



August 8, 2022

Low Carbon Fuels Standard Program
California Air Resources Board
Sacramento, CA 95814

Re: Comments on LCFS Program Staff Presentation on July 7, 2022

To the LCFS Program:

The Bioenergy Association of California (BAC) submits these comments on the July 7 Staff Presentation on potential changes to the LCFS program. BAC represents nearly 100 public agencies, local governments, low carbon fuel producers, utilities, environmental groups, local air districts, and other working to promote sustainable bioenergy development in California. BAC members convert California's organic waste to energy to meet the state's climate change, air quality, wildfire reduction, landfill reduction, and clean energy goals. BAC represents most of the instate biomethane producers and the lowest carbon fuel producers that participate in the LCFS program.

BAC's comments on the Staff Presentation address six major issues:

- Support for increasing the carbon intensity requirement for 2030 and establishing 5-year interim targets between 2025 and 2045.
- Need to prioritize fuels that reduce Short-Lived Climate Pollutants to meet the requirements of SB 1383.
- Adopt incentives to support instate biofuels generated from organic waste.
- Support adoption of sustainability criteria for biofuels.
- Need to add "book and claim" for hydrogen and electricity generated from biogas, consistent with the RPS.
- Need to accurately account for avoided landfill emissions.

BAC's comments are below.

1. Support Increasing the 2030 Requirement and Setting 5-year Interim Targets to 2045.

The Staff Presentation on July 7 makes clear that the LCFS is working and that it has achieved a 9.36 percent reduction in the overall carbon intensity of vehicle fuels.¹ The LCFS has also helped to diversify vehicle fuels, which is important to meet all vehicle needs, maintain competition, and maintain a reliable transportation sector for the world's fifth largest economy. While the LCFS program's achievements are significant to date, the program is far behind the carbon reductions achieved in the electricity sector under the state's Renewables Portfolio Standard (RPS) and the LCFS is not currently on track to meet the state's 2030 and 2045 climate goals.

The Staff Presentation asked whether the 2030 target should be increased and proposes increasing the requirement to 25 or 30 percent in 2030.² BAC strongly supports increasing the 2030 requirement and urges the Air Board to set it at no less than a 30 percent reduction by 2030. This would start to bring the LCFS program into closer alignment with the requirement of SB 32 to achieve a 40 percent reduction in carbon emissions by 2030. Since the transportation sector is the state's largest source of GHG emissions, it makes sense to bring the goals of the LCFS program into alignment with the requirements of SB 32. Increasing the 2030 requirement will also help to achieve the state's goal of carbon neutrality by 2045. Requiring only a 20 percent carbon reduction by 2030 is not consistent with SB 32 and does not put California on track to meet its longer-term climate goals.

The Staff Presentation also asked whether the Air Board should set 5-year interim targets out to 2045.³ BAC strongly supports this proposal for several reasons. First, achieving carbon neutrality will not be possible without aggressive carbon reduction targets in the transportation sector. Second, some fuels – such as biofuels, hydrogen or electricity generated from organic waste - can provide carbon negative emissions that will be needed to reach carbon neutrality. Third, establishing longer term targets will make clear that the near term (2030) target needs to be increased substantially to get California on track to meet its 2045 goals. And finally, establishing 5-year interim targets will provide benchmarks and a smoother path for the market by providing longer term market signals and greater certainty.

For all these reasons, BAC strongly supports the Staff Presentation proposals to increase the 2030 requirement and to set 5-year targets out to 2045.

¹ California Air Resources Board, Staff Presentation entitled "Low Carbon Fuel Standard - Public Workshop: Potential Changes to the Low Carbon Fuel Standard," July 7, 2022, slide 6.

² Staff Presentation at slide 12.

³ Staff Presentation at slides 13-14.

2. The LCFS should prioritize fuels that reduce Short-Lived Climate Pollutants.

BAC urges the Air Board to maintain the LCFS as a performance-based program, based exclusively on the carbon intensity of fuels, as the program was originally designed. This ensures that the program remains focused on its overarching goal - reducing the carbon intensity of transportation fuels - achieves the greatest potential carbon reductions and makes measuring progress much simpler and more objective.

If, however, the Air Board is going to continue to adopt incentives for infrastructure or other goals beyond carbon intensity, then BAC urges the Air Board to adopt additional incentives for fuels that reduce Short-Lived Climate Pollutants.

