewable propane can be sent to the hydrogen plant as feedstock or used as thermal energy in the process heater for the hydrogen plant. Thus, the hydrogen derived from that portion of the renewable propane should be recognized as renewable hydrogen and should qualify for the hydrogen refueling infrastructure crediting program.

EMFAC Model Estimation (Slide 45) – WSPA does not support the use of EMFAC as a source of data for generating base credits for residential EV charging. EMFAC's primary purpose is to estimate the emissions inventories of on road mobile sources in California in the aggregate. CARB staff Slide 45 states: "*EMFAC is not designed to estimate residential PEV charging - estimates are not intended to reflect charging behavior" and "modifications would need to be made to transform model outputs into an estimate of residential PEV charging"*. As such, EMFAC may not be the best tool for accurately calculating credits for residential EV charging.

WSPA appreciates the opportunity to provide comments on this important regulatory process. If you have any questions regarding this submittal, please contact me at (360) 296-0692 or via email at jverburg@wspa.org.

Sincerely,

James Verburg
Director, Fuels
WSPA

Tanya M. DeRivi
Vice President, Climate Policy

December 21, 2022

Sent via upload to:
https://www.arb.ca.gov/lispub/comm2/bcsubform.php?listname=lcfs-wkshp-nov22-ws&comm_period=1

Dr. Cheryl Laskowski
Branch Chief – Low Carbon Fuel Standard
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Re: WSPA Comments on November 9 CARB Workshop regarding Potential Changes to LCFS

Dear Dr. Laskowski,

The Western States Petroleum Association (WSPA) appreciates the opportunity to comment on the staff presentation at the California Air Resources Board (CARB) workshop to discuss potential changes to the Low Carbon Fuel Standard (LCFS), held on November 9, 2022. WSPA is a trade association that represents companies that provide diverse sources of transportation energy throughout the west, including California. This includes the transport and marketing of petroleum, petroleum products, natural gas, renewable fuels, and other energy supplies.

Provided below is WSPA's feedback regarding the CARB staff presentation[1] on proposed changes in the LCFS Program as provided to stakeholders on November 9. WSPA has previously submitted comments to CARB staff pursuant to the CARB's July 7 and August 18 LCFS workshops. Those comments are incorporated into this letter by reference.[2,3]

CATS Model Overview (Slides 12-21)

The California Transportation Supply (CATS) Model is intended to develop optimized scenarios based on the user input. CARB needs to assess that the basis for its inputs to CATS are technically sound, in particular for emerging technologies. WSPA recommends that CARB develop sensitivity analysis for different input variables, including (but not an exhaustive list):

- Various gasoline demand scenarios, including flat gasoline demand or gasoline demand not dropping as fast as expected in the original scenario.

- Different electricity prices, as the cost of electricity seems to be too low if set at 80 $/MWh as stated in Slide 16. The United States Energy Information Administration (EIA) recently reported that in September 2022, the "average price of electricity to ultimate customers" for the transportation sector in California was 15.63 cents/KWh (equates to 156.30 $/MWh).[4] In addition, modeled scenarios for future years should take into account upward pressures on electricity rates such as those presented by the California Energy Commission in their

[1] https://ww2.arb.ca.gov/sites/default/files/2022-11/LCFSPresentations.pdf
[2] Western States Petroleum Association. "WSPA Comments on CARB Workshop to Discuss Potential Changes to the LCFS", August 8, 2022.
[3] Western States Petroleum Association. "WSPA Comments on the August 18th CARB Workshop to Discuss Potential Changes to the LCFS", September 19, 2022.
[4] https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=epmt_5_6_a.

September 21, 2021, Demand Analysis Working Group which shows forecasted statewide commercial and residential rates greater than 20 cents/KWh in 2030 and beyond.[5]

- A range of crude oil price ranges, rather than a single 90 $/barrel proposed on Slide 16 and Table 4 of the CATS documentation.

CATS should also model the additional cost of electricity for building up the electric vehicle (EV) charging infrastructure and the construction of additional power generation.

Table 8 of the "Draft California Transportation Supply Model – Technical Documentation" (hyperlink to document provided on Slide 21) shows a significant difference between the fixed cost of CARBOB production and the fixed cost of ultra-low sulfur diesel (ULSD) production. WSPA requests that CARB provide more information on how these fixed costs are established as ULSD and CARBOB are co-produced at oil refineries. CARB should also confirm whether the biodiesel equivalence value under the United States Environmental Protection Agency's Renewable Fuel Standard (RFS) program should be 1.5 rather than 1.4 as stated on Page 20 of the "Draft California Transportation Supply Model – Technical Documentation."

CATS Summary Input Spreadsheet – Fuel Production Tab – Exogenous Subsidy (Slide 21)

In reviewing the "core model inputs" (hyperlink to spreadsheet provided on Slide 21), WSPA requests that CARB staff confirm if the 0.369 $/MJ value of compressed natural gas (CNG) is correct, or if it should instead be 0.0369 $/MJ. The 0.369 $/MJ corresponds to nearly $390 million per BTU – which seems very high. It is also requested that CARB provide the basis for the renewable gasoline 0.019 $/MJ exogenous subsidy.

Scenario Design: Carbon Intensity (Slides 25-26)

WSPA is concerned about the current pace of the LCFS rulemaking. CARB proposes to significantly accelerate near-term LCFS targets and potentially extend targets as far out as 2045. However, CARB staff is just beginning to assess potential compliance scenarios. The presentation during the November 9 workshop described high-level compliance curves, with little transparency into the methodology and no discussion of feasibility. To meet a January 2024 implementation date, these scenarios need to be presented in a more comprehensive manner, with transparency and significant stakeholder input. Without that, it is difficult to comment on the three compliance curves presented. Consequently, we can only comment on the modeling inputs described by CARB staff.

