



March 15, 2023

Liane M. Randolph, Chair
 California Air Resources Board
 1001 "I" Street
 Sacramento, CA 95814

Via CARB Portal for Submission of Comments

Re: Comments on Potential Changes to the Low Carbon Fuel Standard Program.

Dear Chair Randolph and Board Members of the California Air Resources Board:

Leadership Counsel for Justice & Accountability, Food & Water Watch, Animal Legal Defense Fund, the Center for Food Safety, Institute for Agriculture & Trade Policy, Association of Irrigated Residents, Campaign for Family Farms & the Environment, Central Valley Air Quality Coalition, Center on Race Poverty and the Environment, Valley Improvement Project, Center for Biological Diversity, Friends of the Earth, Central California Environmental Justice Network, Sierra Club California, and Defensores del Valle Central Para el Agua y Aire Limpio

appreciate your leadership and call on you to correct significant and fundamental environmental injustice and technical failures in the Low Carbon Fuel Standard (LCFS) pollution trading scheme.

I. Background

In 2021, several of the undersigned organizations submitted a Petition for Rulemaking to exclude all fuels derived from factory farm gas from the LCFS or, in the alternative, to amend the LCFS to account for the full life cycle of factory farm gas¹ fuels and to exclude non-additional emissions reductions. CARB staff denied the Petition in part and granted it in part, informing the petitioners that CARB would consider the issues raised in the Petition in the public process of the Scoping Plan and these LCFS amendments. At the January 27, 2022 Board meeting, the Chair directed staff to conduct a workshop on the issues raised in the Petition and report back to the Board at a future Board meeting. On March 29, 2022, CARB held a workshop on dairy issues unrelated to the issues raised in the Petition and has not complied with the Chair's direction to report back to the Board. Several of the signatories to this letter submitted comments on the significant shortcomings of that workshop. (Attached as Exhibit A).

On February 22, 2023, CARB staff conducted a workshop and presented potential LCFS amendments which fail to consider or propose policy that would prioritize direct emissions reductions, "protect the state's most impacted and disadvantaged communities,"² and implement Senate Bill 1383. Instead, the workshop indicates that staff have no regard whatsoever for environmental justice principles, the civil rights of communities impacted by factory farms and refineries, the additionality mandate imposed by Assembly Bill 32 on market-based compliance mechanisms, and the gross market distortions caused by avoided methane crediting and the truncated factory farm gas "well to wheel" system boundary that excludes upstream and downstream emissions from the carbon intensity of factory farm gas fuels.

The most recent workshop along with previous workshops demonstrated indifference to these issues which indicates that staff have absolutely no intent to meaningfully consider or address those issues. We call on you to exercise your leadership to end the manner in which the LCFS and complementary policies sacrifice communities for factory farm gas to benefit the California dairy and oil industries.

¹ The term "factory farm gas" means biogas and biomethane sourced from gasses generated by anaerobic manure management at large, confinement-based livestock operations, or factory farms.

² Health & Safety Code § 38562.5.

II. CARB's Treatment of Factory Farm Gas in the Low Carbon Fuel Standard must Comply with the Law through either Exclusion or Substantial Amendment.

As an initial matter, and one that is inextricably tied to the LCFS, we call on you to immediately initiate rulemaking to adopt direct emissions reductions of livestock manure methane as authorized by Senate Bill 1383 and as prioritized by Assembly Bill 197. Such regulation can and must be implemented on January 1, 2024.

We further urge you to direct staff to exclude all fuels derived from factory farm gas, including hydrogen used as a transportation or stationary source fuel, from the LCFS for the reasons stated below.

In the alternative, we ask that you amend the LCFS to comply with state goals and policies as outlined below:

- 1. Amend the LCFS to ensure all reductions associated with factory farm gas comply with the additionality mandate in AB 32, codified at Health & Safety Code § 38562(d)(2).** The Dairy Digester Research and Development Program, the Aliso Canyon Mitigation Agreement, the Inflation Reduction Act, and other programs that fund and necessarily require methane reductions make alleged factory farm gas-related methane reductions connected to LCFS pathways non-additional. Furthermore, several livestock facilities that participate in the LCFS were converting manure into gas prior to their participation in the program. The excessive amount of non-additional credits allow oil companies to produce and sell more carbon intensive fuels and harm communities near factory farms and refineries.
- 2. Amend the LCFS to remove the avoided methane crediting policy that unjustifiably treats liquefied manure management practices at factory farms as naturally and inevitably occurring sources of methane emissions.** Such crediting distorts carbon intensity values as negative emissions and generates excessive credits as a result. The excessive amount of credits authorized by avoided methane crediting allows oil companies to produce and sell more carbon intensive fuels and harm communities near factory farms and refineries.
- 3. Amend the LCFS to include all upstream and downstream greenhouse gas emissions in the well to wheel system boundary for factory farm gas fuels.** At present, CARB excludes significant upstream and downstream emissions (e.g. enteric, digestate). Excluding these upstream and downstream emissions distorts the carbon intensity of factory farm gas fuels. The excessive amount of credits

authorized by the truncated system boundary allow oil companies to produce and sell more carbon intensive fuels and harm communities near factory farms and refineries.

