June 14, 2023

VIA ELECTRONIC FILING

Cheryl Laskowski
California Air Resources Board
1001 I Street
Sacramento, California 95814

Re: RNG Coalition Comments on May 31 and June 1 Low Carbon Fuel Standard Community Meetings

Dear Dr. Laskowski:

The Coalition for Renewable Natural Gas (RNG Coalition) is a California-based nonprofit organization representing and providing public policy advocacy and education for the Renewable Natural Gas (RNG) industry.[1] RNG Coalition respectfully submits these comments to the California Air Resources Board (CARB) in response to the May 31 and June 1, 2023, Low Carbon Fuel Standard (LCFS) Community Meetings (Meetings). We thank CARB staff for holding these important opportunities for community input.

Agricultural RNG projects were one of the most frequent areas of public comment during the Meetings—with strong and passionate testimony both for and against continued LCFS crediting to such Anaerobic Digestion (AD) projects. While we always support additional stakeholder dialog around AD and RNG issues, we note that the facts on these issues have not changed and CARB has held extensive stakeholder outreach on these topics over the last decade, as required by Senate Bills (SB) 605 (Lara, 2014)[2] and SB 1383 (Lara, 2016).[3]

No new substantive information was raised at the Meetings that should cause CARB to change treatment of dairy and swine RNG crediting in the LCFS. Changing tack now would risk dramatic backsliding in greenhouse gas emission (GHG) reductions already accomplished and put at risk the state's statutory GHG reduction goals.

The Underlying Facts that Justify LCFS Crediting to Ag RNG Projects Have Not Changed, CARB Should Rely on Extensive Prior Public Process and Leave the Current Framework in Place

SB 605 required that CARB complete a comprehensive strategy to reduce emissions of short-lived climate pollutants (SLCP) in the state and hold at least one public workshop during the development of the strategy. CARB did so, developing the *Short Lived Climate Pollutant Reduction Strategy*[4] (SLCP Strategy) in March of 2017 with input from, "state and local agencies, academic experts, a working group of agricultural experts and farmers convened by the California Department of Food and Agriculture (CDFA), businesses, and other

[1] For more information see: http://www.rngcoalition.com/
[2] https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140SB605
[3] https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB1383
[4] https://ww2.arb.ca.gov/sites/default/files/2020-07/final_SLCP_strategy.pdf

interested stakeholders in an open and public process".[5] Throughout this process, CARB "sought advice from academic, industry, and environmental justice representatives".[6] The SLCP Strategy contained extensive economic analysis of agricultural RNG projects[7] and found that:

> *The LCFS and the federal Renewable Fuel Standard (RFS) incentivize the use of renewable natural gas as a transportation fuel, creating large revenue potential within the dairy manure and organic diversion measures. These programs in particular can help support cost-effective projects to reduce methane from the dairy and waste sectors. Without the LCFS or RFS programs, additional sources for financial incentives and funding may be needed.*[8]

SB 1383 further required that CARB provide a forum for public engagement on these issues by holding at least three public meetings in geographically diverse locations throughout the state where dairy operations and livestock operations are present. CARB went above and beyond this requirement and conducted almost two years of stakeholder engagement on these topics through a Dairy and Livestock Greenhouse Gas Reduction Working Group (Working Group).[9]

The three subgroups of the Working Group held 28 meetings that were open to the public for in-person and remote attendance and participation. The subgroup meetings typically included "information presented by subject matter experts and representatives from academia, industry, and non-governmental organizations, including environmental justice advocates" and environmental justice experts served on the subgroups.[10] The full Working Group—composed of the principals at CARB, the California Department of Food and Agriculture (CDFA), the California Energy Commission (CEC), and the California Public Utilities Commission (CPUC)—held three public meetings. This led to a set of recommendations, including a recommendation to stabilize LCFS price support to ag RNG projects through a pilot financial mechanism that was never acted upon.

