April 12, 2022

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

Re: Comments on Dairy Biomethane and the Low Carbon Fuel Standard

Dear Chair Randolph:

I am submitting these comments on behalf of the Bioenergy Association of California, which represents nearly 100 local agencies, private companies, environmental and community groups, and research institutions that are focused on sustainable bioenergy development in California to meet the state's climate change, clean energy, air quality, wildfire reduction, and landfill reduction goals. BAC urges CARB to continue to support the development of dairy digesters and the use of dairy biomethane in the Low Carbon Fuel Standard and other programs. Reducing methane emissions from dairies is critical to achieve the state's overall climate goals and using that biomethane in heavy duty trucks that replace diesel trucks also provides enormous benefits for air quality. Continuing to support dairy digesters is also required by SB 1383 (Lara, 2016) and multiple other laws in California.

1. SLCP Reductions are the Most Urgent Climate Measures.

The science is very clear that reducing Short-Lived Climate Pollutant (SLCP) emissions is the most urgent step we can take to begin to reverse climate change. That is because SLCPs are many times more damaging to the climate than carbon dioxide, but only stay in the atmosphere for a short time.[1] Reducing SLCP emissions is effectively the only step that can begin to slow climate change right away and at large scale.[2] Reductions in carbon dioxide, by contrast, will take decades to benefit the climate and we don't have that long to stop catastrophic climate change.[3]

[11] *Short-Lived Climate Pollution Reduction Strategy,* adopted by the California Air Resources Board in March 2017, at page 40, Table 5.
[2] Dr. V. Ramanathan, UC San Diego Scripps Institute, https://bendingthecurve.ucsd.edu/.
[3] Id.

The UN climate conference in Glasgow last fall underscored the urgency of methane and other SLCP reductions. As the head of the United Nations Environment Program stated, "Cutting methane is the strongest lever we have to slow climate change over the next 25 years . . . [we] need to urgently reduce methane emissions as much as possible this decade."[4] President Biden stated it even more clearly in a joint statement with the head of the European Commission that said "reducing methane is the single most effective strategy to reduce global warming in the near term."[5] In addition, about 140 countries including the United States have agreed to cut their methane emissions significantly by 2030.

In California, dairies are the largest source of methane emissions and dairy manure by itself causes about one quarter of all the state's methane emissions. Meeting the requirement of SB 1383 to cut methane emissions 40 percent by 2030 will not be possible without significant reductions in methane emissions from dairies, especially reductions in the emissions from dairy manure since enteric fermentation is much more challenging to reduce and to measure accurately.

2. Excluding Dairy Biomethane from the LCFS Would Violate SB 1383.

Dairy opponents propose excluding dairy biomethane from the LCFS, which would clearly violate the requirements of SB 1383. SB 1383 includes several provisions specific to dairy biomethane, including:

- The requirement that CARB "develop a pilot financial mechanism to reduce the economic uncertainty associated with the value of environmental credits, including credits pursuant to the Low-Carbon Fuel Standard regulations . . . from dairy-related projects producing low-carbon transportation fuels."[6]
- The requirement to adopt a mechanism to provide LCFS credits for up to three 10-year crediting periods to dairy biomethane producers that begin production before the adoption of dairy methane regulations.[7]
- The requirement that the California Energy Commission recommend measures to increase the production and use of biomethane, with priority going to "fuels with the greatest greenhouse gas emissions benefits, including the consideration of carbon intensity and reduction in short-lived climate pollutants."[8]

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[4] Inger Andersen, Executive Director of UNEP, quoted in United Nations Environment Program Press Release entitled "*Global Assessment: Urgent steps must be taken to reduce methane emissions this decade,"* May 6, 2021. Available at: https://www.unep.org/news-and-stories/press-release/global-assessment.

[5] *Joint US-EU Press Release on the Global Methane Pledge,* September 18, 2021. Available at: https://www.whitehouse.gov/briefing-room/statements-releases/2021/09/18/joint-us-eu-press-release-on-the-global-methane-pledge/.

[6] Health & Safety Code section 39730.7(d)(1)(B).

[7] Health & Safety Code section 39730.7(e); LCFS regulations.

[8] Health & Safety Code section 39730.8(e).

There is simply no way to exclude dairy biomethane from the LCFS without violating the clear language and intent of these provisions in state law. There is also virtually no way to meet the 40 percent methane reduction target without dairy digesters, which are providing by far the greatest methane reductions of any programs or investments to date.

