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PARAMOUNT FACILITY Alt Air Paramount, LLC 14700 Downey Avenue Paramount, CA 90723 p: 562.531.2060 (main) e: info@worldenergy.net August 27, 2024

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

# RE: World Energy's Comments on the 15-Day Proposed Amendments to the Low Carbon Fuel Standard

Dear Ms. Sahota and CARB Staff,

World Energy appreciates the opportunity to provide comments on the 15-Day Proposed Amendments to the Low Carbon Fuel Standard (LCFS). We would like to thank CARB staff for their continued efforts throughout this extensive process to consider stakeholder feedback. Of the utmost importance, World Energy urges the finalization of this rulemaking at the November 8th Board meeting to ensure the proposed amendments will have the greatest impact in driving additional decarbonization in California's transportation sector. It is also important for CARB to provide meaningful modifications to the 15-Day Proposed Amendments in order for our company to realize the low carbon opportunities that are envisioned by CARB.

World Energy is one of the largest and longest-serving advanced clean energy suppliers in North America. We were the world's first producer of sustainable aviation fuel (SAF) and remain leaders in the field of renewable fuels. Our facility in Paramount, CA is in the final stages of conversion from a petroleum refinery to a 100% renewable fuels bio-refinery. When completed, World Energy's Paramount facility is projected to increase production capacity to approximately 350 million gallons of low carbon fuels per year.



We have made significant investments in continuously reducing the carbon intensity (CI) of our fuels and producing very-low carbon fuels for the California market and will continue to do so as lower carbon reduction technologies are created and implemented over next 20 to 30 years. Already, we have fuel pathways providing up to an 85% reduction in CI, which are near the lowest commercial scale CI fuels in the marketplace. Our fuels have helped the LCFS program meet and exceed its targets, and our Paramount plant is a premiere example of the clean energy future. World Energy continues our commitment to reduce transportation emissions including investing \$4 billion in scaled manufacturing and new technologies to achieve our goal of supplying 1 billion gallons of sustainable aviation fuel annually by 2030.

World Energy would like to share the following comments and concerns for consideration in response to the 15-Day Proposed Amendments shared on August 12:

## 2025 CI Benchmark

We are encouraged by the proposed nine percent change in stringency for the 2025 CI benchmark as proposed in §95484(d) through (f). Given the accumulation of credits in the credit bank, this is a necessary threshold to begin to better balance the market and send a stronger investment signal in 2025 and beyond. Together with the auto acceleration mechanism, these updates to the LCFS will help maximize transportation decarbonization. We encourage these proposed amendments to be advanced to the CARB Board.

# Proposed Addition of §95482(i): Biomass-Based Diesel from Virgin Soybean and Canola Oil

World Energy has significant concerns with the proposed addition of §95482(i) pertaining to the phase out of biomass-based diesel from virgin soybean and canola oil. Both the principle and the details of the proposal give us pause. Although World Energy prides itself on primarily sourcing waste oils, this restriction will cause significant indirect impacts on us and feedstock supply constraints across the industry.

On principle, we remain unconvinced that these feedstock limits are necessary, and are concerned that CARB is for the first time disqualifying credit generation from a feedstock with a certified low carbon intensity score. The evidence from the marketplace demonstrates that CI scores already act as a restriction to the use of virgin seed oils. While soybean and canola oil comprised over 50%<sup>1</sup> of feedstock for biofuels across the country in 2023, in California these feedstocks represented only 19.5% of the market.<sup>2</sup> The market driver and reason for the regional difference is the CI score, indicating that the

<sup>&</sup>lt;sup>1</sup> Energy Information Administration Monthly Biofuels Capacity and Feedstocks Update Report, Tables 2b and 2c for calendar year 2023

<sup>&</sup>lt;sup>2</sup> CARB LCFS Data Dashboard, Figure 6.



LCFS framework is functioning as intended to incentivize the lowest carbon approaches to transportation decarbonization, and crowd out higher carbon alternatives.