In March of 2022 CARB held another extensive public discussion of these topics, conducting an all-day workshop on *Methane, Dairies and Livestock, and Renewable Natural Gas in California*.[11] This workshop contained an in-depth presentation from CARB on LCFS mechanics.[12] In the same month CARB released an *Analysis of Progress toward Achieving the 2030 Dairy and Livestock Sector Methane Emissions Target*[13] after taking extensive public input[14] on a draft of that analysis. In the *Analysis of Progress* document CARB provided further analysis of LCFS and RFS environmental credit prices on ag AD project economics and continued to support AD as a primary means to reduce dairy manure methane emissions.

Agricultural RNG projects are also a clear example that tests the thesis that investments based primarily on LCFS revenue—and GHG emission reduction benefits in general—is a feasible business model. Agricultural RNG development is the first major low carbon fuel industry built primarily around the LCFS program and it has only been successful because it was stood up by CARB based on the extensive public process described above. Major changes to this framework—without substantive new information—would undermine prior efforts to convince investors to make long-term capital deployment decisions based on LCFS credit value

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[5] CARB SLCP Strategy, p. 25.
[6] Ibid.
[7] CARB SLCP Strategy, *Appendix F: Supporting Documentation for the Economic Assessment of Measures in the SLCP Strategy*. https://ww2.arb.ca.gov/sites/default/files/2021-01/appendixF-SLCP-Final-2017.pdf
[8] CARB SLCP Strategy, p. 107.
[9] *Recommendations to the State of California's Dairy and Livestock Greenhouse Gas Reduction Working Group* https://ww2.arb.ca.gov/sites/default/files/2020-11/dairy-subgroup-recs-112618.pdf
[10] Ibid., p. 3.
[11] https://ww2.arb.ca.gov/our-work/programs/slcp/meetings
[12] https://ww2.arb.ca.gov/sites/default/files/2022-04/dairy-ws-session-9-CARB.pdf
[13] *Analysis of Progress Toward Achieving the 230 Dairy and Livestock Sector Methane Emissions Target,* p. 22, March 2022, California Air Resources Board, https://ww2.arb.ca.gov/sites/default/files/2022-03/final-dairy-livestock-SB1383-analysis.pdf.
[14] https://www.arb.ca.gov/lispub/comm2/bccommlog.php?listname=draft-dl-analysis-ws

specifically, and California's climate strategies more generally.[15] Therefore, CARB should leave the current framework in place.

External Academic Analysis Shows that CARB's Strategy is Working

Methane is a highly potent greenhouse gas (GHG) with impacts greater than 80 times that of carbon dioxide over a 20-year period. Realistically, if California wants to continue to lead globally on critical reductions in this SLCP from dairy and swine operations they cannot consider significantly upending their approach every few years, especially if the existing framework continues to demonstrate success. Recent UC Davis analysis shows continued implementation of California's incentive-based dairy methane reduction efforts will, by 2030, achieve the full SB 1383 40% reduction goal.[16]

This is a powerful and important finding. California's dairy industry, with support from the LCFS and other key programs (e.g., CDFA grants and the federal Renewable Fuel Standard), is on a course to meet the methane reduction challenge required by California law. In terms of both emission reduction and cost effectiveness, these are some of the state's most successful climate protection activities.[17]

Any changes to the treatment of agricultural RNG activities in the LCFS would likely directly contradict the state's prior existing emissions reduction strategy for dairy manure methane, ignore the extensive stakeholder engagement work conducted by state agencies on these topics detailed above, discourage a new RNG industry that has been coalesced primarily to reduce greenhouse gas emissions, and most importantly disincentivize investment in one of the most effective methods of methane abatement that the state fundamentally needs to use to reach its statutory goals.

