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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