For example, Slide 6 shows that the program only slightly "overperformed" – by 0.61% carbon intensity (CI) reduction in 2021 (9.36% CI reduction vs. 8.75% CI target) – which is only about half of the current annual increase in the CI benchmark. If the pace of adopting Zero Emission Vehicles does not occur as planned into 2030, the number of deficits will far exceed any credits being generated. Yet this scenario is not being evaluated as part of the scenarios. As a result, CARB should be careful in setting more stringent CI standards and ensure that the new CI standards do not quickly exhaust the credit bank.

In addition, CARB should include in the proposed regulatory language a provision that stipulates a formal annual program review with an option to reset the benchmarks in the event that credit generation falls short or/and deficit generation is higher than expected.

[5] CEC Demand Analysis Working Group (https://www.energy.ca.gov/sites/default/files/2021-09/1%20Electricity%20Rate%20Forecast%20Updates_ADA.pdf) – Accessed 12-15-2022

Crop-Based Biofuel (Slides 28-29)

As WSPA stated in our August 8 comment letter, no arbitrary limit should be set on crop-based feedstock. Any concerns around land use impacts are handled in feedstock carbon intensity calculations. Indirect Land Use Change (ILUC) values already increase the CI score of renewable fuel produced from crop-based feedstocks, resulting in lower emission reductions attributable to the fuels. An artificial limit on supply is not the appropriate method of accounting for these impacts.

Food supply concerns are similarly addressed by ILUC inputs to carbon intensity scores. It is noteworthy that the 2018 LCFS readoption evaluated several different fuel supply scenarios[6] with varying amounts of biodiesel and renewable diesel available to support the LCFS's goal of reducing the CI of fuels in California 20% by 2030. The scenario chosen to illustrate a feasible program estimated the growth of biodiesel and renewable diesel would be on the order of 146% (and evaluated growth up to a 215% increase) from 2018 levels through to 2030. Much of the anticipated growth in these fuels has already been considered by CARB, including potential land use impacts and other factors[7]. Today, feedstock availability is aligning with expectations from the 2018 LCFS readoption. As shown in the 2018 illustrative compliance calculator,[8] CARB forecasted the CIs for biodiesel and renewable diesel to be 34 gCO2e/MJ for biodiesel and 30 gCO2e/MJ for renewable diesel into 2030. As of Q2 2022, CARB has reported[9] average CI values of 27.51 gCO2e/MJ for biodiesel and 35.96 gCO2e/MJ for renewable diesel. Given investments taking place, additional restrictions should not be created as anticipated growth of these fuels and impact to land use has already been considered.

Additionally, no data has been presented by CARB or other stakeholders suggesting that any threat to food supply has been created by growing biofuel demand. It is noteworthy that while CARB is proposing limits on crop-based feedstock, the proposed regulation encourages the increased development of renewable electricity sources (specifically solar) which will undoubtedly result in the conversion of agricultural lands. WSPA believes that this duplicity in policy is concerning and sends a mixed message to stakeholders.

Rather than establish artificial limits on crediting for specific fuels, WSPA encourages CARB to continue analyzing land use change factors and focus on CI score accuracy. WSPA also requests that CARB define the term "virgin crop-based oil." Specifically, the definition should not include cover crops. Cover crops are used to slow erosion, improve soil fertility and quality, and help control pests and diseases.

Biomethane Crediting (Slides 30-32)

CARB staff presented potential scenarios for limiting crediting for biomethane, including arbitrary geographical limits and a phase-down of avoided methane crediting without providing a clear approach as to how CARB would implement these changes. For example, it is not clear whether or not the gas to a hydrogen production facility (a legacy pathway not tied to a landfill renewable natural gas (RNG) facility book-and-claim) would be removed from crediting as of 2030. Clarity around considerations such as this is important for stakeholders to understand and to provide meaningful feedback. Because biomethane crediting has been a major contributor to the success of the LCFS program, to arbitrarily limit those credits threatens the continued success of the program. It is also contrary to the technology neutral, market-based nature of the LCFS program.

[6] CARB 2018 rulemaking. Illustrative Compliance Calculator.
[7] CARB 2018 Environmental Analysis.
[8] *Supra*, tab "Calculations" Row's 57 and 58.
[9] CARB LCFS Quarterly Data Spreadsheet.

CARB cited a desire to focus biomethane use in hydrogen production and non-transportation use. The proper way to do so is to establish incentives that encourage use in those applications, rather than simply removing incentives elsewhere. As producers discussed during the November 9 workshop, such an approach is more likely to slow or even reverse investments in methane capture. Rather than limit crediting for biomethane under the LCFS, CARB should be looking for ways to establish credit, such as removing the limit on book-and-claim treatment for biomethane used for process energy in refineries and crude production facilities.

Further, WSPA believes that CARB should not attempt to harmonize RNG with electricity (see Slide 32) as the natural gas pipeline is vastly different from the electricity grid. For example, there is more flexibility to move gas longer distances than the electric grid is capable of. If Alternative A or B is adopted, then CARB should grandfather in all current pathways that have RNG facilities located outside of the "Western NG network" as project investment was based upon dispensing in California.

Other Modeling Assumptions Under Consideration (Slide 35)

CARB included a phase out of petroleum project-related crediting in two of the scenarios presented without describing the rationale behind such a change. Given that all scenarios involve continued use of petroleum products in the coming decades, it is contrary to the goals of the LCFS program to discourage carbon reduction projects at crude production and refining facilities.

Rather than arbitrarily constrain these credits without science-based drivers, CARB should be removing current barriers to qualification. Innovative Crude credits are currently restricted to a discrete set of technologies and should be expanded to enable emerging technologies and efficiency investments that reduce carbon emissions. Similarly, the use of biomethane in both crude production and refining facilities should be allowed book-and-claim treatment.

WSPA continues to object to the addition of deficits for intrastate fossil jet use. This is a needlessly complicated addition to the program for a very small portion of jet fuel demand in the State. It would have little impact on alternative jet fuel demand and create considerable work for aviation stakeholders, CARB staff, and verifiers (i.e., fuel producers and importers do not know who controls how much of the jet fuel that is consumed in intrastate flights – nor do they have access to this information). However, if CARB decides to implement such a LCFS obligation on intrastate jet fuel, the obligation should not be borne by fuel producers or importers.