The Federal EPA Has Long Supported Ag AD Projects for a Variety of Proven Environmental Benefits

AD is a proven method of capturing methane from manure management that has been promoted and carefully studied by the United States Environmental Protection Agency (EPA) for more than 20 years.[18] As described by AD proponents at the Meetings, in addition to GHG benefits, AD helps reduce hydrogen sulfide and odors, prevents the propagation of flies, and reduces the exposure of farm residents and nearby communities to disease vectors. With proper nutrient management systems, digesters help to promote soil health by converting the nutrients in manure to forms more accessible to plants that can directly replace fossil-fuel derived chemical fertilizers.[19] As a transportation fuel, AD-derived RNG improves air quality across the state—but especially along transportation corridors where many environmental justice communities are located—by displacing diesel, thereby reducing emissions of both diesel particulate matters and smog-forming oxides of nitrogen in near-zero emission natural gas trucks, fuel cell vehicles, or electric vehicles.[20]

The Scenario Presented at the Meetings is Likely Not Permissible Under Current Statute

Current California law requires a guaranteed LCFS crediting period to agricultural RNG projects.[21] Therefore, simply walking away from the existing projects, and allowing the farms to return to freely emitting methane to the atmosphere—as suggested in the "EJ Scenario" presented by Professor Michael Wara analysis at the

[15] For the initial years of the LCFS, prospective low carbon fuel producers included anticipated credit revenue in financial models and the investors would ignore or heavily discount the LCFS line item, due to perceived change in law risk (colloquially called "stroke of the pen" risk).
[16] *Meeting the Call: How California is Pioneering a Pathway to Significant Dairy Sector Methane Reduction*, December 2022, Kebreab, Mitloehner and Sumner, https://clear.ucdavis.edu/news/new-report-california-pioneering-pathway-significant-dairy-methane-reduction
[17] CARB, *Analysis of Progress Toward Achieving the 2030 Dairy and Livestock Sector Methane Emissions Target*, p. 17, Table 3.
[18] https://www.epa.gov/agstar/agstar-accomplishments
[19] https://www/epa.gov/agstar/benefits-anaerobic-digestion.
[20] https://ww2.arb.ca.gov/sites/default/files/2020-07/dairy-emissions-matrix-113018.pdf
[21] California Senate Bill 1383 (Chapter 395, Statues of 2016). https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201520160SB1383.

Meetings—is not in line with current statutory requirements. Therefore, this scenario should not be seriously considered by CARB.[22] SB 1383 requires that, at a minimum, if CARB chooses to develop a mandatory control requirement for manure methane, LCFS crediting to agricultural RNG projects must be allowed to finish their crediting periods.[23] Further, we do not believe that a major CARB manure methane control regulation could be completed in time to go into effect in 2024, given that no formal regulatory activity on such a measure has commenced thus far.

As RNG Coalition has stated in prior LCFS comments, a California-only mandate for dairy manure methane control would likely drive "economic leakage" unless LCFS support continued as well. Economic leakage in the environmental context occurs when a regulatory environment in one jurisdiction drives the migration of a key business sector to another region without similar regulations. This can lead to simply shifting the pollution location without any global reduction in GHGs. This is particularly likely to occur in markets with the demand for the product is steadily increasing, such as the dairy market.[24]

Although demand for liquid beverage milk is declining, and milk substitutes have emerged, US supply and demand for total milk products (both per capita and in aggregate) continues to grow.[25,26] These facts make it challenging for individual states, even a large dairy state such as California, to require control of manure methane unilaterally. However, it is possible that a federal requirement, or a mandate developed by a coalition of like-minded dairy states could be effective. We advise proponents of such a shift from "carrots" to "sticks" that, for such a transition to be effective it will require the cooperation of both the California dairy and RNG industries.

The current LCFS rule already contemplates an appropriate phase-out of avoided methane crediting once mandatory control requirements are in place. Section § 95488.9(f)(3)(B) of the current LCFS rule states that:

> *"…in the event that any law, regulation, or legally binding mandate requiring either greenhouse gas emission reductions from manure methane emissions from livestock and dairy projects or diversion of organic material from landfill disposal, comes into effect in California during a project's crediting period, then the project is only eligible to continue to receive LCFS credits for those greenhouse gas emission reductions for the remainder of the project's current crediting period. The project may not request any subsequent crediting periods."*

We recommend that Professor Wara model such a phase-out of LCFS crediting, as required by statute. However, we do not support changes to the LCFS regulatory text that would *require* phase-out of avoided methane crediting *without* a suitable replacement policy. If CARB pursue such a path the outcome is very likely to be a halt to project development and backsliding to freely venting methane at many farms.