3. Investments in Dairy Digesters are the Most Effective and the Most Cost-Effective of All the State's Climate Investments.

Both CARB and the Legislative Analyst's Office have found that investments in dairy digesters are the most cost-effective of all of the state's climate investments. According to CARB's 2021 report to the Legislature on the state's climate investments, investments in methane reductions at dairies have cut carbon emissions for the tiny cost of just $9 per ton of CO2e.[9] That is less than one-fifth the average cost of carbon reductions in California. The Legislative Analyst's Office has also found that investments in dairy digesters and other organic waste to energy projects are the most cost-effective of the state's climate investments, averaging less than $10 per ton of CO2e reduction.[10]

Just as we have a very limited period of time – almost certainly less than a decade – to stop catastrophic climate change, we also have limited funding and need to prioritize investments in the most cost-effective measures that benefit the climate right away. CARB's own analysis, along with the LAO and others, makes clear that investments in dairy digesters are the most cost-effective climate investments and the ones that provide the largest and most immediate benefits. California should continue and increase investment in dairy digesters as the most urgent and the most beneficial climate investment the state can make.

4. Using Dairy Biomethane to Replace Diesel Provides Enormous Air Quality Benefits.

When dairy biomethane is used to replace diesel in heavy duty trucks, then it provides an even greater benefit for the climate and air quality. Diesel trucks are the largest source of air pollution in the San Joaquin Valley and South Coast Air Districts, the two most polluted air districts in the United States.[11] Not only do diesel trucks cause smog,

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[9] CARB's Annual Report to the Legislature: *California Climate Investments Using Cap-and-Trade Auction Proceeds*, issued April 2021, Table 2. Available at: Available at: https://ww2.arb.ca.gov/sites/default/files/classic//cc/capandtrade/auctionproceeds/2021_cci_annual_report.pdf

[10] Legislative Analyst's Office, "Estimated Average GHG Reduction Cost Is High With Wide Variation Across Programs," report presented to Assembly Budget Subcommittee #3 on April 20, 2016.

[11] *See*, Miyasato, Matt, PhD, Deputy Director, South Coast Air Quality Management District, presentation to the California Energy Commission, *Air Quality and Near-Zero Emission, Heavy- Duty Natural Gas Engines,* June 2014; San Joaquin Valley Air Pollution Control District, presentation by Dave Warner, San Joaquin Valley Air Quality Management District, to the Dairy Methane Working Group, Sacramento, May 23, 2017.

but they also release toxic air contaminants that increase cancer, heart and lung disease, asthma, and other public health impacts, as well as crop damage, impacts on forest health and water quality, and more.

CARB should continue to include dairy biomethane in the LCFS and incentivize its use to replace diesel in heavy duty trucks. In the short and medium term, dairy biomethane can be used in near-zero emission natural gas trucks that cut air pollution 90 percent compared to diesel trucks.[12] Once zero emission heavy duty trucks are commercially available, then dairy biomethane can be converted to renewable hydrogen and electricity to power zero emission trucks, providing even greater benefits for air quality and the climate.

5. CARB Should Prioritize Instate Biomethane to Maximize Benefits and Ensure Additionality.

At the March 29 workshop, several parties raised concerns about the inclusion of biomethane from out of state dairies and farms. BAC does not take a position on whether those concerns are justified or not, but does encourage CARB to prioritize the use of instate biomethane to help meet the requirements of SB 1383 and other important state policies. Prioritizing instate biomethane from dairies and other organic waste sources will help to meet the requirements of SB 1383 to cut methane 40 percent and anthropogenic black carbon 50 percent by 2030.

Both California's Renewable Portfolio Standard (RPS) and Renewable Gas Standard (RGS) require that biogas be produced and used instate or by physically delivered to California and provide benefits to California's environment.[13] Only the LCFS allows the purchase of credits for out of state biomethane that may never be delivered to California. Out of state biomethane projects may reduce GHG and/or SLCP emissions, which benefits the global climate, but they do not help California meet the specific requirements of SB 1383 to reduce methane and black carbon emissions, divert organic waste from landfills, and increase instate production of renewable gas.

Many other state laws call for instate biomethane production as well. They include:

- AB 1900 (Gatto, 2012) requires that "the commission shall adopt policies and programs that promote the in-state production and distribution of biomethane. The policies and programs shall facilitate the development of a variety of sources of in-state biomethane."[14]

[12] See, EXECUTIVE ORDER A-021-0630, issued by the California Air Resources Board, September 10, 2015.
[13] Public Utilities Code sections 399.12.6(b) and 651(b)(3). The CPUC adopted a Renewable Gas Standard in February 2022 in Decision 22-02-25.
[14] AB 1900 (Gatto, 2012) adding Section 399.24(a) to the Public Utilities Code.