4. **Amend the LCFS to ensure compliance with civil rights law.** CARB must ensure that it incorporates and prioritizes compliance with civil rights law within its programs and policies.
5. **Abandon staff’s plans to use factory farm gas LCFS credits as the financing mechanism to build out infrastructure for stationary source fuels, including hydrogen.**

III. The Board should Direct Staff to Initiate a Rulemaking for Methane from Manure Management as Required by AB 197 and as Authorized by Senate Bill 1383.

CARB must prioritize direct emissions reductions and should adopt such measures to meet the SB 1383 manure methane target.³ But staff have proposed no rulemaking to implement SB 1383 and adopt direct emissions reductions. Rather, staff have proposed to continue using excessively generated manure methane credits in the LCFS to benefit the oil industry while simultaneously and improperly crediting the same reductions towards the SB 1383 target. CARB simply cannot double-count the same methane reductions towards the SB 1383 reduction mandate and the LCFS fuel carbon intensity limit. To correct this misguided and inconsistent policy, and to prioritize direct emissions reductions, **the Board should direct staff to immediately initiate a rulemaking pursuant to SB 1383 and amend the LCFS to remove factory farm gas.** By disentangling manure methane reductions from factory farm gas LCFS credits, the Board can restore integrity to its policies and programs and comply with AB 197 and SB 1383.

Assembly Bill 197 directs CARB to prioritize direct emissions reductions and protect the most impacted and disadvantaged communities when adopting measures to achieve reductions beyond the statewide greenhouse gas emissions limit. AB 32 defines “statewide greenhouse gas emissions limit” to mean “the maximum allowable level of statewide greenhouse gas emissions in 2020.” Health & Safety Code § 38505(n). CARB shall prioritize “direct emissions reductions” when “adopting rules and regulations pursuant to this division to achieve emissions reductions

³ The largest livestock operations are also the largest emitters of methane from manure due to the scale of manure generation and their anaerobic manure management practices. Dairies utilizing pasture-based systems and dry manure handling and storage that avoid manure methane emissions present a different emissions profile and that should inform efforts going forward.

beyond the statewide greenhouse gas emissions limit and to protect the state’s most impacted and disadvantaged communities.” Health & Safety Code § 38562.5.⁴

Staff propose to amend the LCFS to increase the stringency of the annual fuel carbon intensity limit to help achieve the 2030 target set by Senate Bill 32. The Legislature thus directs CARB to prioritize direct emissions reductions when adopting these amendments to achieve emissions reductions beyond the statewide greenhouse gas emissions limit.

CARB must prioritize direct emissions reductions pursuant to AB 197 and achieve the SB 1383 emission reduction target. CARB likewise cannot rely on the LCFS to claim progress toward the SB 1383 target. To do so results in double-counting methane reductions: once as used by oil company LCFS market participants and a second time as a reduction toward the SB 1383 target.⁵ Because CARB has a duty to achieve reductions required by SB 1383, and must prioritize direct emissions reductions, CARB simply cannot rely on factory farm gas fuels in the LCFS.

IV. The LCFS should Prohibit Non-Additional Factory Farm Gas Credits as Required by Assembly Bill 32.

CARB should amend the LCFS to ensure that factory farm gas credits are additional because the LCFS meets the AB 32 statutory definition of a market-based compliance mechanism.⁶ As a market-based compliance mechanism, the LCFS must ensure that “the reduction is in addition to any greenhouse gas emission reduction otherwise required by law or regulation, and any other greenhouse gas emission reduction that otherwise would occur.”⁷ Thus, CARB must ensure that *all* factory farm gas LCFS credits are additional.⁸

⁴ AB 32 defines “direct emissions reductions” to mean “a greenhouse gas emission reduction action made by a greenhouse gas emission source at that source.” Health & Safety Code § 38505(e).

⁵ Comments on the Methane, Dairies and Livestock, and Renewable Natural Gas in California Workshop, Attachment A at 16-20 (April 12, 2022), attached as Exh. 1.

⁶ Health & Safety Code §§ 38505(k), 38562(d)(2).

⁷ Health & Safety Code § 38562(d)(2).

⁸ As currently adopted, the LCFS partially applies the additionality mandate to its avoided methane crediting policy by requiring that a “fuel pathway that utilizes biomethane from dairy cattle or swine manure digestion may be certified with a CI that reflects the reduction of greenhouse gas emissions achieved by the voluntary capture of methane, provided that... the baseline quantity of avoided methane reflected in the CI calculation is additional to any legal requirement for the capture and destruction of biomethane.” Cal. Code Regs. tit. 17 § 95488.9(f)(1)(B).

The LCFS meets the plain meaning of the market-based compliance mechanism definition.⁹ The LCFS sets an annual fuel carbon intensity limit.¹⁰ Fuel reporting entities either generate deficits or credits by reporting fuels using the LCFS Reporting Tool and Credit Bank & Transfer System (“LRT-CBTS”).¹¹ Upon submission and acceptance of these reports, CARB then issues credits and deficits into the LRT-CBTS.¹² Each fuel reporting entity “must demonstrate that it met its annual compliance obligation by submitting an annual compliance report, showing that it possessed and has retired a number of credits from its credit account that is equal to its compliance obligation.” CARB maintains the LRT-CBTS.¹³ CARB regulates the buying and selling of LCFS credits, including monitoring the LCFS market and has authority to manage the market by restricting, suspending, or invalidating LCFS credits.¹⁴ The LCFS thus meets both prongs of the market-based compliance mechanism definition.