It is particularly concerning to us that this significant change to our industry is proposed in a 15-day comment package so close to the regulatory update being completed. The unprecedented suggestion to disqualify credit generation from a category of fuels that currently qualify for credits is likely to send chilling signals to other investors in the marketplace writ large. The investment community will view the last-minute, sudden change in the program as an indication of regulatory instability, which could increase risk calculation and discourage investment in other feedstocks, fuels, or technologies within the LCFS.

Therefore, our **top recommendation is to remove the draft feedstock limitation from the staff proposal**. As originally intended, the CI scores are working as a natural limitation, while still providing some market flexibility during unforeseen events.

If CARB is determined to pursue this concerning provision, we urge CARB to utilize a universal start date in 2030 paired with a phased approach. The necessary components of this revision include:

1. **A universal start date** that does not pick winners and losers, allowing some in the industry to utilize virgin oil feedstocks for several years beyond the rest of the industry.

We are very concerned with the 2028 start date for only certain entities. In separating which entities are subject to the regulation immediately versus in 2028, CARB arbitrarily chooses winners and losers by allowing some entities to have additional time to adjust to the change. This breaks with precedent in the LCFS and gives a marketplace advantage to some fuel producers based on a very finite snapshot of the past – in this case, the 2023 feedstock selections.

2. A **2030 start** to the limit that will still send a strong signal to the market that alternative feedstocks are of upmost value but provides time for the industry to adjust and for companies like World Energy to avoid significant feedstock price spikes. This would also ease concerns from the investment community across the LCFS. Moreover, a later start date will be more consistent with the slow and steady approach typically taken in regulatory implementation.

The respective 2025 and 2028 start dates across the industry do not provide sufficient time for the feedstock market to react. Consider that in order to



plant new, alternative sustainable non-food crops (e.g., camelina and covercrops such as carinata or pennycress) and have yields of any meaningful volumes, farmers will require <u>at least</u> 4–5 growing cycles. The regulatory implementation must reflect this timeline, at a minimum. The planning cycle for farmers, together with the years it takes for seed and farm practice development to supply an updated feedstock offering to the market cannot meet the proposed short timeline. This has the potential to unleash significant feedstock shortages and price spikes.

Already, CARB has recognized that existing credit generation opportunities should have ample advanced notice, as reflected in the staff proposal to cease crediting avoided methane emissions <u>after 2040</u>. Both the marketplace and investors need this lead time for investment confidence and regulatory stability. As users of the lowest carbon feedstocks, World Energy has signed letters of intent with most (if not all) low carbon feedstock developers, trying to spur their development into the commercial marketplace. The simple truth is that these new crops take a long time to develop. Five years of advanced notice is the absolute minimum the industry requires to adjust and develop alternatives.

3. A **phased approach** that starts higher than 20 percent and ratchets down until 2035 or 2040. This would provide the market flexibility to weather unforeseen economic events, while CARB's CI values continue to function as intended.

The existing flexibility in feedstocks has proven crucial recently, when supply chains were severely impacted during COVID. California needs a long-term decarbonization strategy that can weather black swan events like COVID. Completely eliminating fossil fuel from our transportation cannot be accomplished if we are creating plans that only work during strong, predictable economic years.

Furthermore, when it comes to soybean and canola oil and agriculture across the United States, one size does not fit all. Already, farmers are creating more options and greater flexibility to use practices that reduce feedstock and CI. Moreover, the biofuels market remains constantly evolving. Innovation is advancing at an unprecedented rate on feedstock diversification, crop development, and farming practices to reduce GHGs. This is why we encourage CARB to enable as much adaptability and flexibility in its framework as is practicable and embrace a performance-based approach in its analysis, focusing on outcomes rather than prescriptive and exclusionary lists of acceptable feedstocks.



