

To: Cheryl Laskowski
From: Jeremy Martin
Date: December 21, 2022
Subject: Comments on November 9th workshop: 3 of 3 on phasing out avoided methane credits

Crediting avoided methane pollution

We appreciate that the staff proposal has recognized the need to phase out credits for avoided methane pollution, which lead to a substantial indirect subsidy for the largest confined animal feeding operations, especially for dairy cows and swine. The current treatment has a number of negative impacts we have discussed in previous comments, including: distorting the economics of the dairy and swine industry in favor of the largest facilities despite the environmental, equity and public health problems these huge facilities cause; distorting the economics of manure management in favor of strategies that maximize methane capture despite the fact that these may not be the best practices environmentally or the most effective means of minimizing methane pollution; and diluting the effectiveness of the Low Carbon Fuel Standard (LCFS) by awarding negative emissions credits that act principally as offsets for agricultural emission reductions, many outside of California, without reducing transportation emissions. In addition to the impact directly through the LCFS, the large negative carbon intensity (CI) scores awarded to manure methane projects are increasing being cited outside of the LCFS context to support counterproductive outcomes in new projects and policies related to natural gas and hydrogen. For all these reasons, it is important that CARB gets the policy treatment of biomethane right.

The proposed remedy, ending credit for avoided methane pollution in new pathways in 2030, and for all pathways in 2040 is an improvement on the status quo but is too little too late and does not address the distortionary effect of the current program structure.

The blanket assumption that all methane captured for energy use would otherwise be released is technically inappropriate and supports bad policy outcomes

Avoided methane emissions are exaggerated by the inappropriate assumption that all methane captured would otherwise be released into the atmosphere. This assumption does not accurately reflect the current policy and economic landscape, in which the state of California and the federal government provide a great deal of policy support outside the LCFS for manure methane mitigation, both through grants, RFS credits and legislation authorizing CARB to implement regulations as soon as 2024. Many of the facilities applying for manure methane pathways under the LCFS already have digesters installed and in operation prior to the LCFS application, which are presumably economic to operate based on other sources of support including the generous treatment of biomethane in the federal Renewable Fuel Standard (RFS). Assuming that this methane would be released into the atmosphere absent the LCFS pathway is clearly inaccurate and inappropriate.

Moreover, methane generation per unit of milk or meat production is not a fixed quantity but depends upon how manure is managed. Alternative manure management strategies can reduce methane production per unit of manure. The LCFS structure encourages manure management strategies that maximize methane production in order to maximize the subsidies for avoided methane pollution. This is a perverse outcome of a poor policy design, since the most important climate impact of manure methane is as a GHG pollutant, and its value as a fuel is secondary to the importance of keeping it out of the atmosphere.

A more accurate assessment of avoided methane emissions would take into consideration existing equipment, the dynamic policy context, other opportunities to reduce methane emissions and support and incentives for digesters and alternative methane management strategies, as well as current and future obligations under California policy.

LCFS incentives are not simply too generous, the main problem is that they are distortionary

Analysis done for UCS and others reflect that there are large returns to scale in biomethane digester projects in general, which are even larger once gas cleanup and pipeline injection is included, and the upfront capital costs of these projects are much higher than operating costs. The largest confined animal feeding operations (CAFOs), either for dairies, pork or beef, are most economic to install digesters and many already have. The initial capital investments required for these projects are quickly being recovered, and going forward they will generate large returns, probably even absent the avoided methane credit from the LCFS. Continuing to use the initial avoided methane calculation through 2040 for a large facility that already has paid these up-front costs will amount to a huge windfall without additional climate benefit. This dilutes the LCFS by awarding credits that do not reflect real emission reductions, and it will distort markets for milk or pork for the next 17 years.