CARB has on at least one prior occasion argued that CARB adopted the LCFS as an early action measure, did not adopt the LCFS as a market-based compliance mechanism, and thus has no obligation to ensure additionality.¹⁵ However, nothing in the statutory language authorizing early action measures exempts market-based compliance mechanisms from the additionality requirements.¹⁶ Furthermore, the Legislature limited CARB’s authority to adopt early action measures only when such measures would help achieve the statewide greenhouse gas emissions limit (1990 emissions levels by 2020).¹⁷ The Legislature intended for early action measures to take effect before adoption of the first Scoping Plan to achieve the statewide greenhouse gas emissions limit (1990 emissions levels). Early action measures simply have no role or relevance

⁹ “‘Market-based compliance mechanism’ means either of the following: (1) A system of market-based declining annual aggregate emissions limitations for sources or categories of sources that emit greenhouse gases; or (2) Greenhouse gas emissions exchanges, banking, credits, and other transactions, governed by rules and protocols established by the state board, that result in the same greenhouse gas emission reduction, over the same time period, as direct compliance with a greenhouse gas emission limit or emission reduction measure adopted by the state board pursuant to this division.” Health & Safety Code § 38505(k).

¹⁰ Cal. Code Regs. tit. 17 § 95484.

¹¹ Cal. Code Regs. tit. 17 § 95483.

¹² Cal. Code Regs. tit. 17 § 95486.

¹³ Cal. Code Regs. tit. 17 § 95483.2; *see also* LCFS Registration and Reporting, available at <https://ww2.arb.ca.gov/our-work/programs/low-carbon-fuel-standard/lcfs-registration-and-reporting> (last visited March 8, 2023).

¹⁴ Cal. Code Regs. tit. 17 § 95487.

¹⁵ *See* Letter from Richard Corey to Phoebe Seaton, Denial of Petition for Reconsideration of Petition for Rulemaking to Exclude All Fuels Derived from Biomethane from Dairy and Swine Manure from the Low Carbon Fuel Standard Program at 2 n.4, April 25, 2023.

¹⁶ Health & Safety Code § 38560.5.

¹⁷ *See* Health & Safety Code §§ 38505(n) (definition of statewide greenhouse gas emissions limit); 38560.5.

now, when the regulatory strategy must achieve the SB 32 target of 40 percent below 1990 emissions levels.

The Legislature spoke directly to whether and how CARB could adopt market-based compliance mechanisms. It defined market-based compliance mechanisms and specified the requirements applicable to such mechanisms.¹⁸ CARB cannot evade those requirements by self-designating the LCFS as something other than a market-based compliance mechanism. Moreover, because CARB lacks the authority to adopt the LCFS as an early action measure to achieve reductions beyond the statewide greenhouse gas emissions limit, its 2018 amendment to adopt a 2030 carbon intensity target is *ultra vires* and this proposed amendment equally unlawful *as an early action measure*. CARB certainly has authority to adopt the LCFS as a market-based compliance mechanism, but must comply with the requirements the Legislature specified for such mechanisms.

Factory farm gas fuel pathways lack additionality for several reasons. As documented previously in the Petition for Reconsideration, the Dairy Digester Research and Development Program and the Aliso Canyon Mitigation agreement provide the funding to achieve and also require manure methane reductions.¹⁹ Projects receiving such funding cannot claim LCFS credits when these non-additional reductions result from related contractual obligations and otherwise would have occurred notwithstanding the LCFS program. Other sources of funding that render methane reductions non-additional include the Inflation Reduction Act and the Environmental Quality Incentives Program (EQIP).²⁰

In the alternative, if the LCFS is not a market-based compliance mechanism, CARB lacks authority to implement the LCFS. As described above, CARB does not have authority to adopt the LCFS as an early action measure under Health & Safety Code § 38560.5. The Legislature only authorized CARB to limit greenhouse gasses through greenhouse gas emissions limits, emission reduction measures, and market-based compliance mechanisms in sections 38562 and 38570 of the Health & Safety Code. The Legislature carefully defined the terms greenhouse gas emissions limits and emissions reduction measures, both of which do not authorize a system of credits and trading between sources.²¹ While the annual fuel carbon intensity limit, on its own, could meet the definition of a greenhouse gas emission limit, the LCFS's authorization to use

¹⁸ Health & Safety Code § 38505(k), 38570.

¹⁹ Comments on the Methane, Dairies and Livestock, and Renewable Natural Gas in California Workshop, Attachment A at 16-20 (April 12, 2022), attached as Exh. 1.