WSPA appreciates the opportunity to provide comments on this important regulatory process. If you have any questions regarding this submittal, please contact me at via email at tderivi@wspa.org.

Sincerely,

Tanya DeRivi
Vice President, Climate Policy

Tanya M. DeRivi
Senior Director, Climate Policy

March 15, 2023

Sent via upload to:
https://www.arb.ca.gov/lispub/comm2/bcsubform.php?listname=lcfs-wkshp-feb23-ws&comm_period=1

Dr. Cheryl Laskowski
Branch Chief – Low Carbon Fuel Standard
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Re: WSPA Comments on CARB Preliminary Discussion Draft of Potential Low Carbon Fuel Standard Regulation Amendments and February 22, 2023 LCFS Workshop

Dear Dr. Laskowski,

The Western States Petroleum Association (WSPA) appreciates the opportunity to comment on the Preliminary Discussion Draft of Potential Low Carbon Fuel Standard (LCFS) Regulation Amendments and the associated staff presentation at the California Air Resources Board (CARB) workshop, held on February 22, 2023. WSPA is a trade association that represents companies that provide diverse sources of transportation energy throughout the west, including California. This includes the transport and marketing of petroleum, petroleum products, natural gas, renewable fuels, and other energy supplies.

In considering potential amendments to the LCFS Regulation, it is essential to recognize that LCFS adds approximately 11 cents per gallon to the cost of California gasoline according to the California Energy Commission.[1] While California continues to face serious supply constraints as it relates to transportation fuels and the California legislature considers how to provide relief at the pump for California drivers, CARB should ensure that its proposed LCFS regulation amendments do not increase costs uniquely impacting California fuels. Proposed amendments including arbitrary caps on alternative fuel pathways, hydrogen production and a self-ratcheting mechanism, among other amendments, will likely increase costs of California fuels. WSPA is generally concerned with proposed amendments to the LCFS regulation that could further compromise the supply reliability of critical transportation fuels, a consequence of which could be increasing energy costs at a time when energy affordability is a pressing priority for many Californians.

The LCFS program is primarily a liquid fuels program, for which WSPA members have made significant investments to help make the program both successful and replicable. WSPA supports LCFS and believes that the program should continue to provide an appropriate market signal that incentivizes the production of low-carbon intensity (CI) fuels. The LCFS should continue to preserve consumer choice and provide a level playing field for all technologies. The market-based program should embrace fuel- and technology-neutral principles that focus on the meaningful and timely reduction of GHG emissions. Because step changes on CI stringency would be required upon adoption of final regulatory language starting as early as 2024, LCFS should provide a clear and durable market signal for investments in the production of lower CI technologies with sufficient time from adoption to implementation for obligated parties to plan for investments and deployment plans for technologies.

[1] Based on OPIS data; CEC staff presentations at https://www.energy.ca.gov/event/workshop/2022-11/commissioner-hearing-california-gasoline-price-spikes-refinery-operations

Provided below is WSPA's feedback regarding the Preliminary Discussion Draft of Potential LCFS Regulation Amendments and CARB staff presentation[2] from the February 22nd workshop. WSPA previously submitted comments pursuant to CARB's July 7th, August 18th, and November 9th LCFS workshops. Those comments are incorporated into this letter by reference.[3,4,5]

General Comments

Arbitrary Caps on Alternative Fuels Pathways

CARB continues to discuss the concept of placing an arbitrary cap on crop-based fuels but has not yet presented data to demonstrate what problem the cap would address. CARB staff even mentions on Slide 37 that they have *"received limited data, analysis and supporting documents."* Since there is no majority of stakeholders presenting a compelling argument in favor of such a significant programmatic change, this concept should be set aside unless a verifiable issue arises. In fact, an arbitrary cap on crop-based fuels would go against Health and Safety Code Section 38560, the statutory basis for CARB's proposed set of actions, which requires CARB "to achieve the maximum technologically feasible and cost-effective greenhouse gas emission reductions from sources."[6] When all options must be on the table, CARB's concept would be *limiting* proven GHG reductions strategies that are technologically feasible and cost effective, and have garnered significant GHG reductions in the past.

We would also like to once again point out that CARB has already included a control mechanism for potential land use change concerns. This is precisely what the ILUC factors in CI modeling are meant to do, so additional limits are not needed nor appropriate. WSPA believes that adding an arbitrary cap would unnecessarily respond to an issue that was addressed long ago in the LCFS program.

Hydrogen Production

All hydrogen production pathways should be considered based on their CI reduction potential. Similar to what has been discussed above, a more robust hydrogen infrastructure has shown to be a technologically feasible, cost-effective way to reduce GHG emissions, which is what Health and Safety Code Section 38560 requires CARB to accomplish. WSPA does not support either the exclusion of hydrogen derived from fossil fuels from book-and-claim eligibility or the exclusion of hydrogen production by steam methane reforming in Medium- and Heavy-Duty Hydrogen Refueling Infrastructure (MHD-HRI) crediting. There is already a severe shortage of hydrogen refueling options across California (especially in relation to electric charging options) – just as CARB prepares to adopt the proposed Advanced Clean Fleets regulation that will demand the immediate and exponential growth of hydrogen refueling options for MHD vehicles.

We urge CARB to avoid proposed amendments that would arbitrarily constrain hydrogen production at a time when California consumers need more affordable fuel options – not less.

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[2] https://ww2.arb.ca.gov/sites/default/files/2022-11/LCFSPresentations.pdf
[3] Western States Petroleum Association. "WSPA Comments on CARB Workshop to Discuss Potential Changes to the LCFS", August 8, 2022.
[4] Western States Petroleum Association. "WSPA Comments on the August 18th CARB Workshop to Discuss Potential Changes to the LCFS", September 19, 2022.
[5] Western States Petroleum Association. "WSPA Comments on the November 9th CARB Workshop regarding Potential Changes to LCFS", December 21, 2022.
[6] Cal. Health & Safety Code § 38560.

