CALIFORNIA BIOENERGY
Helping dairies fuel a renewable future
2134 E. Mineral King Ave
Visalia, CA 93292
559-667-9560

March 15, 2023

Ms. Cheryl Laskowski
Branch Chief, Low Carbon Fuel Standard Team
California Air Resources Board

Submitted via LCFS Comments Upload Link

RE: CalBio Comments on CARB's February 22, 2023 Public Workshop to Discuss Potential Changes to the Low Carbon Fuel Standard

Dear Ms. Laskowski:

Thank you for the opportunity to provide comments to the California Air Resources Board (CARB) on the workshop to address "Potential Changes to the Low Carbon Fuel Standard," as presented by Staff on February 22, 2023.

California Bioenergy LLC (CalBio) is a leading developer of dairy digester projects. Founded in 2006, CalBio works closely with California dairy farm families, dairy co-ops and cheese producers, CARB, the California Department of Food and Agriculture (CDFA), the California Public Utility Commission (CPUC), the California Energy Commission (CEC), and the U.S. Environmental Protection Agency (EPA). It develops projects that reduce greenhouse gas (GHG) emissions, improve local air quality, protect water quality, and create local jobs. It produces renewable natural gas and generates electricity, both used as a vehicle fuel to power low emission trucks, buses, and cars. CalBio's 50+ operating California projects are preventing over 1 million tons of CO2e from being emitted into the atmosphere each year. With a strong LCFS price and certainty of the program's stability and CDFA's support it has funding resources identified to double, and potentially triple, methane reductions over the next 5 to 7 years, from 1 million to 2 to 3 million metric tons per year.

The Low Carbon Fuel Standard (LCFS) program is the nation's leading and most successful example of a market-based carbon reduction regulation for the transportation sector. The program has been instrumental in supporting the growth of a broad portfolio of low carbon transportation fuels for use in California and their associated reductions in GHG emissions. RNG projects have two local environmental benefits. First, the digester reduces emissions and odors at a dairy by covering the lagoons, which is a unique benefit of California projects. Second, all dairy projects by fueling RNG trucks, reduce NOX by 90% relative to fossil or renewable diesel, providing needed air pollution reductions and particularly benefiting disadvantaged communities. In addition, CalBio, as a local company, creates high-quality, clean energy jobs in the San Joaquin Valley, a low-income area, with historic high unemployment.

As discussed in the workshop and below, CalBio provides its comments on the following topics:

1. **CalBio supports a 35% CI reduction target, combined with a near-term step down to 18% in 2024 and implementation of a compliance target acceleration mechanism.**
2. **The proposal to phase out avoided methane crediting should be removed and dairy projects should remain voluntary.**

3. **To ensure project financing, it is important for dairy projects to remain eligible for the LCFS program until an alternative RNG procurement program is established.**
4. **Pathway Streamlining, Tier 1 Calculator Improvements, and other topics.**

CI Targets and Compliance Target Acceleration Mechanism

CalBio supports the concept of a "CI-target accelerator" which would dynamically respond to current market conditions as California encourages the expansion of low carbon fuels in the transportation sector. This mechanism should be coupled with a 2030 CI target of at least 35 percent in 2030 including a step-down CI target beginning in 2024 of 18%.

This combination of policy adjustments will set the long-term signal needed to enable further investment in low-carbon fuels and bring credit and deficit production back into balance. As outlined in the Scoping Plan and Governor Newsom's letter submitted to CARB on July 22, 2022[1], more action is needed to meet the state's 2030 climate goal and 2045 statewide carbon neutrality target. CalBio urges CARB to continue stimulating large quantities of low carbon fuels in a cost-effective manner which is aligned with the state's Scoping Plan and enabling hundreds of millions of tons of additional GHG reductions, public health, and community benefits to be delivered.

CalBio is Strongly Opposed to the Proposed Phase Out of Avoided Methane Crediting

Key messages

- Avoided methane crediting for voluntary methane mitigation projects is a widely accepted GHG accounting standard. CARB limits this to only ten or fifteen years which is insufficient to motivate new projects or sustain existing projects. An LCFS program without a crediting duration limit will result in the required capital to achieve the very substantial 2030 methane reduction goals.
- In addition, avoided methane crediting should remain indefinite to prevent leakage unless a federal requirement is enacted to control emissions. Only with a national mandate would there a level playing field across the country. Cheese, butter, milk powder and other transportable products can be produced in other locations and demand is growing. If California regulated emissions, it will accelerate the movement of milk cows and methane emissions to other unregulated locations with unregulated methane emissions.
- Removal of avoided methane crediting risks cost of production exceeding cost of operations and thus existing digesters shutting down, reversing the methane reduction accomplishments of California. This will especially be the case with low and unstable prices for smaller dairy digester projects.

As discussed in the workshop, CARB is considering phasing out avoided methane crediting in the LCFS program, to end crediting by 2040 and will only accept new pathways through 2030. CalBio believes this is counterproductive to CARB's goals of helping California achieve its in-state methane reduction goals (SB1383[2], 2030 climate target[3], and net zero target by 2045[4]). Signaling an end to avoided methane

[1] https://www.gov.ca.gov/wp-content/uploads/2022/07/07.22.2022-Governors-Letter-to-CARB.pdf?emrc=1054d6
[2] https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB1383
[3] https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB32
[4] https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp.pdf

crediting will discourage investment in new projects, puts existing dairy digesters at risk of becoming stranded assets, and reduces the amount of biomethane available for use as hydrogen, electric fuel, and non-transportation sectors.