²⁰ CARB's double-counting of the reductions is an issue related to additionality. CARB attributes the reductions from the DDRDP toward SB 1383 compliance and reductions from Aliso Canyon projects toward the mitigation required to offset the climate impact of the Aliso Canyon methane leak. A ton of methane reduced and attributed to other programs should not also count in the LCFS when the oil industry will use that credit to emit more GHGs from fuels.

²¹ Health & Safety Code § 38505(f), (h).

credits as compliance for that greenhouse gas emission limit would meet the plain meaning definition of a market-based compliance mechanism.

V. CARB can no longer ignore the true carbon intensity of factory farm gas with a truncated system boundary and incorrect baseline.

Carbon intensity values are the backbone of the LCFS program and essential to maintaining program integrity and ensuring that California moves towards the most climate friendly transportation fuels. Carbon intensity is defined as “the quantity of life cycle greenhouse gas emissions, per unit of fuel energy, expressed in grams of carbon dioxide equivalent per megajoule (gCO₂e/MJ).”²² The emissions included in each fuel’s carbon intensity calculation are bounded by “fuel pathways,” defined as “the collective set of processes, operations, parameters, conditions, locations, and technologies throughout all stages that CARB considers appropriate to account for in the system boundary of a complete well-to-wheel analysis of [a given] fuel’s life cycle greenhouse gas emissions.”²³ Accurate and thorough life cycle analyses and an appropriate baseline from which a claimed methane reduction is compared are necessary preconditions for the program to identify which fuels to encourage and how many LCFS credits each pathway is able to generate.

Yet, as currently implemented and as CARB’s proposed regulatory language would continue, CARB is failing to assign accurate carbon intensities to factory farm gas pathways. CARB has adopted an arbitrarily truncated system boundary and credits the capture of intentionally produced methane to reach extremely negative carbon intensities.²⁴ Comparing the extravagantly negative carbon intensity values that result with far more environmentally sound and climate friendly pathways like solar-based electric vehicle charging highlights the problematic incentives structure CARB has created under the LCFS.²⁵

²² Cal. Code Regs. Tit. 17 § 95481(a)(26).

²³ Cal. Code Regs. Tit. 17 § 95481(a)(66).

²⁴ For example, CARB has certified several factory farm gas tier 2 pathways with carbon intensities above -500 gCO₂e/MJ. Pathway #s B003701, Van Warmerdam Dairy Digester; B003801, Van Steyn Dairy Digester; B005901, ABEC Bidart-Old River LLC; B009601, Calumet - Dairy Dreams; B002401, Coronado Dairy Farm; B011101, Stotz Dairy Southern; B016301, Hilarides; B014001, New Energy One; B016601, New Hope Dairy Digester; B017301, Big Sky Dairy Digester. And nearly every factory farm gas pathway is certified with carbon intensities vastly lower than any other fuels in the LCFS.

²⁵ LCFS pathways for direct EV charging from zero emission solar arrays are assigned a CI far less profitable than those given to factory farm gas pathways (CI of 0), despite those projects perfectly aligning with a truly clean, combustion-free transportation future. *E.g.*, Pathway # T2N-1269 (photovoltaic electricity directly supplied to electric vehicle charging station at Los Altos High School, CA). Thus, CARB is providing vastly more incentive to pathways based on burning factory farm gas than to what should be the gold standard for LCFS projects.

To remedy this failure, CARB must adopt two reforms. First, CARB must expand the system boundary for factory farm gas pathways. Second, CARB should eliminate the counterfactual assumption that manure methane emissions from factory farms are unavoidable and unintentional.

A. CARB should apply a true “well-to-wheel” life cycle analysis to factory farm gas by expanding the truncated system boundary currently applied.

The LCFS regulations require a “complete well-to-wheel” life cycle analysis that accounts for all emissions within the system boundary for certified pathways.²⁶ The reason is clear: the LCFS must accurately identify the climate impacts of alternative transportation fuels incentivized by the program. But when it comes to factory farm gas, CARB applies an unreasonable and unscientific system boundary that excludes significant GHG emissions up and downstream of the projects’ anaerobic digesters. According to the existing regulations, a pathway applicant must provide:

a detailed description of the calculation of the pathway CI. This description must provide clear, detailed, and quantitative information on process inputs and outputs, energy consumption, greenhouse gas emissions generation, and the final pathway carbon intensity.²⁷

That calculation is supposed to include several life cycle stages, including but not limited to “feedstock production and transport; fuel production, fuel transport, and dispensing; co-product production, transport and use; waste generation, treatment and disposal; and fuel use in a vehicle.”²⁸

Instead of faithfully applying the regulations to factory farm gas, CARB excludes many necessary project elements from the system boundary, and thereby also ignores the GHG emissions associated with those elements. Most importantly, CARB excludes feedstock production and co-product transport and use.²⁹

²⁶ Cal. Code Regs. Tit. 17 § 95481(a)(66).

²⁷ Cal. Code of Regs. Tit. 17 § 95488.7(a)(2)(B).

²⁸ *Id.*

²⁹ Whether CARB considers factory farm manure and process wastewater a waste product or a co-product, § 95488.7 calls for associated emissions to be included in the carbon intensity calculation. Commenters note, however, that the industry and state regulators regularly describe manure as a valuable product. *E.g.*, CDFA, *Manure Nutrient Recovery, Removal, and Reuse on California Dairies* (Oct. 15, 2022) at 10, https://www.cdfa.ca.gov/oefi/research/docs/cbc_manure_nutrient_report.pdf.