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[22] In the "EJ Scenario" dairy gas volume falls from five million MMBtu in 2022 to zero in 2024. We interpret this to mean that RNG projects currently capturing and using their methane have gone bankrupt and the dairies have returned to emitting the methane to the atmosphere. https://ww2.arb.ca.gov/sites/default/files/2023-05/Stanford%20Presentation.pdf (see slide 8)

[23] CA HSC § 39730.7(e) states that CARB "shall ensure that projects developed before the implementation of regulations adopted pursuant to subdivision (b) receive credit for at least 10 years. Projects shall be eligible for an extension of credits after the first 10 years to the extent allowed by regulations adopted pursuant to the California Global Warming Solutions Act of 2006."

[24] Office of Environmental Farming and Innovation, California Department of Food and Agriculture, March 29th 2022 Workshop Presentation, Slide 3, Dr. Amrith Gunasekara, Manager. https://ww2.arb.ca.gov/sites/default/files/2022-04/dairy-ws-session-2-CDFA.pdf

[25] USDA, *Dairy Products: Per Capita Consumption, United States (Annual)*, last updated 9/30/22. https://www.ers.usda.gov/webdocs/DataFiles/48685/pcconsp_1_.xlsx?v=4825

[26] USDA, *US Milk Production and Related Data*, last updated 8/15/22. https://www.ers.usda.gov/webdocs/DataFiles/48685/quarterlymilkfactors_1_.xlsx?v=4825

There is No Evidence of a Perverse Incentive to Increase Farm Size from LCFS

LCFS credits from biomethane production does *not* incentivize manure production by increasing herd size. Even skeptical academic experts studying this issue[27] have found no empirical evidence to support the "perverse incentive" claims that underly some of the oral comments made at the Meetings by uninformed anti-dairy voices.

Dairy RNG, at current transportation GHG market prices, generates only a small fraction of the gross revenue that is created by milk-sales. What is more, only a small share of that revenue goes to the farmer—the majority will be distributed to cover the costs of the digester developers, the gas marketer, the credit broker, end users (e.g., fleets adopting clean vehicles), the investors, and the banks. Meaning that the farmer does not make enough additional revenue from RNG to justify increasing herd size. However, the additional LCFS revenue from RNG production *is* critical to help defray the cost of an anaerobic digestor and encourage the transition toward a model of sustainable agriculture.

Even at higher prices, the LCFS incentive is unlikely to shift farm behavior. Dairy farmers are in the business of milk production and not RNG production. Agricultural voices that run dairy farms provided oral comment to this effect at the Meetings in direct response to questions from CARB Staff. RNG production at farms is usually handled by third-party project developers who constitute a large share of RNG Coalition's membership. These firms take substantial financial risk on these projects, historically because of explicit direction to do so from CARB and other California leaders. As described in prior RNG Coalition LCFS letters, destroying these green businesses with a stroke of a pen would undermine all faith in the LCFS in the clean tech investment community.

Conclusion

California has proven that investment in AD with productive energy use is one of the most effective and readily available opportunities to achieve immediate fugitive methane emissions reductions from dairy and swine farms, and RNG has played a key role in supporting the successes of the LCFS. It's important that CARB focus on forward-looking improvements to the LCFS instead of considering eliminating tools that work to achieve the agency's statutory goals.

Sincerely,

/s/

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[27] Smith, Aaron, *"Are Manure subsidies Causing Farmers to Milk More Cows?"* April 8, 2023. https://agdatanews.substack.com/p/are-manure-subsidies-causing-farmers?r=i2qe&utm_campaign=post&utm_medium=web