CATS Model

CARB staff stated at the February 22nd LCFS workshop that the California Transportation Supply (CATS) Model would be released within a week for stakeholders to evaluate and use. According to CARB's document, the CATS Model *"can be used to explore how different assumptions relating to the cost, supply, demand, and carbon intensities of various fuel may impact the transportation market, and how Low Carbon Fuel Standard credit prices may respond to changes in market conditions and program stringency."*[7] WSPA subsequently inquired with CARB staff on the status and timing to comment when that week-long timeframe had passed. As the CATS modeling has yet to be released, we along with other stakeholders are unable to offer robust comments at this time.

Providing the CATS modeling with adequate review time would have helped stakeholders raise issues for CARB staff or to seek clarification from CARB staff regarding important input assumptions being used to inform CARB's modeling of future LCFS requirements. Even without the CATS modeling release, WSPA does have questions about various modeling assumptions, including cost of compliance, how feedstock pricing was established, inclusion of fixed cost regression for some fuel components, interim pricing for intrastate Sustainable Aviation Fuels, inflationary assumptions, costs associated with fossil fuel sales, and other important variables.

Specific Comments – CARB Staff Presentation

Slide 11 – Alternative Fuel Diversification

CARB staff rightfully noted in their introductory comments that *"LCFS drives investment and fuel diversification"* and that further investment is needed to meet accelerated targets. It is concerning, however, that CARB staff then proposed a number of changes that would scale back existing investments and discourage future growth. This includes dramatic increases in biogas carbon intensity, artificial caps on crop-based fuels, halving credits for ZEV forklifts, and phasing out crediting for GHG reduction at upstream and refining facilities. Further constraining fuel options just as CARB seeks to increase the program's stringency is the wrong approach for Californians. Such proposals would also go against Health and Safety Code Section 38560 which requires CARB to seek out technologically feasible, cost-effective GHG reduction mechanisms.

Slide 15 - Self-Ratcheting Mechanism

The second bullet on Slide 15 identifies as an element of the rulemaking scope: "*Mechanisms to auto-adjust CI targets to accelerate investment if program is over-performing."* WSPA recommends against a self-ratcheting mechanism that would auto-adjust the CI targets. We believe that rulemaking is the appropriate process to update the CI targets, because it is what is expected under basic principles of California administrative law,[8] and because a self-ratcheting mechanism would defeat the spirit of the LCFS regulation, which is to allow banking of LCFS credits for future use as the program becomes more stringent over time. It would also not appear to account for exceptional circumstances, such as the COVID pandemic nor recessionary-driven slowdown, that have demonstrably significant impacts on the fuels market as well. A self-ratcheting mechanism may lead to an excessive use of LCFS credits in the short term to the detriment of long-term compliance

[7] https://ww2.arb.ca.gov/our-work/programs/low-carbon-fuel-standard/lcfs-meetings-and-workshops.
[8] *See* Cal. Gov't Code § 11346.2 (discussing the notice-and-comment process); *POET, LLC v. State Air Res. Bd.*, 218 Cal. App. 4th 681, 744 (2013), *as modified on denial of reh'g* (Aug. 8, 2013) ("agencies must . . . (1) give the public notice of the proposed regulatory action; (2) issue a complete text of the proposed regulation with a statement of reasons for it; (3) give interested parties an opportunity to comment on the proposed regulation; (4) respond in writing to public comments; and (5) maintain a file as the record for the rulemaking proceeding").

options. Further, such mechanism fails to provide market certainty.

Slide 16 - Rulemaking Process

CARB staff lays out a very general rulemaking process on Slide 16 without discussing timing. Given the progress to date on this rulemaking, WSPA urges CARB staff to identify an achievable implementation date for any regulatory changes made and to publish a detailed rulemaking calendar.

Slide 25 (and Slide 52) - Compliance Target Step Down and Acceleration Mechanism

This is the first workshop during which CARB officially discussed the concept of an "acceleration mechanism." We find this concept concerning as it shortcuts the deliberative, public process of a formal rulemaking (i.e., an "acceleration mechanism" could remove credits from the bank too quickly and risk rendering the program infeasible in the later years when the CI standards become ever more stringent) which the public is entitled to under basic administrative law principles in California.[9] The credit bank should be looked to as a long-term compliance option. We also believe that any market indicators identified could result in serious unintended consequences such as credit shortages or market volatility. With the concept under consideration, such consequences could only be addressed through emergency actions by CARB, followed by an immediate rulemaking.

Regarding the potential triggers CARB listed, a credit price trigger is the least appropriate. While the LCFS is intended to spur investment, CARB should not seek to fix prices. The price cap in the Credit Clearance Market is there as a relief valve to avoid harmful spikes. Setting an effective price floor would represent market manipulation. Furthermore, markets are volatile. Establishing a price trigger could lead to frequent, disruptive alterations to compliance targets. Adding such volatility to California's fuel market would be highly inadvisable.

However, of the triggers CARB identified, the total credit bank size would be the most appropriate. If the credit bank size were used as a trigger, it would obviously behoove CARB to include automatic "deceleration" of targets should the credit bank become very low or negative. It is unclear what "credit to deficit ratio" means as a trigger for changing targets.

Finally, the LCFS credits modeled by CARB is above the maximum allowed credit price, which indicates a shortage of credits. Therefore, no step-change should be considered in the program. Rather CARB should establish CI standards that can be met while maintaining the LCFS credit price below the maximum allowed price.

Slide 29 - ZEV Refueling Infrastructure

While the replication of the light-duty ZEV refueling infrastructure language for medium- and heavy-duty vehicles is appreciated, it is critical that CARB staff identify a reasonable mechanism for modeling "hybrid" stations to avoid creating a requirement for the duplication of storage-to-dispensing infrastructure.