Distortionary subsidies in favor of the largest CAFO operations are an environmental justice problem

The current LCFS structure for manure biomethane is not simply bad climate policy, as discussed above, but also creates a substantial profit center for the largest CAFOs that is not available to smaller operators or to competitors that employ other strategies to mitigate methane pollution. The largest CAFOs have many environmental problems including water and air pollution and the burdens of this pollution fall most heavily on the adjacent communities, who are in many cases are already overburdened by pollution. These harms are documented in the petition by the Association of Irrigated Residents, Leadership Counsel for Justice & Accountability, Food & Water Watch, and the Animal Legal Defense Fund which CARB has promised to address in this rulemaking.

How CARB can address the concerns above without undermining the LCFS

We understand that CARB values stability and continuity within the LCFS framework, to ensure that private parties have confidence to make investments based on the incentive structure created by the policy. We also understand that CARB is relying on the LCFS to provide financial support for the 2030 Dairy and Livestock Sector Methane Emissions target¹. However, the current LCFS policy design, even with the proposed changes, does not effectively minimize California methane emissions because not only is it excessively subsidizing the largest CAFO operations with existing methane digesters, it is not

¹ [Final Analysis of Progress toward Achieving the 2030 Dairy and Livestock Sector Methane Emissions Target \(March 2022\)](#)

adequate to cover the costs for smaller facilities. Analysis by the International Council for Clean Transportation suggests that most of the California dairies that can cost effectively capture methane already have implemented digesters², so continuing to accept new applications until 2030 will produce little if any additional benefit. Most of the recent LCFS pathway applications for manure biomethane come from out of state, so the avoided methane emissions supported these pathways will not help meet California's methane reduction goals, and the avoided methane emissions associated with these pathways displace emission reductions from other pathways that offer more direct air quality benefits to Californians who are ultimately covering the cost of the LCFS program.

A credit aggregator can address the distortions of the current policy design

As discussed in our January 2022 comment on the December 2021 LCFS workshop³ and additional comment on the March 2022 Workshop on Methane, Dairies and Livestock, and Renewable Natural Gas in California⁴, CARB should restructure the treatment of avoided methane emissions to ensure that support for investments that reduce methane emissions are not inadvertently creating incentives to maximize the production of methane. A structural change to the LCFS would address these problems by moving credits for avoided methane emissions to a credit aggregator to monetize and disburse as grants in support of agricultural methane reduction, including but not limited to digester projects. This approach would allow CARB to avoid overpaying for facilities that already have digesters, and by scaling payments to actual costs the credit aggregator will have more funds to overcome the cost barriers for smaller facilities. By basing grant amounts on costs and taking into consideration other sources of support the credit aggregator can avoid windfall profits that distort the economics of milk or meat production in favor of the largest CAFOs. Moreover, a grant process run by a credit aggregator can include criteria and requirements beyond what fits into a carbon intensity calculation and create an opportunity for community engagement to understand and mitigate local concerns including public health or environmental justice prior to grant approvals.

Absent structural changes, credit for avoided methane should be limited to 10 years for all pathways

While we believe a credit aggregator is the best structure for LCFS policies in general, we understand that CARB may be reluctant to dramatically restructure an existing program. In the absence of a credit aggregator, credit for avoided methane emissions should be limited to 10 years after the date of pathway approval, starting retroactively, if possible, but if not starting at the conclusion of the 2023 rulemaking process. This will provide the operator a predictable opportunity to recoup their upfront costs, but after operating and receiving LCFS support for avoided methane pollution for 10 years, the existence of the digester should be included in counterfactual lifecycle analysis, such that the facility no longer receives credits for avoided methane emissions after 2034.

² Jane O'Malley, Nikita Pavlenko, Yi Hyun Kim. 2022. 2030 California renewable natural gas (RNG) outlook: resource assessment, market opportunities and environmental performance – in press.

³ <https://www.arb.ca.gov/lists/com-attach/24-lcfs-wkshp-dec21-ws-AHVSN1MhVlpXNQRI.pdf>

⁴ <https://www.arb.ca.gov/lists/com-attach/19-dairywkshp220329-ws-VCFXMIQmWVVWNFQ1.pdf>