July 12, 2023

Cheryl Laskowski
Chief, Transportation Fuels Branch
California Air Resources Board
1001 I Street
Sacramento, CA 95814

RE: Simplified Tier 1 Calculator for Biomethane from Anaerobic Digestion of Dairy and Swine Manure

Dear Dr. Laskowski,

We appreciate the opportunity to comment on CARB's Proposed New Tier 1 Simplified Calculator for Biomethane from Anaerobic Digestion of Dairy and Swine Manure ("Simplified CI Calculator"). Leadership Counsel for Justice and Accountability, Animal Legal Defense Fund, and Food & Water Watch ("Commenters") have identified problems with how CARB calculates carbon intensity scores for dairy and swine biomethane on numerous occasions.[1] Those same problems now infect the proposed Simplified CI Calculator. Most importantly, the proposed Simplified CI Calculator applies an erroneous baseline and fails to account for significant life

[1] *See, e.g.*, Association of Irritated Residents et al., Petition for Rulemaking to Exclude All Fuels Derived from Biomethane from Dairy and Swine Manure from the Low Carbon Fuel Standard (Oct. 27, 2021) (hereinafter "Petition"), https://ww2.arb.ca.gov/resources/documents/2021-lcfs-petition; Association of Irritated Residents et al., Petition for Reconsideration of the Denial of the Petition for Rulemaking to Exclude All Fuels Derived from Biomethane from Dairy and Swine Manure from the Low Carbon Fuel Standard (Mar. 25, 2022) (hereinafter "Petition for Reconsideration"), https://ww2.arb.ca.gov/resources/documents/2021-lcfs-petition; Leadership Counsel for Justice and Accountability et al., Joint Comments on Potential Changes to the Low Carbon Fuel Standard Program (Mar. 15, 2023), https://www.arb.ca.gov/lists/com-attach/115-lcfs-wkshp-feb23-ws-UzlXPgBoVmtXJQNc.pdf; *see also* CARB, LCFS Pathways Requiring Public Comments, https://ww2.arb.ca.gov/resources/documents/lcfs-pathways-requiring-public-comments (coalition comments posted).

cycle emissions. These errors will result in dramatically negative carbon intensities that do not reflect the fuel's true climate impacts and undermine the integrity of the Low Carbon Fuel Standard ("LCFS"). We request that CARB revise the avoided methane baseline and ensure full emissions accounting in the Simplified CI Calculator as explained below. In the interest of transparency, we also request that CARB publicly explain the proposed changes to the Simplified CI Calculator compared to the current version, and extend the comment period for these proposed changes accordingly.

1. The Simplified CI Calculator Cannot Rely On an Avoided Methane Baseline

The proposed Simplified CI Calculator uses the same incorrect baseline that Commenters and others have raised many times to CARB.[2] Massive impoundments filled with liquified or slurried manure, left to break down anaerobically and emit greenhouse gasses, are not natural features of the landscape nor are they unavoidable aspects of raising livestock. Instead, flushing waste into lagoons for storage in anaerobic conditions is a choice adopted by certain dairy and swine operations to reduce internal costs. By calculating massively negative CI scores based on avoided methane crediting, CARB is rewarding the biggest polluters and incentivizing practices and capital investments that lock in greenhouse gas emissions from these sectors instead of avoiding them.

A senior energy analyst with the Union of Concerned Scientists recently described the baseline used by the Simplified CI Calculator as "outdated" and at odds with the imperative to hold all major sources of GHG emissions accountable for their contributions.[3] Further, perpetuating a right-to-pollute perspective is at odds with CARB's approaching statutory mandate to directly regulate methane emissions from dairies in California under S.B. 1383.[4] "[T]he right baseline assumption for biomethane lifecycle GHG accounting should be one where the methane has been entirely captured or avoided to start,"[5] similar to how the LCFS operated prior to the 2018 amendments.[6]

In addition to being an outdated and misguided assumption, using an avoided methane baseline leads to a perverse incentive to maximize methane production and undermines the integrity of the LCFS.[7] CARB must revise the Simplified CI Calculator to apply the conservative baseline where methane emissions from manure lagoons would have been avoided or captured and destroyed.

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[2] *See supra*, note 1; Earthjustice, Comments on February 23, 2023 Workshop at 6-11, https://www.arb.ca.gov/lists/com-attach/159-lcfs-wkshp-feb23-ws-Wz5VMlwvVXIEagRu.pdf.
[3] Julie McNamara, *Biomethane Threatens to Upend the Clean Hydrogen Tax Credit*, Equation (May 25, 2023), https://blog.ucsusa.org/julie-mcnamara/biomethane-threatens-to-upend-the-clean-hydrogen-tax-credit/.
[4] Cal. Health & Safety Code § 39730.7 (allowing regulation beginning January 1, 2024).
[5] McNamara, *supra* note 3.
[6] CARB Staff Paper, Renewable Natural Gas from Dairy and Livestock Manure at 1 (Apr. 13, 2017).
[7] *See* Petition & Petition for Reconsideration, *supra* note 1; Earthjustice, *supra* note 2.

