August 27, 2024

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

RE: 15-Day Changes to CARB's LCFS Proposed Amendment

Ms Sahota:

I am writing on behalf of Nuseed, Americas and our general support of the Air Resources Board's 15 day amendment package to the LCFS published August 12th.

Nuseed is a global agriculture innovator enabling the transformation of select crops into renewable and traceable sources of lower-carbon energy, and plant-based nutrition. Nuseed's proprietary solutions like our Omega-3 canola and our Carinata product contribute to solving global challenges like food security, human nutrition, and climate change. Nuseed empowers growers and end-use customers to rapidly scale today to meet current and emerging demand for generations to come.

Established in 2006, Nuseed, with more than 400 employees, and sales in more than 30 countries, has multiple locations across North America, including regional offices in California and Alberta, as well as offices worldwide in South America, Europe and Australia. Nuseed is the seed technologies platform of Nufarm Limited (ASX:NUF).

Modifications to Section 95482
We note the elimination of aviation fuel as a deficit generator and applaud its continuation as an opt-in fuel. The Sustainable Aviation Fuel (SAF) market is still nascent and needs time to develop both supply chains and distribution chains. Allowing airlines operating within California to leverage the LCFS system will reward their climate mitigation efforts while continuing to minimize societal cost associated with achieving program goals.

We would recommend that ARB – in conjunction with other relevant state agencies – review the state of the SAF marketplace and issue a report of its findings prior to the next scoping plan update so that the scoping plan process will best reflect and include the emission reduction opportunities available in this critical area.

Modifications to Section 95483
The inclusion of a proposed cap on lipid-based crops is controversial and a dramatic change from what was proposed within the 45 day package of amendments; it has caused significant controversy and is likely to lead to litigation. We are concerned that its inclusion may ultimately delay Board consideration, thus causing further interruption in adoption of the LCFS amendment package.
Above all, Nuseed supports CARB's efforts to develop and enact regulation that leverages market forces to incentivize (and disincentivize) technologies and practices based on their merits and the application of sound science and hard data. CARB should steer clear of picking winners or losers based on crop

designation or species, but rather should focus on clearly measurable and demonstrable attributes that reflect performance with respect to carbon intensity. Only in this way can we ensure that all technologies and feedstocks have the opportunity to compete with one another on a level playing field, with their respective agronomic and sustainability performance forming the basis of their relative positions in the LCFS market. In addition to ensuring a fair market, such an approach also supports and stimulates innovation in plant genetics as well as in new cropping systems that are climate-friendly and food & feed positive.

It should also be considered that to call out and limit specific crop types from participation in the California market can have unintended consequences that may not yet be fully understood. For example, an artificial regulatory mandate (i.e., not market-driven) that impacts the soybean price matrix could have implications on animal protein and food costs. Such manipulation of the supply-demand balance could also result in increased use of such questionable feedstocks as imported used cooking oil (UCO), with uncertain origins and sustainability attributes that threaten to undermine the intentions of the LCFS. Similar knock-on effects would impact demand and consumption effects across the range of liquid fuels under the LCFS, including those most promising such as renewable diesel.

Modifications to Section 95484

We wholeheartedly support the proposal to modify both near-term and post-2030 stringency of the LCFS carbon intensity benchmarks. Like other environmental commodity markets such as the EU ETS and California's own cap-and-trade scheme, the LCFS has demonstrated over time a clear ability to find equilibrium with appropriate aggressive targets. Recent and repeated over-compliance and credit price decline is a clear indicator that continued growth in low-carbon fuels warrants increased stringency to bring deficits and credits back into balance at a stable price level.

Carbon intensity benchmarks are fundamental to the design of market-based programs like the LCFS. It's important to note that LCFS credit prices have fallen significantly below their 2020 peak and are now roughly on par with 2016 pricing in large part to over-compliance. As CARB has noted, a robust credit market is critical in offsetting costs and driving compliance in later years. As previously demonstrated, the change in stringency can be managed by the value chain while delivering Californians the low carbon fuels they demand.

Modifications to Section 95488 – 95488.3

In subsection 95488(d), staff proposes to give the Executive Officer discretion to stop accepting applications for new fuel pathways for biomass-based diesel starting January 1, 2031. Simply put, this is wrong-headed and does not reflect science and is ultimately unnecessary.

Limiting applications for new pathways will terminate any development of either new feedstocks or sustainable farming practices. It sends absolutely the wrong signal and is, in effect, backtracking on California's leadership role in setting climate policy. No similar provisions exist in any other state with Clean Fuel Standards nor is there a counterpart in the EU.

CARB's own projections indicate legacy combustion engines will persist well beyond 2031. As the provision alludes, biofuels will play a roll beyond that time as well. This measure would lock in biofuel CI's to legacy feedstocks potentially depriving California of lower CI alternatives. The tenets of AB 32 envisioned a technology neutral approach, while climate needs have changed and CARB has evolved to supporting ZEV's, at no time has policy retrenched to prevent science based and documented and verified alternatives from entering the market.