Slide 32 - Methane Crediting

CARB staff cited a desire to focus biomethane use in hydrogen production and non-transportation use. The proper way to do so is to establish incentives that encourage use in those applications, rather than simply removing incentives elsewhere. As stakeholders discussed this issue during

[9] Please see discussion in Footnote 7.

previous LCFS workshops, such an approach is more likely to slow or even reverse investments in methane capture. Rather than limit crediting for biomethane under the LCFS, CARB should be looking for ways to *establish* credit, such as removing the limit on book-and-claim treatment for biomethane used for process energy in refineries and crude production facilities.

WSPA also believes that Avoided Methane Crediting is needed to support current and future investment and project development. These credits for methane – that was previously emitted or flared – are key components of dairy renewable natural gas (RNG) investments and should be preserved to ensure the maximum production of clean fuels and emission reductions.

Further, WSPA recommends that CARB not attempt to harmonize RNG with electricity as the natural gas pipeline is vastly different from the electricity grid. For example, there is more flexibility to move gas longer distances than the electric grid is currently capable of.

Slide 35 - Intrastate Jet Fuel

WSPA continues to object to the addition of deficits for intrastate fossil jet use. This is a needlessly complicated addition to the program for a very small portion of jet fuel demand in the state. It would have little impact on alternative jet fuel demand and create considerable work for aviation stakeholders, CARB staff, and verifiers. Crediting for alternative jet fuel is based on delivery to airport storage, while the proposed deficits would be based on consumption during intrastate flights. Given that, blending more alternative jet fuel would not reduce the deficits generated by airlines for intrastate flights. This means that these added deficits would simply make the airlines credit purchasers in the program and would not incentivize increased blending of alternative jet fuel.

If CARB decides to implement a LCFS obligation on intrastate jet fuel, WSPA agrees that the obligation should not be borne by fuel producers or importers (but rather the airlines that will use the jet fuel) as fuel producers and importers do not control the volume of jet fuel that is used for intrastate travel. This would enable more direct tracking of intrastate jet consumption.

Slides 36-41 - Crop-Based Fuels

As a follow-up to the General Comment above and consistent with past WSPA comment letters, no arbitrary limit should be set on crop-based feedstock. A free-market CI based policy should drive technology choices and there should not be additional prohibition mechanisms in favor/or against certain technologies. ILUC values already increase the CI score of renewable fuel produced from crop-based feedstocks, resulting in a lower economic value for these fuels compared to fuels produced from waste-based feedstocks. CARB should let the market optimize the fuel slate based on market economics and feedstock availability and not set arbitrary constraints.

WSPA further suggests that Best Farming Practices be included in, and accounted for, within the program CI calculation methodology to properly credit “climate smart” agricultural practices. Doing so would recognize the projected GHG mitigation and carbon sequestration benefits associated with ongoing or new and innovative farming practices associated with the intentional production of climate-smart commodities (e.g., reduced use of fertilizer, targeted fertilizer nutrients, soil carbon sequestration, etc.).

Slide 43 - Project-Based Crediting – Phase Out

WSPA objects to an artificial phase out of project-based crediting and limiting the duration of the crediting period of these projects, as project-based crediting incentivizes incremental GHG emission

reductions. Such an approach is arbitrary and discourages investment in real GHG reduction investment at refineries and oil producing facilities. Rather than arbitrarily constrain these credits without science-based drivers, CARB should be removing current barriers to qualification. Innovative Crude credits are currently restricted to a discrete set of technologies and should be expanded to enable emerging technologies and efficiency investments that reduce carbon emissions – especially given the strong and long-term demand for these fuels identified in the 2022 Scoping Plan Update.

Similarly, the use of biomethane in both crude production and refining facilities should be allowed book-and-claim treatment. Restricting book-and-claim for RNG to CNG transport outlets but not for hydrogen feedstock dispositions again seems to be attempting to pick "winners and losers" based upon long-term speculative market forecasts. We continue to support a free market-based policy and level playing field for various RNG pathways. To that end, we support maintaining the robust tracking, traceability, and documentation requirements and continuing to allow book-and-claim from all existing geographies for all RNG pathways, as this represents the best path forward to achieve more stringent LCFS targets.

Slide 48 - LCFS Modeling Framework

WSPA requests detailed clarification of the CATS Model assumptions. Areas of concern identified from information available to date include but are not limited to the following:

- The model does not appear to be tracking any possible increase in the cost of fossil fuel sales in the model (or are not explaining how it is included), which may incorrectly increase the cost of compliance.
- Inflation does not seem to be factored into the model; more clarification is needed on assumptions and methodology.
- The Sustainable Aviation Fuel (SAF) model appears to reflect only the interim SAF pricing in years 2023-24 versus 2025-27. It is not clear if an entity can carry this forward beyond the years approved. The model is showing soybean oil SAF with a $1.25/gallon subsidy at 50% CI reduction, or 42 CI. This indicates the assumptions used citing the federal Inflation Reduction Act are based on 40B New SAF credits rather than 45Z New Clean Fuel Production credits, which would make better sense.
- More clarity is needed as to how feedstock pricing was established.
- More clarity is needed as to whether the model is assuming an infinite amount of virgin oil feedstock available, driven only by increasing price.
- More clarity is needed on how the model estimates higher fossil and agriculture benchmark costs, relative to historic values.
- The fixed cost regression for FAME and Renewable Diesel is confusing (as well as the one for CARBOB and ULSD) – additional clarification is needed.
- While the model has a fixed price of $1.45/RIN for D4s and FAME RIN equivalence of 1.4 (vs 1.5) and D6s are modeled at $1.13/RIN, a reference for D3s cannot be found.

Slides 49-51 - LCFS Modeling Outputs

Slides 49 and 50 show a significant destruction of gasoline demand over time, yet the diesel pool continues to have a sizable proportion of petroleum diesel. WSPA suggests that CARB evaluate an alternative scenario where the entire pool of petroleum diesel is replaced with renewable diesel and biodiesel blends over the next few years. As alternative fuels saturate the market to near-completion, there should be a step change in credit generation that slows credit generation; it is more difficult to substitute petroleum CARBOB with renewable fuels, due to several constraints,

including ethanol blending limits. In particular, if the growth of electric vehicles does not materialize as fast of CARB's current prediction, the deficit generation from CARBOB may be challenging to balance with credits. This uncertainty should also be modeled.