Regarding feedstock production, factory farm gas production relies primarily on manure flushed to lagoon impoundments as feedstock. Manure is produced by the animals confined at the underlying factory farm. In order for those confined animals to generate manure, feed must be imported to the factory farm. Therefore, “feedstock production” in this context must include the importation of feed and the animals themselves. Enteric emissions from those animals are inextricable from their manure that is then flushed into lagoons. Without enteric fermentation, the pathway applicant has no feedstock to use for factory farm gas production because enteric fermentation is fundamental to the animals’ utilization of the feed and therefore the generation of manure. Despite this, CARB irrationally and arbitrarily excludes feed production, feed transport, and enteric emissions from the system boundary for these pathways. This results in a dramatic miscalculation since these necessary stages in feedstock production account for the majority of the GHG emissions associated with factory farm gas operations.³⁰

Regarding co-product production, transport and use; or waste generation, treatment and disposal, factory farm gas production results in a large amount of effluent, or digestate, that must be managed. Yet, digestate remains largely unaccounted for even though the LCFS requires all Tier 2 pathway applications to include “a description of all co-products, byproducts, and waste products associated with production of the fuel. That description shall extend to all processing . . . applied to these materials after they leave the fuel production process, including processing that occurs after ownership of the materials passes to other parties.”³¹ Yet, CARB does not require a full analysis of digestate transport, use, treatment, or disposal and has certified many factory farm gas pathways that entirely ignore the associated GHG emissions.

Upstream, factory farm gas pathways ignore feed production and transport as well as enteric emissions. And downstream, these pathways ignore emissions from digestate handling, use, and disposal. Digestate land application and composting result in increased emissions of nitrous oxide compared with undigested manure, which has a global

³⁰ CARB recognizes that enteric emissions alone are a major source of methane emissions from manure management. CARB, *Analysis of Progress Toward Achieving the 2030 Dairy and Livestock Sector Methane Emissions Target* (Mar. 2022) at Fig. 3. Many studies are available that show large GHG emissions from feed production and transport. See, e.g., Giampiero Grossi et al., *Livestock and Climate Change: Impact of Livestock on Climate and Mitigation Strategies*, 9:1 *Animal Frontiers* 69 (2019), <https://academic.oup.com/af/article/9/1/69/5173494>; Food and Agriculture Organization of the United Nations, *Global Livestock Environmental Assessment Model (GLEAM)*, <https://www.fao.org/gleam/dashboard-old/en/>.

³¹ Cal. Code Regs. Tit. 17 § 95488.7(a)(2)(A)(8).

warming potential 265 to 298 times that of carbon dioxide.³² Additionally, many operators choose to store digestate in open-air lagoons which release methane among other contaminants. Because increased nitrous oxide emissions result from the anaerobic digestion process, they are clearly attributable to the production of factory farm gas and must be included in the well-to-wheel analysis.

Despite the significant emissions associated with manure production and digestate handling, the LCFS fails to accurately account for the large GHG emissions associated with factory farm gas production. By using such a narrow system boundary, CARB does not account for up and downstream emissions and thereby allows for life cycle analyses that omit significant greenhouse gas emissions and result in unscientific and erroneous carbon intensities.

Furthermore, factory farm gas life cycle analyses also fail to include downstream emissions associated with transport. The LCFS factory farm gas pathways mention but do not require reporting of inputs to calculate emissions generated from the refining and transport of factory farm gas. For example, the Tier 1 Calculator for factory farm gas *can* quantify emissions leaked or vented from the digester and associated pipeline infrastructure—but the applicant is not *required* to calculate it.³³

In sum, current practices in calculating the carbon intensity of factory farm gas are woefully inaccurate. CARB has allowed these pathway applicants to ignore major up and downstream GHG emissions that the regulations require to be included. Commenters request that CARB remedy this ongoing failure and expand the system boundary for factory farm gas pathways - whether for biomethane, biogas-to-electricity, or hydrogen production. Doing so will help bring integrity back to carbon intensity valuations and partially correct the absurdly negative values assigned to these pathways.

³² Holly, *supra* note 69 at 411, 414, 418. Alun Scott & Richard Blanchard, *The Role of Anaerobic Digestion in Reducing Dairy Farm Greenhouse Gas Emissions*, 13 Sustainability 2 (Mar. 1, 2021) <https://doi.org/10.3390/su13052612>; *Understanding Global Warming Potentials*, Env't Prot. Agency, <https://www.epa.gov/ghgemissions/understanding-global-warming-potentials> (last visited Oct. 21, 2021).

³³ CARB, *Tier 1 Simplified CI Calculator Instruction Manual: Biomethane from Anaerobic Digestion of Dairy and Swine Manure* 1, 8–9, 13–14 (Aug. 13, 2018), https://ww2.arb.ca.gov/sites/default/files/classic/fuels/lcfs/ca-greet/tier1-dsm-im.pdf?_ga=2.153600376.1744114239.1608082460-1114251839.1598731081.