The Board should remove this section from the final adopted package.

On the other hand, in subsection 95488.1(d)(4), we strongly support the proposal to add "alcohol to hydrocarbons" to the illustrative list of drop in fuels, in order to clarify that drop in fuels include hydrocarbon fuels (e.g., sustainable aviation fuel (SAF)) derived from alcohols. A robust SAF market is absolutely critical to decarbonize aviation. Adding additional sources of SAF beyond lipids is prudent and smart policy.

We do note, with some irony, that CARB may create a catch-22 by limiting certain crop-based lipids (based in part based on concerns over the impacts to food production and ILUC as voiced by Board members Balmes and Sperling – see Board minutes Fall 2022 into Spring 2023) while opening the flood gates of corn and sugar production for alcohol to hydrocarbons.

Staff proposes to add specification of the geographic region to Table 6 in section 95488.3(d) identifying where land use change (LUC) carbon intensity was modeled for specific feedstock/fuel combinations. We support the use of geographic specific data in this regard.

In doing so, staff propose vesting with the Executive Officer (EO) the ability to make determinations that no value in Table 6 is conservatively representative of a particular region/feedstock/fuel combination and assign a more conservative LUC value. The EO is directed to use empirical evidence including but not limited to satellite-based remote sensing data for land cover monitoring, crop yields, and emission factors from the AEZ-EF model or carbon stock datasets in making the determination.

While we agree with the spirit of the proposal – protect carbon sinks, to introduce conservative assumptions could limit introduction and use of new feedstocks and cropping systems for which robust datasets are limited or do not yet exist. To paraphrase Sherlock Holmes, data, data, data.

Rather than a piecemeal and clearly "one-way" approach to addressing LUC, the Board should forgo this provision and direct staff to comprehensively review and update LUC data to reflect current farming and land-use practices this decade and to develop a broad update of not only the GTAP model, but the underlying assumptions as well. Further, the Board should require periodic updates in between changes to the Scoping Plan.

Modifications to Section 95488.9

We wholeheartedly support the phase in of Sustainability Requirements for Biomass. Nuseed has been working with international certification bodies for several years and is confident of our data and verification schemes. As with many other companies and participants in the global value chain for sustainable renewable fuels, the experience gained over the last several years has been driven in large part by European Union rules. Thus, we encourage careful examination of these rules and a consistent application of standards where appropriate. The 2008 cut-off date for the purposes of demonstrating no deforestation of other land conversion risks is one example.

We also support the concepts behind using best environmental management practices that reduce GHG emissions or increase GHG sequestration. However, CARB lists just four vague "practices" as meeting sustainability certification requirements (those that maintain or enhance biodiversity habitat on agricultural or forested lands; those that enhance soil fertility and avoid erosion or compaction; those that apply fertilizers in a manner that minimizes runoff, and soil and water contamination; and those that reduce unsustainable water use, and minimize diffuse and localized pollution from chemical residues). This short section of the regulation will undoubtedly be the target of much attention, and the interpretation of these words are critical to the success or failure of new innovative feedstocks and agricultural practices.

Staff missed a major opportunity to recognize and reference a *plethora* of conservation and sustainability programs and practices already available globally and for which clear definitions exist. For example, clear reference can be made to practices that are known to achieve these environmental results, such as the usage of intermediate crops, adoption of reduced- or no-till practices, and the avoidance of certain chemical applications. Further detail can also be included to specify the performance levels that constitute "sustainable" practice across the board. A clear example are the words "reduce unsustainable water use."

To leave the definition of what qualifies as sustainable water use up to the verification bodies alone will contribute to a lack of standardization across the LCFS program, and ultimately lead to more and less stringent verifiers rather than consistency. CARB should seek to avoid implementing policy that will encourage such "verifier-shopping." Worse, the amendment contains, "but not limited to" language without addressing a process by which other practices can be identified, quantified and deployed.

The approach in this section is clearly a stick – the value chain must do these things or the feedstock won't qualify. If the goal is to achieve lower CI fuels for Californians, the same approach that rewards things like innovative production, solar, wind and geothermal process energy, carbon capture and sequestration, development of infrastructure (in the case of ZEVs), then CARB should recognize the positive impact climate smart sustainable farming practices have and reward them through lower CIs and participation in credit generation.

As staff should know, the current administration has been a strong proponent of climate smart agriculture and is expanding the role it plays within the USDA and for farmers. In no way should CARB limit the ability of the federal government to develop its own data driven certification regimes based on US developed plans and criteria. We recommend eliminating the 2025 limitation and allow for the US federal government to develop its own certification regimes eligible for the LCFS. Waiting to refine this section until the next update will artificially handcuff the system and overwhelm the accreditation regimes in place.

Thank you for the opportunity to provide comments. We recognize the significant amount of time, energy and effort by all in developing the proposed changes to the LCFS program.

Sincerely,

Scott R. Hedderich
North America Policy and Government Affairs Director