Slide 51 shows the LCFS credit price going over the maximum credit price which suggests a shortage of credits to balance the deficits. Therefore, WSPA requests that CARB also model a CI standard curve where the LCFS credits remain below the LCFS maximum credit price throughout the duration of the modeled period. Another modeling scenario CARB should consider is incorporating the bank of credits held by firms today, by including the credit bank in any forward forecast; including the credits will allow stakeholders to assess how CARB's potential updates will impact the current market.

Slides 62-64 - Updates to Tier 1 Calculators

WSPA supports the development of a new hydrogen calculator. CARB should also include options for renewable hydrocarbon feedstocks, such as renewable propane and other renewable hydrocarbon and hydrocarbon mixtures (such as ethane, propane, butane, etc.) in the steam reforming hydrogen calculator.

In addition, WSPA requests that CARB update the definition of renewable hydrogen to allow infrastructure crediting for hydrogen fuel produced from renewable hydrocarbons other than biomethane/renewable natural gas, by including renewable ethane, renewable propane, renewable butane and other renewable hydrocarbons and a mixture thereof.

Slide 69 - OPGEE

WSPA requests that CARB eliminate the incremental deficit provision from imported petroleum CARBOB and petroleum ULSD (CARB diesel). CARBOB and ULSD produced at refineries outside California do not process the same crude slate as the crude slate processed in California, and therefore, the incremental deficit calculations are not relevant for imported products.

WSPA also requests that CARB release the latest dataset from 2019 used to establish crude baselines in OPGEE. This is an important step to maintain the model's transparency.

Side 70 - Verification Updates

MCON (Crude) Reporting - Refineries should not need to report California crudes by field name in the MCON report as CARB is not using this information. CARB is using the data from the Department of Conservation. Therefore, no verification of California crudes should be required.

Site Visits - No site visit should be required other than for fuel pathway verification. Video conferencing and screen sharing are sufficient for other types of verification.

Quarter 3 LCFS Reporting Deadline - WSPA requests that CARB change the Q3 reporting date from December 31st to January 15th to allow time for the winter holidays.

Specific Comments – Proposed Regulatory Text

§95486.3(a)(1)(B): This section would require proposed MHD-HRI stations to be located in California within one mile of a Federal Highway Administration Alternative Fuel Corridor. WSPA

requests that CARB provide the rationale for placing limits on designated corridors and locations rather than leaving the market to define those locations based upon real world demands.

§95486.3(a)(1)(C): This section would allow application on MHD-HRI pathway application through December 31, 2029. WSPA requests that application submissions for light-duty HRI be extended to the same date as well in section §95486.2(a)(1)(B) and §95486.2(a)(7).

§95486.3(a)(2)(E): This proposed section references the HySCapE model. WSPA requests that CARB clarify if there will be a different version of the HySCapE model – one for heavy-duty and one for light-duty hydrogen fuel cell vehicles – or if the same HySCapE model will be used in any case.

§95486.3(a)(3)(A): This section includes an equation for estimating potential MHD-HRI credits. WSPA suggests that CARB consider additional language for exemptions and waivers considerations and provide clarity on credit equation for extreme cases where an approved station is not operational for an extended period after approval (extreme case).

§95486.3(a)(4)(B): This section requires that the station must be open to at least two different trucking companies. WSPA suggests eliminating this restriction on station owners.

§95486.3(a)(4)(D): This section requires that at least three Original Equipment Manufacturers have confirmed that the station meets protocol expectations, and their customers can fuel at the station. WSPA requests that CARB provide the reasoning behind this rigorous requirement.

§95486.3(a)(5): In the equation for the calculation of MHD-HRI credits, it appears that the CI_{HR} factor is not the same CI_{HR} factor delivered to the actual station *("… is the carbon intensity used for HRI crediting. Company-wide weighted average CI for dispensed hydrogen during the quarter or 0 g/MJ, whichever is greater"*). WSPA requests further information on this CI input.

§95486.3(a)(6): In this section, certain requirements appear to include information that is competitively sensitive, business confidential information. WSPA requests that CARB identify how this information will be protected against disclosure. In addition, CARB needs to clarify what entities will have access to this information and why that access is necessary.

WSPA appreciates the opportunity to provide comments on this important regulatory process. If you have any questions regarding this submittal, please contact me at via email at tderivi@wspa.org.

Sincerely,

Tanya DeRivi

Tanya M. DeRivi

Tanya DeRivi
Senior Director, California Climate and Fuels

June 6, 2023

Dr. Cheryl Laskowski
Branch Chief – Low Carbon Fuel Standard
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Sent via upload to:
https://ww2.arb.ca.gov/public-comments/public-comments-regarding-auto-acceleration-mechanisms-low-carbon-fuel-standard

Re: WSPA Comments on CARB's Proposed Low Carbon Fuel Standard Auto-Acceleration Mechanism and May 23, 2023 Workshop

Dear Dr. Laskowski,

The Western States Petroleum Association (WSPA) appreciates the opportunity to comment on potential changes to the Low Carbon Fuel Standard (LCFS), to add a mechanism that would accelerate the carbon intensity benchmarks if certain conditions are met, and the associated staff presentation at the California Air Resources Board (CARB) workshop held on May 23, 2023. WSPA is a trade association that represents companies that provide diverse transportation energy resources throughout the west, including California. These include the transport and marketing of petroleum, petroleum products, natural gas, renewable fuels, and other energy supplies.