B. CARB must stop crediting the capture of intentionally produced methane at factory farms no later than January 1, 2024.

Manure methane emissions at factory farms are the result of intentional production choices and can be avoided with better waste management practices, yet CARB’s current practice certifies pathways that reward this intentional GHG generation with the most lucrative carbon intensities awarded to the biggest climate polluters. CARB previously used a “conservative baseline” that did not assume manure methane production was inevitable.³⁴ CARB should return to that sensible policy approach no later than January 1, 2024, when it is authorized to directly regulate manure methane emissions, to avoid the perverse incentives and injustices built into current practice.

The manner in which a facility handles livestock manure can mitigate or intensify methane production from that manure.³⁵ The key factors are whether manure is handled and stored in aerobic versus anaerobic conditions and the quantity of organic material handled in that environment. “When oxygen is available, microbial decomposition primarily occurs through respiration producing CO₂, but without oxygen methanogens produce CH₄.”³⁶ Livestock operations, especially dairies, can manage manure in liquid, slurry, or solid forms depending on how the facility owners decided to structure their operations, with different methanogenesis associated with each option. Operators can also opt to separate liquids from solids, which reduces the amount of organic material that is handled in anaerobic conditions and thereby reduces methane generation.

Therefore, several operational decisions drive the amount of methane generation at any particular factory farm. **CARB’s current practice of crediting “avoided methane” perversely incentivizes and has caused *increased* methane production for the purpose of profiting from the LCFS.** For example, one of the largest megadairies in the country, Threemile Canyon in Oregon, altered how it manages its manure upon installing anaerobic digesters to *maximize* its credit generating potential. Instead of separating solids from liquids prior to storage in lagoons, which it previously did, the massive factory farm now flushes nearly all its manure into anaerobic environments to produce factory farm gas, and opts to separate solids from liquids after it produces and captures the gas.³⁷ Despite this intentional decision to maximize methane

³⁴ See CARB, Discussion Paper: Renewable Natural Gas from Dairy and Livestock Manure (Apr. 13, 2017).

³⁵ C. Alan Rotz, *Modeling Greenhouse Gas Emissions from Dairy Farms*, 101 J. Dairy Sci. 6,675, 6,679 (2018), [https://www.journalofdairyscience.org/article/S0022-0302\(17\)31069-X/pdf](https://www.journalofdairyscience.org/article/S0022-0302(17)31069-X/pdf).

³⁶ *Id.*

³⁷ CARB, Staff Summary: Iogen D3 Biofuel Partners WOF PNW Threemile Project Tier 2 Pathway Application, https://ww2.arb.ca.gov/sites/default/files/classic/fuels/lcfs/fuelpathways/comments/tier2/b0072_summary.pdf.

production, CARB has rewarded Threemile Canyon with a lucrative -171.65 carbon intensity value. Other factory farms that similarly intentionally opted to structure their waste management in ways that result in large GHG emissions have received even more extravagant carbon intensity values.³⁸

This behavior is the logical consequence of CARB's incentivization of factory farm gas - an otherwise avoidable source of GHGs that the LCFS has turned into a lucrative revenue stream. Said differently, **crediting intentionally produced factory farm gas is perversely turning factory farms into GHG production facilities.** This is bad for the climate and turns the intent of the LCFS on its head.

Now that CARB is approaching the beginning of its responsibility to directly regulate manure methane emissions at California dairies under SB 1383 starting January 1, 2024, it should not pit this LCFS rulemaking against that essential source reduction regulatory approach.³⁹ CARB cannot adopt a preference for the LCFS's voluntary, incentive-based approach over SB 1383 direct regulation. That approach will not achieve the 40% methane reduction by 2030 required by law.⁴⁰ **The rational and responsible way forward is for CARB to eliminate avoided methane crediting on the same timeframe as it implements direct regulation - that is, starting January 1, 2024.**

The proposed LCFS regulatory language fails to acknowledge the relationship between direct regulation and LCFS credit generation by waiting until 2040 to completely phase out avoided methane crediting. While Commenters appreciate that CARB has proposed this phase out at all, waiting until 2030 followed by a 10 year grace period conflicts with its SB 1383 authority and its 40% methane reduction mandate. Direct regulation is needed as soon as possible, and CARB should align its LCFS policies with that necessity accordingly.

VI. CARB must Comply with Civil Rights Laws.

The LCFS market-based compliance mechanism authorizes oil companies to continue to produce and sell their fossil fuels by purchasing credits generated from fuels derived from factory farm gas and other sources.⁴¹ With staff proposing to continue to allow factory farm gas

³⁸ *E.g.*, LCFS Pathway # B021401 (CI of -413.67). This Smithfield Foods swine factory farm gas project appears to have never separated solids from liquid effluent, but Smithfield intentionally structured these facilities to produce factory farm gas as part of its partnership with Dominion Energy, Align RNG. *See* <https://alignrng.com/projects.aspx>.

³⁹ *See* Cal. Health & Safety Code § 39730.7(b).