- SB 1122 (Rubio, 2012) requires the CPUC to "encourage gas and electrical corporations to develop and offer programs and services to facilitate development of in-state biogas for a broad range of purposes." [15]
- AB 2313 (Williams, 2016) requires the CPUC to consider options to increase instate biomethane production and use.[16]
- SB 840 (Budget, 2016) states that for "California to meet its goals for reducing emissions of greenhouse gases and short-lived climate pollutants, the state must . . . increase the production and distribution of renewable and low-carbon gas supplies."[17]
- SB 1383 (Lara, 2016) requires state agencies to "consider and, as appropriate, adopt policies and incentives to significantly increase the sustainable production and use of renewable gas, including biomethane and biogas."[18] SB 1383 also requires the Commission to "consider additional policies to support the development and use in the state of renewable gas, including biomethane and biogas, that reduce short-lived climate pollutants in the state."[19]
- SB 1440 (Hueso, 2018) requires the CPUC to consider adopting a biomethane procurement program focused on instate and delivered biomethane.[20]

BAC urges CARB, therefore, to prioritize biomethane that is produced and used instate or is physically delivered to California. This will align the LCFS eligibility requirements with the state's RPS and RGS programs and will maximize the benefits to California.

6. Opponents' Arguments Focus on Dairies and Digestate, Not Biomethane Production or Use.

At the March workshop, presenters and public commenters that oppose dairy biomethane focused most of their arguments on dairy operations – which would exist with or without dairy digesters – and the land application of digestate, which is a byproduct of dairy digestion. Several opponents asserted that dairy digesters and the LCFS program more generally are encouraging increased herd sizes, more consolidation, and other changes that could increase dairy methane emissions. Yet, they presented no data to support these assertions. On the contrary, speakers from USDA, CDFA, and the dairy industry provided data showing that consolidation has been occurring in the dairy industry for decades and that the number of dairy cows in California has not increased in response to dairy biomethane production.

[15] SB 1122 (Rubio), Statutes of 2012, Chapter 612, codified at Public Utilities Code § 399.20(f)(2)(D).
[16] Public Utilities Code § 784.2.
[17] Senate Bill 840 (Budget), Statutes of 2016, SEC. 10, §§ (b) – (i).
[18] Health and Safety Code 39730.8(c).
[19] Health and Safety Code 39730.8(d).
[20] Public Utilities code section 651(b).

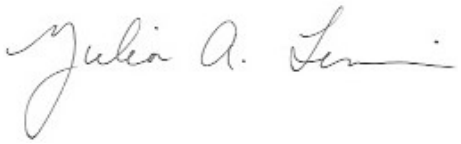
Dairy opponents also ignore the clear evidence that dairy digesters – by collecting and covering dairy manure – reduce odors, air and water pollution from dairies.[21] Opponents also ignore the economic and jobs benefits of dairy digesters, which provide jobs and local revenues in low-income communities.[22] Opponents also ignore the significant air quality benefits of dairy biomethane when it is used to replace diesel in heavy duty trucks.

None of the opponents presented data or evidence that dairy digesters or the use of dairy biomethane are increasing pollution in local communities. Instead, their arguments are about the dairies themselves and should be addressed in other venues that consider dairy operations. It makes no sense to try to stop dairy operations by fighting dairy digesters, which provide an extremely cost-effective and critical tool to reduce methane emissions and other pollution.

Conclusion

BAC urges CARB to continue to include dairy biomethane in the LCFS to meet the requirements of SB 1383 and other important state policies. These are the most effective, urgent, and cost-effective of all of the state's climate investments. Dairy digesters also reduce air and water pollution from dairies and can provide enormous air quality benefits when dairy biomethane is used to replace diesel in heavy duty trucks. Reduction of SLCP emissions is far too urgent to exclude dairy biomethane from the LCFS, but to maximize benefits to California, CARB should prioritize the use of instate biomethane and biomethane that is physically delivered to California.

Sincerely,



Julia A. Levin
Executive Director

[21] California Department of Food and Agriculture, *Dairy Digester Research and Development Program – Report on Funded Projects 2015-2020*, 2021 Report to the Joint Legislative Budget Committee, at pages 17-18.
[22] Id.