August 27, 2024

California Air Resources Board
1001 I Street
Sacramento, CA 95814

The Honorable Liane Randolph
Chair, California Air Resources Board

Steve Cliff
Executive Officer, CARB

RE: UNICA's Comments on Proposed 15-day Changes to LCFS

The Brazilian Sugarcane and Bioenergy Industry Association (UNICA) appreciates the opportunity to provide additional feedback on the recent amendments proposed to the Low Carbon Fuel Standard before the vote to reform the program later this year. UNICA directly represents more than half of the ethanol production in Brazil, including its largest producers and is deeply committed to our partnership with California, to the success of the LCFS market, and the stability of this policy which will influence many other markets. UNICA is pleased to support the recent proposed amendments, which will accelerate low-CI fuel adoptions while strengthening the credit market, phase in proven sustainability criteria, and elevate the standards of the global biofuels market. With the exception of a few concerns highlighted below, we look forward to aligning with CARB's guidance in supplying this energy transition.

Above all, UNICA would like to emphasize three general themes. First, we appreciate that key elements of the policy are phased in to allow for conformity and implementation efforts to play out, and that discretion is granted to the Executive Officer to intervene when there is overwhelming data or evidence to support a shift in course or a corrective decision. Second, we encourage CARB to continue its leadership on the international stage and prioritize alignment with international biofuels standards and reporting schemes where possible. As an international producer in an increasingly global commodity market, duplicative, contradictory, and unnecessary requirements are a constant concern. Lastly, we applaud CARB for its history in maintaining a tech-neutral approach within the LCFS. Innovation is not exclusive to zero-emission fuels, it is constantly occurring in the biofuels sector and this should be reflected in updated CI and ILUC scoring.

Updates to ILUC Scores at Executive Officer's Determination

The proposed amendment to §95488.3(d)(2) introduces a process to assign a more conservative indirect land use change (iLUC) when empirical data is convincing,

including satellite-based monitoring and crop yields, to determine appropriate iLUC values. To ensure scientific rigor and fairness, it's crucial that CARB establishes a clear public process and expectations for these determinations. This should include early communication with stakeholders, transparency in methodologies, and a public consultation process for discussing new or altered iLUC values. CARB should also consider lowering iLUC values when necessary, rather than only considering adjustments that could negatively impact certain feedstocks and fuels.

Brazilian second-crop corn illustrates the need for such a thorough and transparent approach. Not all corn is equal in carbon intensity, which varies considerably based on farming practices, use of byproducts, industry energy source, etc. and encourages CARB to analyze these important differences. The current global default value for corn does not account for the low-risk and low-CI characteristics of this specific feedstock that are objective and relatively simple to audit. We urge CARB to recognize Brazilian farming and industrial practices, particularly the double-cropping of soy and corn, and the role of renewable biomass in establishing Brazilian second-crop corn as a low-CI and low-iLUC feedstock. Key factors include improved agricultural practices, available soybean land for corn expansion without additional land use, and documented negative iLUC for Brazilian corn ethanol. For example, CORSIA and ISCC have recognized zero or negative iLUC values for secondary and sequential crops, including Brazilian corn ethanol, classifying it as Low LUC risk. These factors warrant a thorough review by CARB.

On that note, we argue there is not substantial evidence that direct land use changes are occurring in production of Brazilian ethanol, as more recent data than that being used by CARB shows increased production through higher yields rather than expanded acreage. The proposed amendments fail to recognize significant carbon intensity (CI) improvements achieved by Brazilian mills, including advancements in sugarcane ethanol production that align with the proposed sustainability criteria, expanded use of multi-cropping, and utilization of waste-based feedstocks like 2G ethanol from bagasse. These innovations, unique to Brazil, are not reflected in CARB's current CI calculators, creating disadvantages both in the scoring of the production process and pathways factors in bringing the feedstock to consumers. For example, UNICA producers utilize less than 1% of Brazilian land, and have enhanced productivity through investments such as nearly ubiquitous mechanized harvesting (~99%) despite modeling accounting for only 80%. Despite these efforts, CARB applies outdated and overestimated ILUC penalties based on data from 2013-2015, ignoring more recent studies[1] that demonstrate reduced or even negative land use change emissions. Furthermore, CARB's models overlook sustainable practices like pasture recovery and second-crop harvesting prevalent in Brazil. Recent research[2] confirms that sugarcane has expanded over existing agricultural lands without causing deforestation, and Brazil's sugarcane can greatly expand production sustainably.