2. The Simplified CI Calculator Must Incorporate Full Life Cycle Emissions Accounting

The proposed Simplified CI Calculator fails to account for significant up and downstream emissions associated with dairy and swine biomethane production. As Commenters have explained on numerous occasions, CARB's carbon intensity calculations for dairy and swine biomethane pathways omit upstream emissions associated with "feedstock production" and downstream emissions from the handling, use, or disposal of digestate.[8]

For example, by indiscriminately adopting the Compliance Offset Protocol Livestock Projects ("LOP Inputs"), the proposed Simplified CI Calculator expressly ignores increased nitrous oxide emissions from digestate when composted, stored, and/or land applied.[9] Commenters have explained to CARB, and reiterate here, that anaerobic digesters alter the chemistry of livestock manure waste streams such that subsequent use and handling result in increased emissions, including nitrous oxide emissions, compared with a scenario of no anaerobic digester.[10] Nitrous oxide is a powerful greenhouse gas and excluding it from the carbon intensity calculation is irrational and counterproductive to California's climate efforts.

Additionally, the proposed Simplified CI Calculator ignores upstream feedstock production emissions such as enteric emissions and emissions associated with animal feed production and transport. As previously explained by Commenters, these emissions need to be included in the required "well-to-wheel" analysis.[11] CARB already has the tools to incorporate both of these sources of emissions into the Simplified CI Calculator: for animal feed production and transport CARB can look to existing crop-based biofuel pathways, and for enteric emissions it can use the per-head emissions estimates used in CARB's Greenhouse Gas Emissions Inventory.[12]

Without CI calculations that accurately describe dairy and swine biomethane's climate impacts, the proposed Simplified CI Calculator will yield results that overvalue these fuels' climate benefits. Put on top of the flawed baseline discussed above, this under accounting for life

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[8] *See, e.g., supra* note 2.
[9] *See* CARB, Compliance Offset Protocol Livestock Projects at 16 (Nov. 14, 2014).
[10] Michael A. Holly et al., *Greenhouse Gas and Ammonia Emissions from Digested and Separated Dairy Manure During Storage and After Land Application*, 239 AGRIC. ECOSYSTEMS & ENV'T 410, 411, 418 (Feb. 15, 2017), https://doi.org/10.1016/j.agee.2017.02.007; *see also* Maria Dietrich et al., *Anaerobic Digestion Affecting Nitrous Oxide and Methane Emissions from the Composting Process,* 15 Bioresources Tech. Reports 100,752 (Sept. 2021) (finding up to twelve times more methane emissions).
[11] *See, e.g.*, Leadership Counsel for Justice and Accountability et al., Joint Comments on Potential Changes to the Low Carbon Fuel Standard Program (Mar. 15, 2023), https://www.arb.ca.gov/lists/com-attach/115-lcfs-wkshp-feb23-ws-UzlXPgBoVmtXJQNc.pdf.
[12] https://ww2.arb.ca.gov/applications/greenhouse-gas-emission-inventory-0.

cycle emissions helps catapult factory farm gas into extremely negative CI values that are having various distortionary effects on the LCFS.

Therefore, Commenters ask that CARB ensure that the Simplified CI Calculator incorporate full consideration of up and downstream emissions associated with feedstock production and digestate handling, use, and disposal. This will require, at a minimum, modifying the LOP Inputs to include the increased methane and nitrous oxide emissions from effluent ponds, composting, and land application of digestate.

3. CARB Should Improve Transparency Into What Changes It Is Proposing

Given the intense and sustained public interest in how dairy and swine biomethane is treated under the LCFS, CARB should improve transparency into the proposed changes to the Simplified Tier 1 Calculator by publicly explaining the specific changes and why each is needed. When asked for a "redline" version of the proposed changes to the Tier 1 calculator, CARB said that no such comparison version exists. It is difficult for non-industry stakeholders to fully understand the implications of the proposed new Simplified CI Calculator without an explanation from CARB staff as to what is changing and why. According to CARB's February 2023 workshop presentation, the proposed changes are intended to enhance "calculator functionality and flexibility to accommodate Tier 1 classification."[13] CARB should explain how the specific proposed changes accomplish this goal.

To facilitate meaningful stakeholder evaluation and feedback, CARB should also extend the comment period to accommodate public review and comment with the benefit of the above requested explanation of changes. A clearer understanding of the specific proposed changes to the Simplified Tier 1 Calculator and their practical implications will allow Commenters and the broader public to provide more meaningful input on these important and controversial issues.

Respectfully,

Christine Ball-Blakely,
Animal Legal Defense Fund

Tyler Lobdell,
Food & Water Watch

Phoebe Seaton,
Leadership Counsel for Justice and Accountability

[13] LCFS, Public Workshop: Potential Regulation Amendment Concepts, at slide 63 (Feb. 22, 2023) https://ww2.arb.ca.gov/sites/default/files/classic/fuels/lcfs/lcfs_meetings/LCFSpresentation_02222023.pdf.