⁴⁰ *Id.*

⁴¹ In 2021, NG from Dairy and Swine Manure accounted for approximately 10 percent of LCFS credits generated. *See* CARB, LCFS Quarterly Data Spreadsheet, available at

to generate excessive LCFS credits, and even encourage more factory farm gas fuels to build-out fuel infrastructure for hard to decarbonize stationary sources, staff continue to ignore the reality on the ground: factory farm gas harms communities in the San Joaquin Valley while the excessive credits awarded to factory farm gas producers allow oil companies to produce and sell more of their fuels, thus harming refinery communities. **The proposed rulemaking prioritizes the pollution trading scheme to benefit factory farm gas fuel producers and oil companies over the civil rights of impacted communities.**

CARB must comply with California and federal civil rights laws, yet the proposed rulemaking has failed to analyze, consider, or ensure such compliance. **California law mandates agencies like CARB to ensure that their policies do not disproportionately impact residents on the basis of race, color, national origin, or ethnic group identification.**⁴² This prohibition on discrimination applies to the LCFS because the LCFS meets the criteria of a program that is “conducted, operated, or administered” by CARB, a California state agency.⁴³ California law also prohibits activities that limit housing opportunities for members of protected classes, including activities and programs that interfere with the use and enjoyment of one’s dwelling or that results in the location of toxic, polluting, and/or hazardous land uses in a manner that adversely impacts the enjoyment of residence, land ownership, tenancy, or any other land use benefit related to residential use.⁴⁴ Title VI of the Civil Rights Act of 1964 and its implementing regulations prohibit recipients of federal funds from engaging in racial discrimination, including policies that have the effect of discrimination, also known as disparate impact.⁴⁵ The state is also subject to the prohibitions in the Fair Employment and Housing Act.⁴⁶

As the Chair of the Board and as Board Members, you should direct staff to prioritize civil rights and environmental justice in this rulemaking. For too long, CARB has elevated the

https://ww2.arb.ca.gov/sites/default/files/2023-01/quarterlysummary_013123.xlsx (data available under “Feedstock” tab). For the first three quarters of 2022, NG from Dairy and Swine Manure increased to 13.6 percent of credits generated. *Id.*

⁴² Government Code § 11135.

⁴³ *Id.*

⁴⁴ Government Code § 12955.

⁴⁵ 42 U.S.C. § 2000d; 40 C.F.R. part 7. As a recipient of federal funding, CARB remains subject to Title VI. CARB receives tens of millions of dollars in substantial federal financial assistance to implement the Clean Air Act. *See*

<https://www.usaspending.gov/search/?hash=012e762e5caea2debee24864f739fd50> (last visited March 7, 2023). For example, EPA has provided \$27.1 million over the period from October 1, 2018 to September 30, 2023 to CARB for “strategic planning and evaluation, developing state implementation plans, monitoring air and emissions, rulemaking, operating permits and all other program related activities to reduce risks to human health and the environment.” *See* FAIN 00901319.

⁴⁶ CA Legis. 352 (2021), Cal. Legis. Serv. Ch. 352 (A.B. 948), amending Government Code § 12955; 2 Cal. Code Regs. §§ 12005(v), 12060.

economy-wide greenhouse gas reductions and its pollution trading policy to incentivize low-carbon fuel production without regard to Black, Indigenous, Latinx and other communities of color. **We call on you to provide long overdue civil rights leadership.**

VII. CARB must not use the LCFS as a Financing Mechanism to Build Infrastructure for Hydrogen and Hard to Decarbonize Stationary Source Fuels.

Staff propose to continue awarding excessively generated factory farm gas credits to promote the use of factory farm gas in hard-to-decarbonize stationary sources or as a feedstock for hydrogen production. Rather than exclude factory farm gas from the LCFS and protect the communities impacted by its production and use, CARB staff instead propose to protect factory farm gas investors and profits for some of California's most egregious polluters.

Operating the LCFS as a financial mechanism to stimulate factory farm gas production rather than as a mechanism to generate greenhouse gas emissions reductions or displace fossil transportation fuels falls far outside the purpose and scope of the LCFS. Moreover, the Legislature has not authorized CARB to use a credit-based financing mechanism to support generation of fuel for hard-to-decarbonize sectors. Expanding the role of the LCFS to incentivize and subsidize the production of factory farm gas for stationary sources and hydrogen production when California has transitioned away from combustion-based transportation fuels will only intensify the harms outlined above. CARB's prioritization of factory farm gas developers over community health and the environment further underscores CARB staff's disregard for environmental justice.

Conclusion.

For the foregoing reasons, we urge you to exclude all fuels derived from factory farm gas and initiate the rulemaking to adopt direct emissions reductions as authorized by Senate Bill 1383 and required by Assembly Bill 197. If CARB is unwilling to comply with its environmental justice and civil rights obligations by doing so, it must still prohibit non-additional factory farm gas credits, reform its unscientific and inaccurate approach to factory farm gas GHG life cycle analyses, and eliminate avoided methane crediting no later than January 1, 2024.

Thank you for your leadership and commitment to environmental justice.