Adding incentives for fuels that reduce SLCP emissions makes sense for several reasons. First, SB 1383 requires significant reductions in SLCP emissions – a 40 percent reduction in methane and a 50 percent reduction in anthropogenic black carbon - by 2030.⁴ Second, climate science is now very clear that reducing SLCP emissions is by far the most urgent step we can take to address climate change as it is one of very few measures that begins to cool the climate right away – or even in the next several decades. As the Air Board’s *Short-Lived Climate Pollutant Reduction Strategy* states, “The science unequivocally underscores the need to immediately reduce emissions of short-lived climate pollutants (SLCPs).”⁵

Finally, SLCP reductions, unlike reductions in carbon dioxide emissions, provide immediate and significant public health benefits.⁶ Black carbon and methane are both air pollutants that impact air quality and public health significantly. Black carbon emissions also impact agriculture and forest health and can impact precipitation patterns. In other words, not only is SLCP reduction more critical for the climate than other carbon reductions, but it also provides more immediate benefits to public health and the economy than carbon dioxide reductions.

BAC urges the Air Board to incentivize low carbon fuels that reduce SLCP emissions to help meet the requirements of SB 1383 and to provide direct benefits to public health. This includes biofuels, hydrogen and electricity generated from organic waste in California, which reduces SLCP emissions from landfills, livestock, agricultural, and forest waste.

3. The LCFS should do more to incentivize instate biofuels.

The Staff Presentation on July 7 shows that biomethane use, along with other biofuels, is increasing in California. Most of the participating biomethane is generated out of

⁴ Health and Safety Code section 39730.5.

⁵ *Short-Lived Climate Pollutant Reduction Strategy*, adopted by the California Air Resources Board, March 2017, at page 1.

⁶ *Id.*

state, however, which does not help California to meet its SB 1383 requirements to divert organic waste from landfills, reduce dairy methane emissions in-state or reduce open burning of agricultural and forest waste. We recognize the climate benefits of new out-of-state biomethane projects and do not propose excluding them from the LCFS. At the same time, it is critical for the Air Board to do more to ensure that in-state biomethane continues to have a role under the LCFS as in-state biomethane provides the greatest overall carbon reductions and does the most to meet other important state policies. There are several reasons why the Air Board should incentivize in-state biomethane production in the LCFS program or at least ensure that in-state and out-of-state biomethane are competing on a level playing field.

First, only in-state production of biomethane helps to meet the requirements of SB 1383 to reduce methane and black carbon emissions from organic waste in California. The importance of in-state production of biomethane in the LCFS is underscored by the requirement in SB 1383 to ensure the long-term value of LCFS credits for biomethane in-state from dairy waste.⁷ Converting the state's organic landfill waste, agricultural, and forest waste to biomethane also helps to reduce methane and black carbon emissions as required by SB 1383. SB 1383 also requires state agencies to adopt additional policies to increase the development and use of in-state biomethane and biogas.⁸ Specifically, SB 1383 requires state agencies 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.”⁹ [emphasis added]

Second, many other state laws require the adoption of policies and incentives to promote the in-state production and use of biomethane and biogas, including:

- AB 1900 (Gatto, 2012) requires the adoption of “policies and programs that promote the in-state production and distribution of biomethane.”¹⁰
- SB 1122 (Rubio, 2012) requires the adoption of programs “to facilitate development of in-state biogas for a broad range of purposes.”¹¹
- AB 2313 (Williams, 2016) requires consideration of options to increase in-state biomethane production and use.¹²
- 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

⁷ Health and Safety Code section 39730.7(d)(1)(B).

⁸ Health and Safety Code sections 39730.8(c) and (d).

⁹ Id.

¹⁰ AB 1900 (Gatto, 2012) adding Section 399.24(a) to the Public Utilities Code.

¹¹ SB 1122 (Rubio), Statutes of 2012, Chapter 612, codified at Public Utilities Code § 399.20(f)(2)(D).

¹² Public Utilities Code § 784.2.

. . . increase the production and distribution of renewable and low-carbon gas supplies.”¹³

- SB 1440 (Hueso, 2018) requires the CPUC to consider adopting a biomethane procurement program focused on in-state biomethane or biomethane that is physically delivered to California.¹⁴

Finally, it is harder to ensure that out-of-state biomethane sold into the LCFS is providing additional – or new – climate benefits. In some cases, as documented in a recent article in *Greenwire*,¹⁵ out-of-state biomethane producers simply switch from electricity generation to selling into the LCFS program, which provides no additional climate benefits.

