

April 12, 2022

Short-Lived Climate Pollutants Program  
California Air Resources Board  
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**RE: Comments on March 29, 2022, Workshop on Methane, Dairies and Livestock, and Renewable Natural Gas in California**

Thank you to the California Air Resources Board (CARB) staff for organizing this workshop and providing deep consideration of the complex issues underlying dairy methane emissions and abatement in California. CARB's willingness to engage with stakeholders and provide forums for discussion is critical to ensure the state has a strong foundation for regulatory action. We further thank CARB for providing a well-researched, technical basis for discussion in the form of a series of thorough presentations at the workshop.

As background, Oberon is an innovative California company founded in San Diego almost 12 years ago with a focus on decarbonizing the global propane industry while laying the foundation for green hydrogen. We accomplish this by producing renewable dimethyl ether (rDME). rDME can be made from various, in-state waste streams (e.g., dairy manure biogas) and can reduce the carbon footprint of transportation as 1) a blending agent with LPG/propane and 2) a hydrogen carrier to power the growing fuel-cell electric vehicle market.

We are grateful for the robust discussion around the interplay of the Short-Lived Climate Pollutants Program regulations for dairy methane and the California Low Carbon Fuel Standard (LCFS). However, we strongly believe that more time and consideration need to be given to this regulatory nexus and how the two programs can best work together to incentivize the fastest, most economic, and most equitable environmental outcomes. The LCFS is building a phenomenal track record of driving real market adoption of clean fuels and construction of physical infrastructure that reduce emissions. California should act with extreme caution not to undermine the success of the LCFS but, rather, to build upon it and leverage the market mechanisms, private sector experience, and flexible technology options that have proven effective since its incarnation.

To the maximum extent possible, CARB should harmonize the Short-Lived Climate Pollutants Program's regulations to support further use of the LCFS to reduce dairy methane emissions. Indeed, CARB has recognized the importance of this approach, noting in its "Final Short-Lived Climate Pollution Reduction Strategy (March 2017)" that "Emission control regulations will be designed to support and complement existing

programs.”<sup>1</sup>

However, in contrast to the above stated assertion, CARB notes in its guidance document, “Credit Generation for Reduction of Methane Emissions from Manure Management Operations (September 2020)”, “projects developed after the Regulation’s emission reduction requirements are in effect would not be eligible for compliance offset credits or an LCFS carbon intensity that reflects avoided methane emissions, as the methane reductions associated with those projects would not be additional to the Regulation...”<sup>2</sup>

We urge CARB to consider regulatory approaches that would not cut off future innovative biogas projects. The biogas/LCFS intersection is larger than use of renewable natural gas in CNG vehicles. Biogas is a critical, limited, renewable alternative to fossil natural gas and coal that can produce a diverse set of clean fuels and technologies that California will need to meet its overall climate goals. For example, California’s renewable hydrogen standard requires that all H<sub>2</sub> fueling stations constructed with state funding must dispense H<sub>2</sub> with a minimum of 33.3 percent renewable content. Furthermore, once the annual volume dispensed reaches 3.5 million kilograms, this requirement will apply to all fueling stations regardless of funding source.

Biogas produced in California and elsewhere can be a feedstock for renewable hydrogen, either via direct steam reformation or through upgrading to rDME for energy dense transport and then converted to H<sub>2</sub>. Biogas serving as a feedstock for rDME can help decarbonize propane used in forklifts, buses, trucks, and other vehicles used throughout California in those sectors that are the most difficult to decarbonize, as well as in rural regions where pipelines and H<sub>2</sub> fueling stations do not exist. These pathways rely on the LCFS for a market signal and have long lead times to build physical infrastructure. A regulatory structure that cuts off new projects in 2024 will severely hinder deployment, dry up capital, and halt future innovation of business models that support both farmers and clean transportation.

Additionally, CARB noted in its “Final Short-Lived Climate Pollutant Reduction Strategy” that “the rulemaking process will first focus on developing measures to require regulated parties to both report and maintain records covering the parameters that affect GHG emissions at California dairies and other livestock operations.”<sup>3</sup> We urge CARB to provide an extended time period for this phase of the rulemaking in order to provide the longest possible window for projects to retain eligibility for full LCFS credit accounting for avoided methane.

Beyond California, the national impact of these regulations is also important. CARB can either implement policies that continue to highlight California as a bellwether for the rest of the country or implement policies that no other state will want to imitate. Currently, the

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<sup>1</sup> [Final Short-Lived Climate Pollutant Reduction Strategy \(March 2017\), Page 69](#)

<sup>2</sup> [Credit Generation for Reduction of Methane Emissions from Manure Management Operations](#)

<sup>3</sup>[Ibid](#)

market signals derived from the LCFS are resulting in huge improvements in manure management around the country, bringing economic and environmental win-wins. CARB and California benefit from the broadest possible scope of influence as widespread deployment reduces costs, pollution, and emissions. Because of the power of its market signal and flexible program design, CARB is able to incentivize good manure management behavior even in places outside its regulatory reach. However, CARB risks significantly negating the continuation of such beneficial activities outside California by regulating emissions in a way that removes the LCFS incentive.

As a California-based project developer and innovative clean fuel producer, Oberon can unequivocally state that CARB's actions will have real, dramatic, and near-term consequences and can either unlock long-term investment by assuring continuation of LCFS consideration for methane destruction or stymie innovation and stop the development and deployment of future impactful projects by adopting regulations under its Short-Lived Climate Pollutants Program that do not allow for continued credit generation.

Thank you for your time and consideration. Please do not hesitate to contact me at [david.mann@oberonfuels.com](mailto:david.mann@oberonfuels.com) with any questions.

Sincerely,

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