General Comments

In considering potential LCFS regulation amendments, it is essential to recognize that the LCFS adds approximately 11 cents per gallon to the cost of California gasoline according to the California Energy Commission (CEC).[1] As California continues to face serious transportation fuels supply constraints, the California legislature and the Governor recently approved legislation[2] attempting to address this fuel supply concern. This new statute requires CARB and CEC to prepare a Transportation Fuels Transition Plan "in consultation with the state's fuel producers and refiners" that "shall include, at a minimum, a discussion of how to ensure that the supply of petroleum and alternative transportation fuels is affordable, reliable, equitable, and adequate." WSPA looks forward to working closely with CARB and CEC to inform the Transition Plan's development – where fuel affordability and equity must be central considerations to help inform policies under the baseline assumption that internal combustion engine vehicles (including hybrid vehicles) will be used and needed by Californians for decades to come.

While the LCFS program has a maximum credit sale or transfer price of $200 (2016$) it is important that CARB ensure the potential LCFS amendments recognize the impacts of a change to costs uniquely impacting California fuels. WSPA is extremely concerned with proposed amendments that could further compromise the supply reliability of critical transportation fuels and destabilize the program – a consequence of which could be increasing energy costs at a time when energy affordability is a pressing priority for many Californians. Proposed amendments like a one-way auto-

[1] Based on OPIS data; CEC staff presentations at https://www.energy.ca.gov/event/workshop/2022-11/commissioner-hearing-california-gasoline-price-spikes-refinery-operations.
[2] Senate Bill SB X1-2 (Skinner, 2023) https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202320241SB2.

acceleration mechanism, among other potential changes, will likely increase California fuels costs. Newly inserting an automatic mechanism would be wholly inappropriate and set a bad precedent for a program that was developed through and has been amended multiple times since by formal rulemaking processes.

WSPA members have made significant investments to help make the LCFS program both successful and replicable. WSPA supports the LCFS and believes the program should continue to provide an appropriate market signal that incentivizes the production of low-carbon intensity (CI) fuels. This market-based program should focus on providing clear, meaningful, durable, and timely market signals for the reduction of greenhouse gas emissions through investments in the production of lower CI technologies, with sufficient time from adoption to implementation for obligated parties to plan for investments and deploy technologies.

Specific Comments – CARB Staff Presentation

Provided below is WSPA's feedback regarding the auto-acceleration mechanism under consideration for potential LCFS amendments and the CARB staff presentation[3] from the May 23rd Workshop. WSPA previously submitted comments pursuant to CARB's July 7, 2022, August 18, 2022, November 9, 2022, and February 22, 2023 LCFS Workshops. Those comments are incorporated into this letter by reference.[4,5,6,7]

Slide 7 – Scope of Rulemaking. The second bullet point on Slide 7 identifies mechanisms to auto-adjust CI targets to accelerate investment if the LCFS program is overperforming. WSPA recommends against including a (one-way) auto-adjustment of the CI targets. We believe that rulemaking is the appropriate process to update the CI targets, because it is what is expected under the basic principles of California administrative law,[8] and because such a mechanism would defeat the spirit of the LCFS regulation, which is to allow banking of LCFS credits for future use as the program becomes increasingly more stringent over time.

Instead of an auto-adjustment of the CI targets, WSPA suggests that CARB consider utilizing annual fuels forecasting to determine the need to adjust CI targets. For example, the Oregon Department of Administrative Services (DAS) annually completes a fuels forecast (pursuant to Oregon Administrative Rule 340-253-2100) to inform the Oregon Department of Environmental Quality (DEQ) as to the performance of the DEQ's Clean Fuels Program. A similar independent approach by CARB is encouraged for transparency and consistency.

An auto-adjustment of the CI targets would also appear to not account for exceptional circumstances – such as the COVID pandemic nor a recessionary-driven slowdown – that have demonstrably significant impacts on the fuels market. Instead, such an auto-acceleration mechanism may lead to

[3] https://ww2.arb.ca.gov/sites/default/files/2023-05/LCFSPresentation_052223_0.pdf
[4] Western States Petroleum Association. "WSPA Comments on CARB Workshop to Discuss Potential Changes to the LCFS", August 8, 2022.
[5] Western States Petroleum Association. "WSPA Comments on the August 18th CARB Workshop to Discuss Potential Changes to the LCFS", September 19, 2022.
[6] Western States Petroleum Association. "WSPA Comments on the November 9th CARB Workshop regarding Potential Changes to LCFS", December 21, 2022.
[7] Western States Petroleum Association. "WSPA Comments on the February 22nd CARB Workshop regarding Potential Changes to LCFS", March 15, 2023.
[8] *See* Cal. Gov't Code § 11346.2 (discussing the notice-and-comment process); *POET, LLC v. State Air Res. Bd.*, 218 Cal. App. 4th 681, 744 (2013), *as modified on denial of reh'g* (Aug. 8, 2013) ("agencies must . . . (1) give the public notice of the proposed regulatory action; (2) issue a complete text of the proposed regulation with a statement of reasons for it; (3) give interested parties an opportunity to comment on the proposed regulation; (4) respond in writing to public comments; and (5) maintain a file as the record for the rulemaking proceeding").

an excessive use of LCFS credits in the short-term to the detriment of long-term compliance options. Further, such a mechanism fails to provide the market certainty necessary to ensure petroleum and alternative transportation fuel supplies are affordable, reliable, equitable, and adequate as California's leaders seek to achieve.

Slides 11-12 – **Compliance Target Step Down and Acceleration Mechanism Concepts.** This was the first workshop where CARB officially discussed details of an "acceleration mechanism." Previously, there was only one workshop where a broad concept was presented. WSPA finds the concept (and the late introduction of details) that introduces a complex structural change to the LCFS program at the very end of the informal rulemaking process concerning. Because such a mechanism could remove credits from the bank too quickly, it risks rendering the LCFS program infeasible in the later years when the CI standards become ever more stringent for regulated entities to comply with. Yet CARB provides no mechanism to *reverse* any unintended consequence of this action as the only options presented to date (including by third party stakeholders without compliance obligations) operate only to *increase* CI benchmarks.

WSPA believes this would be a significant enough structural change that further stakeholder discussion, analysis, and modeling is required. We strongly encourage CARB not to include the concept in the upcoming 45-day package to be released within the next several weeks and to instead separate it from the forthcoming rulemaking to allow for further discussion and evaluation.