Despite the many reasons to prioritize in-state biomethane, it is cheaper and easier to sell out-of-state biomethane into the LCFS program. Out-of-state producers do not have to comply with California’s pipeline injection standards and they have lower interconnection, permitting, and development costs. This discrepancy could become even worse if the California Public Utilities Commission adopts additional standards for pipeline biomethane that will apply only to in-state producers. Preliminary information about the next update to pipeline biomethane standards indicates that the standards for in-state producers could become even more expensive to meet, while out-of-state producers are held to much lower standards.

For all these reasons, virtually every other state policy to reduce carbon emissions and promote renewable energy requires delivery of out of state fuels and/or actual benefits to California’s environment. For example:

a) California’s Renewables Portfolio Standard (RPS) Program

AB 2196 (Chesbro, 2012) requires that out-of-state biomethane be physically delivered to California and provide benefits to California’s air, water, or soil quality.¹⁶

b) The CPUC’s biomethane procurement program

SB 1440 (Hueso, 2018) requires that the production of eligible biomethane reduce SLCP and GHG emissions in California and that out-of-state biomethane provide specified benefits to California’s environment.

¹³ Senate Bill 840 (Budget), Statutes of 2016, SEC. 10, §§ (b) – (i).

¹⁴ Public Utilities Code section 651.

¹⁵ Marc Heller, “Natural Gas Could Power New Chapter in Manure-to-Energy,” published in *Greenwire*, July 13, 2022.

¹⁶ Public Utilities Code section 399.12.6(b).

c) CARB's Carbon Offset Program

Adopted pursuant to AB 32 (Pavley, 2006), this market-based program limits the amount of carbon offsets that can be used to meet compliance obligations to just 4 percent until 2025 and then 6 percent until 2030, and at least half of the offsets must provide direct environmental benefits in California.¹⁷

To be clear, BAC is not asking the Air Board to exclude out-of-state biomethane, which is providing significant carbon reductions under the LCFS. In addition, instate production is still quite low and will not be sufficient to replace out-of-state supplies for many years. At the same time, though, it is critical to ensure that instate production can continue to participate in the LCFS and is not effectively excluded because instate production (and actual delivery) are more expensive. Given the greater benefits to California, BAC urges the Air Board to consider incentives to ensure that instate biomethane can continue to participate in the LCFS. Those incentives could include:

- Increased incentives for Near-Zero Emission natural gas trucks in Class 7 and 8 (where there is no commercially viable ZEV option) that contract with instate biomethane producers for three to five years of biomethane supply.
- Increased incentives for pipeline interconnection for instate biomethane producers.
- Incentives for biomethane that helps California meet its landfill diversion, dairy methane reduction, or black carbon reduction
- Incentives for biomethane infrastructure in California similar to the incentives for hydrogen fueling and electric vehicle charging infrastructure

By adopting incentives such as the ones described above (or others), CARB would ensure that biomethane that is helping to meet the requirements of SB 1383 and other important state policies can continue to participate in the LCFS.

4. Support adopting sustainability criteria for biofuels

The Staff Presentation raised several questions related to the sustainability of biofuels.¹⁸ BAC strongly supports the adoption of sustainability criteria for all fuels, not just biofuels. BAC's comments on the biofuels specific questions are below, but BAC urges the Air Board to consider sustainability criteria for batteries and other fuels, in addition to biofuels. The European Union has just adopted sustainable battery standards that the Air Board should consider adopting as well. All fuels and technologies should be held to appropriate sustainability standards.

BAC's response to the sustainability questions around biofuels are:

¹⁷ <https://ww2.arb.ca.gov/our-work/programs/compliance-offset-program/about>.

¹⁸ Staff Presentation at slides 33-37.

a) Forest sector

BAC supports the adoption of sustainability criteria for forest waste and urges the Air Board to adopt the same criteria as the CPUC adopted for the BioMAT program.¹⁹ SB 1122 (Rubio, 2012), which created the BioMAT program, requires the utilities to procure 50 megawatts of bioenergy from new small-scale facilities that convert the “byproducts of sustainable forestry” to electricity.²⁰ The CPUC adopted criteria to define what the “byproducts of sustainable forestry” means and those criteria were developed by a diverse stakeholder group that included CalFire, the Sierra Nevada Conservancy, Placer County Air Pollution Control District, several environmental groups, and BAC. In summary, the criteria limit the use of forest biomass to material that is removed for wildfire mitigation or for forest restoration projects. By using the term “byproducts,” SB 1122 ensures that no forest biomass is eligible for the program if it was removed primarily for the sake of energy.