Sustainability Criteria and Third-party Certification

UNICA is proud of its members' strong international standing in sustainability

---

[1] Guarenghi,M.M.; Garofalo, D.F.T.; Seabra, J.E.A.;Moreira,M.M.R.; Novaes, R.M.L.; Ramos, N.P.; Nogueira, S.F.; de Andrade, C.A. *Land Use Change Net Removals Associated with Sugarcane in Brazil*. Land 2023, 12, 584. https://doi.org/10.3390/land12030584

[2] https://www.mdpi.com/2073-445X/12/3/584

certifications. Brazil's leadership is evident, with 1.6 million hectares (84.2%) of the global Bonsucro-certified area and producing 96 million tons (80%) of certified sugarcane, with 89 of the world's 165 Bonsucro-certified mills (54%) held by Brazilian ethanol producers. Many UNICA members, particularly exporters, also hold ISCC (International Sustainability & Carbon Certification), with some already certified for or in the process of obtaining ISCC CORSIA certification, essential for the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA). Domestically, 121 of the 127 UNICA member mills are accredited by RenovaBio, representing approximately 75% of Brazil's ethanol production. Those without active accreditation are deactivated mills. In São Paulo, the Greener Ethanol Protocol certifies 129 ethanol plants and 13 supplier associations as of 2023. All exporting UNICA members hold at least one ISCC or Bonsucro certification, meeting internationally recognized standards like European Union Renewable Energy Directive (EU RED) and CORSIA. In particular, we are encouraged by the proposed amendment's recognition of EU RED as an approved certification system.

Given the foreseeable complexity and costs of altering these established accreditation programs by 2031, UNICA urges CARB to plan to utilize established certification schemes to avoid duplicating efforts and imposing unnecessary burdens. We advocate for a regional approach to standards and certifications, accommodating local variables to the sustainability criteria, and appreciate the intent to afford time to seek additional feedback to better align the policy with regional nuances and existing certifications. We support sustainability criteria if they are transparent, affordable, and aligned with existing certification schemes like ISCC, Bonsucro, and RSB. While confident in Brazilian producers meeting established standards, we are concerned that the proposed amendments could introduce vague and costly compliance challenges by delegating final authority over qualification determinations to external parties.

New Restrictions on Use of Biomass

UNICA expresses concerns about the proposed lengthy addition of policy in §95488.9(g), which pertains to new sustainability criteria for fuel pathways derived from biomass, which for Brazilian ethanol producers includes extensive and efficient utilization of straw, residues, and other byproducts. Due to the complexity of these issues, UNICA contends that more time would be needed to ensure these new concepts can be properly implemented and does not lead to unintended consequences. We support rigorous life cycle assessment methods that accurately measure biofuel emissions and reward lower-carbon feedstocks, however this well-intended effort to improve CI assessment accuracy may unfairly penalize biofuel CI scores or exclude certain feedstock sources entirely. We recommend a more deliberate, balanced approach that allows CI scores and program eligibility to reflect actual environmental performance, positively or negatively.

More specifically, if not delayed, we suggest that CARB establish clear and more detailed requirements and definitions for the life cycle analysis of renewable biomass. This includes clarifying the limits and more granular details of definitions for important stages such as "chain-of-custody evidence", "land cultivation", "point of origin", "first gathering point", "processing unit", and "wastes/residues" to ensure consistency. Further, UNICA encourages more accurate measurement of carbon footprints and environmental impacts for biomass combustion that provides clear guidance on the impact on a producer's economics.

SAF and Other New Technologies

UNICA is encouraged by CARB's move to tighten the CI benchmarks for fuels beyond its previous goals, and the secondary market effects that will inspire. With California's climate policy influencing beyond its borders, it's crucial that CARB's evaluation of biofuels remains consistent and up-to-date, reflecting modern scientific evidence. We urge a reevaluation of the efficiencies in Brazilian sugarcane production, as well as ensuring consideration of innovations in second generation ethanol production, regenerative agricultural practices, and accurate mill-level data which will further delineate ethanol from certain biofuels which feature concerning supply chains and lifecycle emissions. The benefits of low-CI ethanol will be enhanced with the adoption of higher blends such as E15, greater utilization of E85 and flex-fuel vehicle technology, and incentivizing capital investments in sustainable aviation fuels (SAFs) and maritime biofuels.

UNICA members are proudly supplying the US's SAF supply chain and see this as a crucial market for growth and a natural transition for the biofuels industry. We understand that CARB wants to take a measured approach to including aviation and other tough to electrify sectors into the LCFS, but encourage steps to spur the market and drive investments as this program has done for more than a decade. We encourage stronger steps once this market matures and stabilizes and expresses our commitment to improving the US's ability to meet feedstock demand.

Lastly, we want to emphasize the potential for ethanol to contribute to energy affordability efforts while also encouraging more sustainable choices by California consumers. For that reason, we support the proposed 9% step down, the effort to bolster the credit prices in the market to drive targeted investments, and further cuts by 2045. Ethanol remains essential for equity and affordability in the LCFS, offering significant savings, especially with higher blends like E85, which is priced significantly lower than gasoline. Expanding ethanol blends could further enhance affordability and reduce emissions, benefiting consumers and the environment alike.

Conclusion

We appreciate the opportunity to provide this feedback and look forward to engaging with CARB staff on the critical need to achieve a balanced approach with these proposed amendments. CARB's policy guidance and incentives have driven substantial improvements in ethanol production, and we remain dedicated to advancing these efforts within our industry. While we support CARB's reasoning and thoughtful work to implement sustainability criteria, including third-party accreditation, feedstock sourcing tracking, and resource management, we urge careful consideration of the potential for unintended consequences. It is essential that the policy reflects local context and acknowledges existing certifications that already deliver significant economic, social, and environmental benefits.

Thank you for your consideration.

Sincerely,

Austin Heyworth
UNICA, North American Representative