Slides 15-25 – Different Ways to Implement the Auto-Acceleration Mechanism. WSPA believes incorporating an auto-acceleration mechanism into the LCFS program now would be premature. Compromising the health of the program without sufficient analysis, in an effort to artificially inflate LCFS credit prices, would be inappropriate and highly problematic by unnecessarily increasing programmatic and market complexities at a time when the transportation sector is already working through dramatic transformation. It also presumes that fuel supply and demand scenarios will perform as envisioned to meet the ambitious 2022 Scoping Plan Update goals – that supply will phasedown in line with demand – despite known uncertainties in the energy market itself rather than seeking to ensure supply and demand for liquid fuels remains harmonious.

The credit bank is and should continue to be looked to as real emission reductions that regulated entities may use as a long-term compliance option. We also believe that any market indicators identified could result in serious unintended consequences such as credit shortages or market volatility. With the concept under consideration, such consequences could only be addressed through emergency actions by CARB, followed by an immediate rulemaking.

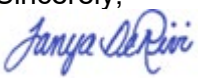
Should CARB proceed with incorporating this concept into the program through the upcoming formal rulemaking process, WSPA believes that additional work and stakeholder engagement is necessary. This should also include incorporating a means to reverse or "release" an auto-accelerator mechanism to avoid cementing overly ambitious forward CI benchmarks in place if the market would struggle to comply and compromise the integrity of the program. As the CARB Governing Board has exercised with multiple regulations before, we would encourage the Governing Board direct CARB's Executive Officer to work with stakeholders and perform additional analysis and then return later for formal approval.

We encourage CARB to provide regular periodic review of the program's performance to assess what additional changes would be required and discussed through a formal rulemaking process where all stakeholders can participate.

WSPA appreciates the opportunity to provide comments on this important regulatory process. If

you have any questions regarding this submittal, please contact me at via email at tderivi@wspa.org.

Sincerely,



Senior Director, California Climate and Fuels

WSPA
Tanya M. DeRivi
Senior Director, California Climate and Fuels

September 12, 2023

Dr. Cheryl Laskowski
Branch Chief – Low Carbon Fuel Standard
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Re: WSPA Comments on the Low Carbon Fuel Standard Modeling Updates Workshop

Dear Dr. Laskowski,

The Western States Petroleum Association (WSPA) appreciates the opportunity to provide these written comments on the California Air Resources Board's (CARB) August 16, 2023 public workshop regarding updates to the California Transportation Supply (CATS) Model used for the Low Carbon Fuel Standard (LCFS) program. WSPA is a trade association that represents companies that provide diverse sources of transportation energy throughout the west, including California. This includes the transport and marketing of petroleum, petroleum products, natural gas, renewable fuels, and other energy supplies.

Diesel Fuel Demand and Heavy-Duty Vehicle Zero Emission Vehicle (ZEV) Assumptions
While CARB has sought to update the CATS Model to account for the recent adoption of the Advanced Clean Fleets (ACF) regulation, WSPA appreciates the known transportation electrification-related uncertainties as identified in the 2022 Scoping Plan Update's "Uncertainty Analysis"[1] and the ACF regulation itself. These were recently discussed during CARB's new ACF "Truck Regulations Advisory Committee" on August 22, 2023 – where infrastructure challenges and vehicle readiness were amongst the priority issues identified by affected stakeholders that could affect compliance. We further note that the ACF regulation was only recently finalized and re-filed with the Office of Administrative Law for a final determination, so CARB has not yet submitted it to the U.S. Environmental Protection Agency for the required Clean Air Act waiver request that would make the regulation enforceable (if granted). Furthermore, we note that the North American Electric Reliability Corporation – the entity responsible for the reliable operation of our bulk power system – recently identified energy policy as the top risk – with grid transformation, resilience to extreme events, security risks, and critical infrastructure interdependencies falling behind – to the reliable operation of the Bulk Power System in their 2023 ERO Reliability Risk Priorities Report.[2] We again urge CARB to more closely evaluate what impact the large-scale shift of heavy-duty trucks would have on the energy demand of California's electric grid.

We would recommend that CARB not set LCFS benchmarks based on the presumed and wholly successful implementation of ACF given the significant known challenges identified to date and without also having an alternative pathway to ensure the reliable provision of necessary services to all Californians. Although CARB shows a 37% reduction of diesel fuel demand from 2022 to 2045 in the CATS Model updates, if medium- and heavy-duty ZEVs do not saturate the market as quickly as CARB assumes in staff's presentation (slides 17 and 18), likely resulting in prolonged and heightened demand for liquid fuels, transportation fuel companies will need a continuing means to comply with the LCFS regulation. We encourage CARB to conduct periodic reviews of

[1] Appendix J, https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp-appendix-j-uncertainty-analysis.pdf
[2] https://www.nerc.com/comm/RISC/Related%20Files%20DL/RISC_ERO_Priorities_Report_2023_Board_Approved_Aug_17_2023.pdf

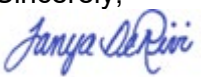
the program, accounting for the real world implementation status of ACF, Advanced Clean Trucks, the Omnibus regulation, and include a flexible compliance mechanism to make adjustments accordingly.

CATS Technical Documentation – CI Factor Assumptions

Table 11[3] shows a significant reduction of the carbon intensity (CI) of the electric grid from 2044 to 2045 – from 48.3 (in 2044) to 16.5 (in 2045). WSPA seeks clarification from staff regarding the CI curve for the electricity grid, and confirmation that such a substantial CI reduction could take place in a single year.

WSPA appreciates the opportunity to provide comments on the CATS modeling updates. If you have any questions regarding this submittal, please contact me via email at tderivi@wspa.org.

Sincerely,



Tanya M. DeRivi
Senior Director, California Climate and Fuels

[3] California Transportation Supply (CATS) Model v0.2 – Technical Documentation for August 2023 Example Scenario, Last Modified: August 2023 https://ww2.arb.ca.gov/sites/default/files/2023-08/CATS%20Technical_1.pdf