The state’s goals for forest fuel treatment will lead to millions of tons of forest waste. Sustainable biofuels should be generated from that waste material. Adopting the same guidelines for forest waste biomass as adopted by the CPUC will ensure that the program is limited to the “byproducts of sustainable forestry” and will help the state meet its wildfire reduction and forest health goals. It will also provide consistency across different state agencies and programs.

b) Crops

BAC agrees with the recommendation to adopt sustainability criteria for fuels generated from food crops since their generation can impact food supplies and prices, cause environmental harm from land use changes or forest destruction, and generally provide fewer carbon benefits. At the same time, BAC urges the Air Board to define sustainability criteria around agricultural crops that do not inadvertently exclude the use of crop residues and other agricultural waste (such as tree and vineyard prunings, nut shells, spoiled produce, livestock waste, etc.). BAC also urges the Air Board to consider allowing crops that do not increase net water consumption and do not displace food crops.

c) Lipids / FOG

In adopting sustainability criteria for lipids, the Air Board should be sure not to exclude waste oils that can be converted to very low carbon and sustainable biofuels. This includes Fats, Oil, and Grease (FOG). Some wastewater treatment facilities accept FOG, which boosts biogas production and provides a beneficial way to repurpose the waste oils. BAC urges the Air Board to work with the California Association of Sanitation Agencies (CASA) on any criteria that would affect the ability of wastewater treatment facilities to accept waste oils.

¹⁹ CPUC Decision 14-12-081, adopted in CPUC Rulemaking 11-05-005.

²⁰ Public Utilities Code section 399.20(f)(2)(A)(iii).

5. Book and Claim for Hydrogen and Electricity Generated from Organic Waste, Consistent with RPS Requirements.

The LCFS program allows the use of directed biogas and directed electricity, but does not currently allow the use of directed hydrogen or electricity generated from biogas or directly from organic waste. Given the growing importance of both hydrogen and electricity as low carbon transportation fuels, BAC urges the Air Board to allow “book and claim” for hydrogen and electricity generated directly from organic waste or from biogas with the qualification described below. Doing so will boost opportunities for carbon negative fuels under the LCFS and help to maintain program costs.

In adopting book and claim for hydrogen and electricity from organic waste/biogas, the Air Board should ensure that their inclusion is consistent with the RPS, so that eligible electricity and hydrogen (that will be used in a fuel cell electric vehicle) are consistent with the state’s electricity policies. In particular, BAC urges the Air Board to ensure that the use of directed electricity and hydrogen are consistent with:

- a) The timeline under SB 100 to achieve 100 percent of California’s electricity from renewable resources and zero carbon resources, including the ramp-up requirements to 2045; and
- b) The requirements of Public Utilities Code section 399.12.6(b) regarding biogas eligibility under the RPS.

As California’s electricity and fuels programs become more and more intertwined, it is essential that they are consistent. With those two additions, BAC supports the eligibility of book and claim for hydrogen and electricity generated from organic waste or biogas.

6. Need to Accurately Account for Avoided Landfill Emissions

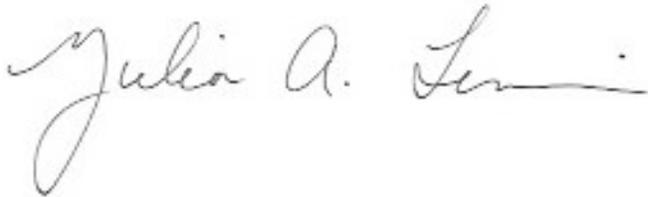
SB 1383 requires local jurisdictions to divert 75 percent of their organic landfill waste by 2025. Many cities and counties are developing projects to convert that organic waste to transportation fuels for LCFS compliance. Accurately assessing the carbon intensity of these fuels is essential and that depends on an accurate assessment of avoided landfill emissions. BAC urges the Air Board to use actual monitoring data, which NASA’s jet Propulsion Laboratory and others can provide, rather than outdated estimates of landfill methane emissions. NASA’s monitoring data makes clear that landfill emissions are higher – in some case, significantly higher, than previously believed.²¹ The carbon intensity of LCFS fuels generated from diverted organic waste should include actual avoided emissions from landfills where that data exists and updated estimates where landfill-specific data is not available. This will make the carbon intensity analysis more accurate, by basing it on actual data rather than decades old estimates, and will

²¹ See, <http://methane.jpl.nasa.gov/>. See also: <https://www.jpl.nasa.gov/news/a-third-of-california-methane-traced-to-a-few-super-emitters>.

accelerate the diversion of organic waste from landfills, which is critical to meet the requirements of SB 1383.

Thank you for your consideration of these comments.

Sincerely,

A handwritten signature in cursive script that reads "Julia A. Levin". The signature is written in a dark ink and is positioned above the printed name.

Julia A. Levin
Executive Director