CalBio believes CARB should recognize and build upon the effectiveness of its voluntary methane reduction strategies. To ensure success, it needs to continue avoided methane crediting for years to come over multiple crediting periods. The reason the digester industry has had the success that it has in helping the state achieve progress towards meeting its climate goals is because the right mix of policies and incentives were in place. CARB should seek to be consistent with the long-established state policy and strategies it has put in motion to reduce methane emissions.

For dairy digester projects to continuing preventing manure methane emissions, investors need assurance that dairies will remain unregulated and avoided methane crediting will be preserved prior to committing any more capital towards the development of projects. Voluntary implementation of manure methane emission capture projects in a non-regulated environment are internationally recognized as climate benefiting and for generating avoided methane CO2e credits.

This unregulated additionality is especially important for California dairy RNG as CalBio works to develop these assets now to later be directed to the hard-to-electrify/decarbonize sectors of California's economy. Maintaining the negative carbon attributes allows for a lower and more commercially acceptable renewable gas price (lower $/MMBTU of heating value) as the carbon attributes can be stripped off and sold separately. Lack of an understanding and confirmation of how California dairy RNG can be competitively marketed after the LCFS program will prohibit the deployment of the needed $1 - $1.5B of private sector capital.

Confirmation of permanent unregulated additionality combined with a CI target of 35% solves substantially for the increased costs per MT of reductions and the reductions in grant funding.

Alternate RNG Procurement Program

Key messages

- If CARB wants to incentivize biomethane to supply non-transportation sectors, more clarity is needed on how an alternative RNG procurement program will be structured and what economic drivers can be put in place to incentivize the movement of biomethane into harder to decarbonize end-uses.
- Continued participation in the LCFS Program is needed until alternatives are developed.

In the recently approved Scoping Plan[5], CARB has suggested that biomethane use in California will transition out of transportation and into other sectors such as residential, industrial, commercial, and other end-uses. If CARB desires biomethane to be directed to hydrogen or other non-transportation sectors, the solution is not to eliminate avoided methane crediting from the LCFS. The solution is to develop new incentive programs to bring about the success that has been realized in the LCFS program into other sectors. Such a policy will increase the demand and development of dairy digester projects which would otherwise not occur, resulting in significant methane reductions and enabling the state to achieve its climate goals faster. Eliminating avoided methane crediting would simply put a chill on investment opportunities for new methane capture projects, regardless of the final end-use.

[5] https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp.pdf

CalBio has built and is committed to developing more projects to serve the growing electricity demand in the state to power electric vehicles using clean electric generation technology. The Scoping Plan sets a target to transition 100% of all vehicle class sales to electric by 2045[6]. This timeframe corresponds well for CalBio, and other dairy developers, to migrate over time to an increased production of electricity and/or hydrogen as near zero natural gas trucks are replaced by even cleaner vehicles as those technologies emerge. Given its experience and location, CalBio will be ready to provide in-state reductions to California fleets as they convert from diesel-to-electric or from CNG-to-electric vehicles. However, significant new investments will be required, and this fleet conversion will be all the more likely and occur more quickly if the avoided methane credit remains to be shared along the value chain.

One of the "Strategies for Success" laid out in the Scoping Plan to achieve carbon neutrality was the recommendation to install state-of-the-art anaerobic digesters that maximize air and water quality protection, maximize biomethane capture, and direct biomethane to sectors that are hard to decarbonize or as a feedstock for energy[7].

CalBio believes CARB should act consistently with the Scoping Plan by recommitting to dairy methane capture as a key low carbon energy source and methane abatement strategy. However, it is premature for CARB to push dairy biogas into other sectors when there is still a substantial need to decarbonize transportation and no other markets exists as a viable alternative.

Pathway Streamlining, Tier 1 Calculator Improvements, and other topics

Of the other topics that were discussed during the workshop, CalBio supports the following:

1. Retroactive issuance of LCFS credits during the temporary CI phase. Providing the full CI value will correct for substantial losses in revenue as well as reduce the complexity and cost of gas storage.
2. Expedite California pathways so California dairy farmers do not need to wait 18+ months for their first LCFS revenues.
3. Allow for temporary CI crediting for biogas-to-electric projects. Electric LCFS should be treated the same way as RNG LCFS for both temporary CI and retroactive issuances.
4. Approve a book and claim LCFS pathway for California dairy RNG to be delivered to off-site remote electric generation facilities. This will allow biomethane to continue to expand its contribution to the electric transportation conversion in State and to be delivered to high efficiency power plants that are not always available for small on-site generators.
5. Add a California DEBs (Direct Environmental Benefit) feature for encouraging in-state produced dairy RNG versus out-of-state renewable diesel, similar to the DEBs feature of the California Climate Offset program. The improvements to local air quality, by capturing and eliminated lagoon pond gases, are substantial as is the 90% reduction in NOX from the conversion of diesel fleets to RNG.
6. There is still an opportunity to enable immediate improvement of air-quality through the conversion of diesel to CNG trucks while heavy-duty electric trucks move from concept to widespread commercialization. CARB should incentivize the utilization of CNG trucks, making up for the decline from municipal bus fleets, to ensure sufficient demand for RNG resources.

[6] https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp.pdf
[7] ibid

7. Modify the Tier 1 Simplified CI Calculator for Biomethane from Anaerobic Digestion of Dairy and Swine Manure so as to allow standardized projects to go through a more streamlined review process.

CalBio commends CARB for developing the LCFS as the nation's leading and most successful example of a market-based carbon reduction regulation for the transportation sector and we thank CARB for considering these comments. We strongly encourage CARB to ensure the program continues to support further investment in dairy digesters which uniquely bring about significant near-term GHG emission reductions, in-state renewable energy jobs, and a reduction in local air pollutants.

Sincerely,

Andrew Craig
Vice President, Greenhouse Gas Programs
California Bioenergy LLC