Phoebe Seaton, Co-Director
Leadership Counsel for Justice and Accountability

Dr. Catherine Garoupa, Executive Director
Central Valley Air Quality Coalition

Ingrid Brostrom, Assistant Director
Center on Race, Poverty & the Environment

Tyler Lobdell, Staff Attorney
Food and Water Watch

Defensores del Valle Central Para el Agua y Aire Limpio
Central Valley Defenders for Clean Water and Air

Ben Lilliston
The Institute for Agriculture and Trade Policy

Chloe Waterman, Senior Program Manager
Friends of the Earth

Patty Lovera
Campaign for Family Farms and the Environment

Hannah Connor
Environmental Health Deputy Director and Senior Attorney
Center for Biological Diversity

Bianca G. Lopez, Co-Founder/Project Director
Valley Improvement Projects

Rebecca Spector
Center for Food Safety

Christine Ball-Blakely
Animal Legal Defense Fund

Nayamin Martinez, Executive Director
Central California Environmental Justice Network

Brandon Dawson, Executive Director
Sierra Club California

Tom Franz
Association of Irrigated Residents

Encl: EXHIBIT A

EXHIBIT A

April 12, 2022

Liane Randolph, Chair
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Via Online Submission

Re: Comments on the Methane, Dairies and Livestock, and Renewable Natural Gas in California Workshop

Dear Chair Randolph:

Leadership Counsel for Justice & Accountability, Association of Irrigated Residents, Food & Water Watch, Animal Legal Defense Fund, and the Center for Food Safety (“Petitioners”) submit these comments following the March 29th workshop. We appreciate the effort staff made to conduct the workshop and include San Joaquin Valley residents’ perspectives. We have three significant concerns, however, with the workshop and CARB’s disregard of the Low Carbon Fuel Standard issues raised by the Petition for Rulemaking to Exclude All Fuels Derived from Biomethane from Dairy and Swine Manure from the Low Carbon Fuel Standard.

First, the workshop precluded an unknown number of participants from an opportunity to comment. We have heard from several residents and staff of allied organizations who raised their hands to comment and were denied that opportunity. We appreciate that many people participated, and that staff did not want to conduct a two-day workshop. We acknowledge the flexibility provided by CARB staff to add a community panel at the request of our coalition, but it is unacceptable for community residents, who volunteered their time and yield no financial gain in this matter, to not be at the center of this workshop. CARB professes to emphasize environmental justice, a fundamental tenant of which is that communities must be allowed to participate in the decisions that affect their lives. The workshop did not meet that basic environmental justice principle, while multiple industrial dairy owners/operators with factory farm gas systems were given the opportunity time and time again to endorse factory farm gas and defend their industry’s adverse impacts on local communities. We anticipate that when staff places this item on the agenda for a Board meeting, as the Board directed staff to do, there will be significant public interest. We urge staff to ensure the agenda allows for those who wish to speak to the Board have that opportunity and that Spanish-speaking residents receive sufficient, additional time for translation.

Second, on March 28th, the day before the workshop, CARB released the Analysis of Progress toward Achieving the 2030 Dairy and Livestock Sector Methane Emissions Target. This report acknowledges, as it must, several of the significant impacts that industrial dairy operations have on San Joaquin Valley communities, and even certain LCFS fuel pathways CARB has approved, including on-site electricity generation in internal combustion engines. Yet the report only discusses the LCFS as an

incentive mechanism for factory farm gas generation, but fails to consider other centrally important issues. Both the report and the workshop failed to consider or discuss the excessive credits generated with inflated carbon intensities, non-additional credits from reductions attributed to other programs and other incentive funding mechanisms, and how fossil fuel producers use these credits to sell more fossil fuels and pollute more. In other words, the report does not acknowledge that the LCFS incentivizes methane pollution so that operators can turn it into vehicle fuels and sell the associated and illegitimate reductions to allow more fossil fuel emissions.

Finally, CARB staff framed the workshop as if the purpose was to discuss and consider the progress towards the Senate Bill 1383 reduction target and whether factory farm gas is the best way to accomplish that statutory obligation. But that simply was not what Board members directed staff to do. As we set forth in our Petition for Reconsideration, Board members directed staff to hold a workshop on the Low Carbon Fuel Standard issues raised in the Petition for Rulemaking. Board members also directed staff to return to the Board for a public informational update on those issues. Refusing to talk about those issues when directed by Board members further demonstrates the arbitrary and capricious way CARB has considered and decided the issues raised by the Petition for Rulemaking. We call on staff to stop dodging the LCFS issues we have raised and allow Board members and the public to squarely discuss and consider these important issues. Recognition is a necessary first step towards resolution.

In conclusion, staff must confront the issues raised by the Petition for Rulemaking and the Petition for Reconsideration, brief Board members on those issues as the Board members directed, and ensure the public has a meaningful opportunity to participate. The workshop was, unfortunately, a missed opportunity.

Respectfully,

Phoebe Seaton
Michael Claiborne
Jamie Katz
Leadership Counsel for Justice & Accountability

Tom Frantz
Association of Irrigated Residents

Tarah Heinzen
Tyler Lobdell
Food & Water Watch

Cristina Stella
Christine Ball-Blakely
Animal Legal Defense Fund

Rebecca Spector
Center for Food Safety