August 8th, 2022

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

**RE: American Biogas Council Comments Regarding Potential Changes to the Low Carbon Fuel Standard**

Dear Chair Randolph,

Thank you for the opportunity to submit comments on the July 7, 2022, Public Workshop to Discuss Potential Changes to the Low Carbon Fuel Standard (LCFS). The American Biogas Council (ABC) is the unified voice of the United States biogas production and distribution industries: we represent 330 organizations nationwide dedicated to recycling organic waste into home-grown renewable transportation fuels and natural soil amendments and fertilizers, while at the same time, reducing GHG emissions. These 330 member organizations represent thousands of professionals throughout the biogas and anaerobic digestion industry.

We applaud the California Air Resources Board's (CARB) leadership on climate change issues and are pleased at the thoughtfulness that CARB has shown in its support of biogas as a vital component of meeting our current and future climate-based challenges and priorities. At their core, biogas systems protect our air, water, and soil, and are a crucial part of the solution to the challenges CARB seeks to address.

After the workshop, Governor Newsom sent you a letter on July 22, 2022 (the "Governor's Letter") in which he noted that California is in the midst of a climate crisis and asked that CARB help the state to "up [its] game" in addressing this great crisis. He asked CARB to take even bolder action than what was laid out in the draft Scoping Plan issued in May.

We therefore make the comments set forth in this letter not only in response to the July 7th workshop, but also with the Governor's Letter in mind.

1. Make the carbon reduction targets more stringent

   In the workshop, CARB staff asked for stakeholder input on whether carbon intensity reductions in the period 2024 (or later effective date of the amendment) – 2030 should be made more stringent than the 20% reduction currently called for by 2030. In making our comment we note that LCFS credit values have fallen by approximately 50% in the last year, with little prospect for credit prices to increase again until the amendment goes into effect. The purpose of the LCFS is to incentivize the ongoing reduction of the carbon intensity of transportation fuels in California through a market-driven regulation, but the market is telling us that the current target CI reductions in the LCFS regulation are not stringent enough. Thus, the purpose of the LCFS is imperilled, especially at a time when other states have either passed, or are likely to pass, their own versions of the LCFS. Therefore, we support the scenario presented by CARB staff in the workshop of a 30% reduction by 2030. In light of the Governor's Letter calling for an urgent move away from fossil fuels and considering the demonstrated ability of the clean fuels industry to innovate to drive down CI and ramp up low carbon fuel production, a 30% reduction by 2030 is the **minimum** reduction CARB should incorporate into the amendment.

2. Interim five-year CI targets post 2030

   During the workshop CARB staff requested input on whether there should be interim five-year CI targets post-2030 until 2045. As noted in our preceding comment, we have seen great turbulence in the LCFS credit market this past year, with an approximate 50% reduction in credit price as compared with a year earlier. Our members' alternative transportation fuel projects require long lead times for planning, permitting and construction, along with substantial up-front capital investment and ongoing operating expenses. These projects are exactly the kind of projects the LCFS was designed to incentivize, yet the precipitous drop in credit price is imperilling them. However, staff has

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said in workshops that more stringent targets will not go into effect until the effective date of the amendment, i.e., at the earliest January 1, 2024. In the workshop presentation, CARB included as one of its "principles for alignment," the need to "further incentivize private investment in transportation decarbonization." We therefore believe that to fully stabilize the LCFS credit market and incentivize ongoing innovation in transportation fuels used in California, CARB should indeed set forth five-year reduction targets post-2030 that can be adjusted based on actual conditions in the market.

3. Phase-in of more stringent CI reduction targets

   CARB did not include a proposed schedule for the phase-in of the more stringent reduction targets in the Scenarios presented in the workshop. We note that the way the new reduction Scenario is phased in can have a substantial impact on LCFS credit prices and therefore the goals of the LCFS. We therefore call upon CARB to put forth its thoughts on the phase-in during the upcoming August 18th LCFS workshop to enable it to receive stakeholder input.

4. Make the carbon intensity targets more stringent outside a full rulemaking

   In the December 7, 2021, workshop, CARB staff stated that it would not be making reductions in the carbon intensity targets until the full amendment goes into effect. We urge CARB to determine if it is possible to steepen such targets before the full rulemaking under California regulatory law, as some stakeholders posited in the December workshop.

5. Amend the Livestock Offset Protocol to expand the types of livestock manure that can generate avoided emissions credits

   California's SB 1383 law and the facts and data presented in CARB's March 31, 2022, workshop on dairy manure RNG make it clear that reducing methane emissions from dairies and livestock facilities is critical to California achieving its climate goals. We continue to strongly support the ability of dairy and swine manure RNG to generate avoided emissions credits (AEC's) under the LCFS. To further assist California to meet its climate goals, we ask CARB to amend the Livestock Offset Protocol ("LOP"), which was last amended in 2014, to expand the types of livestock manure that can generate avoided emissions credits under the LCFS. The LOP is based on values set forth in Chapter 10 of the Intergovernmental Panel on Climate Change's 2006 Guidelines for National Greenhouse Gas Inventories entitled "EMISSIONS FROM LIVESTOCK AND MANURE MANAGEMENT". In addition to dairy cattle and swine, Chapter 10 also incorporates values for beef cattle and poultry manure. If CARB wants to incentivize the reduction of methane emissions from livestock, it should expand the categories of livestock manure that can generate avoided emissions credits.