#### Proposed Addition of §95488(d): No New Fuel Pathways if ZEVs or NZEVs Exceed 132,000

We are also concerned with the proposal in §95488(d) regarding the Executive Officer's ability to deny new fuel pathway applications for biomass-based diesel if the number of Class 3 to 8 zero-emission vehicles (ZEV) or near-zero emission vehicles (NZEV) reported in California exceeds 132,000 vehicles. While World Energy agrees this may make sense for ZEVs, we ask CARB to reconsider this provision for NZEVs. Particularly, NZEVs will still use combustion fuels and eliminating the option for new fuel pathways may reduce the opportunities to include new biomass-based diesel fuel pathways with lower CI. As such, the restriction could inadvertently prolong the use of petroleum over switching to lower carbon fuels. As long as NZEVs are in use, the LCFS should incentivize new fuel pathways to ensure the lowest possible CI fuels are available to fuel NZEVs.

#### **Sustainability Related Considerations**

The current proposed language for biomass-based feedstock requires environmental management practices that are not relevant to waste based oils. World Energy suggests adding a stipulation that the requirements pertain to cultivated rather than waste diversion/repurposing end uses.

Regarding Approved Certification Systems, it is possible that several of the requirements may not be included in the operating procedures for the standards bodies (e.g., certification system requiring auditing bodies to maintain professional liability insurance). We recommend that CARB consider including formal consultation with the candidate "certification system" operators that includes both analysis and the potential for adoption of new CARB provisions. It is unclear whether CARB is envisioning a California based certification (e.g., ISCC-CARB, RSB-CARB fuel certification), or whether the assessment will determine if recognizing an external regulatory system as sufficient (e.g., CARB recognizes ISCC-Plus or RSB-Global as complying). Clarification on these points would be helpful.

### **Unresolved Issues for Imminent Consideration**

World Energy is glad to see CARB is reaching the final stages of this LCFS rulemaking. However, we want to highlight some important topics that we have mentioned in our previous comments that have not been addressed in this rulemaking. We would like to encourage staff to turn their attention to these topics as soon as possible at the conclusion of this rulemaking.



- Low Carbon Power Crediting: CARB should update its low carbon power sourcing provisions – already afforded to the ZEV market – for renewable fuel production. Utilization of lower carbon power, both as an industrial power source and to create hydrogen, should be rewarded in the California marketplace. To adequately encourage SAF production, CARB should align its accounting for and crediting of electricity emissions with that of the federal government's 40B guidance.
- 2. <u>Book and Claim for Hydrogen</u>: Furthering the issue above, to spur the growth of lower carbon hydrogen in California, industrial use of low carbon hydrogen should be credited, so long as the eventual product is used in the transportation market. CARB is narrowly dictating end uses of low carbon energy sources when cleaner hydrogen should be credited within the transportation market, whether used to produce SAF or sent directly into a FCEV.
- 3. <u>Farm Side Crediting and Soil Organic Carbon</u>: We also recommend CARB evaluate the potential benefits of adding farm side crediting to the LCFS during the next rulemaking. As farmers consider opportunities to implement agricultural climate solutions, such as soil organic carbon sequestration, including farm side crediting in the LCFS can incentivize and reward improved agricultural practices. Reducing emissions associated with feedstock production at the farm level will result in overall lower carbon intensities of the LCFS fuel pool.
- 4. <u>Marine Fuels</u>: We encourage CARB to consider adding ocean-going and marine vessels to the LCFS. Ocean-going and marine vessels are hard-to-decarbonize and incentivizing lower CI fuels will be a crucial near-term solution to move the vessels towards lower carbon emissions. Adding ocean-going and marine vessels to the LCFS can motivate investments and open the market to lower CI fuels which can support the decarbonization of these vessels.

World Energy values CARB staff's work to finalize this LCFS rulemaking. We hope our concerns will be considered and incorporated before the rulemaking package is finalized and approved by the CARB Board. We are hopeful that the final package will be adopted on November 8<sup>th</sup> and implemented on schedule in January 2025 to send the appropriate market signals and ensure the continued success of the LCFS.

Sincerely,

World Energy Net Zero Services,

Scotf Lewis, President