6. Incorporate sustainable agricultural practices as a means of reducing carbon intensity

   In the July 7th workshop, staff noted that stakeholders have requested consideration of site-specific agricultural inputs in determining a fuel pathway's carbon intensity. In his letter, Governor Newsome stated that California "must look for greater opportunities to reduce our dependence on fossil fuels to achieve our air quality and climate targets, including in our … transportation sector." One way to accomplish this is to incentivize the adoption of agricultural practices that reduce the carbon intensity of alternative transportation fuels, such as renewable natural gas, used in the state. A by-product of the anaerobic digestion of dairy and livestock manure is digestate, which is usually produced in rural areas where it can be utilized by farmers to grow their crops. The use of digestate not only reduces GHG emissions by eliminating the need for synthetic, imported fertilizers, but it also has the benefit of reducing fertilizer costs during a time that producers are experiencing skyrocketing costs brought about by the Russian invasion of Ukraine, a problem that will continue for the foreseeable future. In addition, the United States Departments of Agriculture's (USDA) Partnerships for Climate-Smart Commodities grant program will expand existing commodity supply chains to produce renewable natural gas and carbon credits through a smarter utilization of resources, thus improving the sustainability and resilience of farming and ranching operations. This program has the potential, along with the LCFS program, to substantially change the way farmers and ranchers produce the nation's crops through the use of byproducts of anaerobic digesters along with food waste and animal manure.

7. "Drastically Reducing Methane"

In the section of the Governor's Letter entitled "Drastically Reducing Methane," he notes that "short-lived climate pollutants, such as methane**,** can also have an outsized impact on climate change in the near term given their potent warming power." He called for "the input of community members, air districts and local government entities to take action to address" [methane] leaks from oil infrastructure. His position is buttressed by California law through SB 1383 and SB 1440.

In the Letter, he asked for the establishment of a Task Force to identify and address methane leaks from oil infrastructure. We support his request but believe that the duties of such a Task Force should be expanded to address methane leaks from landfills. While the Governor refers to methane detection satellites as the means of addressing methane leaks from oil infrastructure, there is also drone technology developed by NASA to measure landfill methane leaks. We advocate for the inclusion of such drones in the $100 million appropriated in the state budget along with the methane detection satellites. This technology exists and will enable CARB to utilize actual fugitive emissions data in the Tier 1 Calculator for methane produced from landfill gas, instead of utilizing assumptions developed before the drone technology was available.

We therefore request that CARB revise the Tier 1 calculator for renewable natural gas (RNG) derived from landfills to incorporate actual fugitive emissions data from landfills, which we understand it can do outside of a full rulemaking. Doing so will incentivize stakeholders to develop and operationalize landfill gas RNG projects, helping the state to meet its methane reduction goals. Without this change operators do not have the proper incentives to produce RNG to sell into the LCFS market.

8. Focus more on carbon capture and sequestration

In the Governor's Letter, he noted that "engineered carbon removal is clearly needed to achieve the scale of carbon removal required to reach carbon neutrality." We note that carbon dioxide is a one of the two main by-products of the anaerobic digestion of organic waste, and some of our members are actively exploring carbon capture and sequestration (CCS) as a means of reducing CO2 emissions. While CARB created an LCFS CCS protocol as part of the last LCFS amendment, it is our understanding that no LCFS CCS pathway has been certified to date. Therefore, we urge CARB to employ additional staff resources to enable CARB to meet Governor Newsom's goals with respect to CCS.

9. Speed up the fuel pathway certification process

During the workshop, stakeholders producing RNG from dairy manure commented that the pathway certification process takes too long, causing them to forego LCFS credits they would be entitled to if their pathways were certified on a timely basis. That delay imperils the ongoing incentivization of decarbonization of the transportation pool and we urge CARB to employ additional staff resources to address this bottleneck on an ongoing basis.

10. A book-and-claim pathway for biogas would unlock the full potential of California's biogas market.

To further enhance the LCFS program, we believe that biogas to electric vehicle projects should be able to use similar book-and-claim processes that are in place for compressed natural gas (CNG) and allowed across multiple grids. Establishing a book-and-claim pathway for biogas would significantly increase the prospect of biogas as an alternative fuel, as well as improve the economics of the biogas market. For instance, rather than limiting dairy biogas participation to those with a direct pipeline connection to the San Joaquin Valley, all LCFS participants would be able to participate in California's growing dairy biogas market. As seen in Dairy Cares latest California Dairy Digester Development update, 182 dairy farms are planned to be included in the "hub and spoke" pipeline model. However, an additional 35 dairy digester projects under development are not part of the hub and spoke clusters. CARB should consider allowing biogas book-and-claim in the LCFS program to unlock the full potential of California's biogas market. Industry estimates indicate that biogas from California's dairy farms has the potential to generate 300MW+ of power, equivalent to powering approximately 600,000 EVs, each traveling 15,000 miles per year. When considering the nationwide market, the potential is even greater.

In addition to dairy, there are 541 operational landfill gas energy projects in the US and 474 candidate projects. The operational projects are capable of 1,471 MW or 314 mmscf of gas per day, and the candidate projects are capable

of 980 MW or 545 mmscf of gas per day. There are immense opportunities to better incorporate biogas into the LCFS program, and this is an excellent opportunity to do so.

In closing, the ABC continues to be extremely supportive of CARB's world-class LCFS regulation and believes that CARB can continue to lead the way for the United States and the world by making smart and thoughtful amendments to the LCFS program in a way that will stabilize and broaden the market, as well as incentivize innovative technologies and crop production practices moving forward.

Sincerely,

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