

October 16, 2024

California Air Resources Board
1001 I Street
Sacramento, CA 95814
Via Online Submission

Comments on the Second 15-day Changes to the Proposed Low Carbon Fuel Standard

Dear California Air Resources Board (CARB) Low Carbon Fuel Standard Program Staff:

Thank you for the opportunity to provide comments in response to the proposed amendments to the Low Carbon Fuel Standard.

As background, Oberon is an innovative California company founded in San Diego 13 years ago with a focus on decarbonizing the global LPG/propane industry while laying the foundation for renewable hydrogen. We are accomplishing this today by producing renewable dimethyl ether (DME) at our Brawley, California production facility. Oberon's rDME® brand fuel can be made from various in-state waste streams (*e.g.*, dairy manure biogas, waste water treatment biogas), which can enable smaller, often stranded, biogas suppliers to participate in the LCFS program and produce low carbon DME.¹ Oberon's rDME fuel can reduce the carbon footprint of transportation when used as a: 1) blending agent with Liquid Petroleum Gas (LPG)/propane; 2) hydrogen carrier to power the growing fuel-cell electric vehicle and stationary source market; and 3) diesel substitute. This range of creative applications that clean fuels, such as DME, can support is underscored in the 2022 Scoping Plan Update—DME along with other clean alternatives to petroleum are a key part of the solution for the state to reach its legislatively-mandated greenhouse gas reduction targets.

Responses to Draft Amendments

Oberon supports the proposed amendment package and appreciates the significant efforts that have gone into developing these changes.

In the 'Other Comments' and 'Recommendations for Future Action' sections below we offer suggestions for further clarity where the proposed amendments may benefit from a more fulsome consideration of rapidly developing technology and commercial practices.

We also express our gratitude for your engagement and support for DME and we note with pleasure the inclusion of DME on *Table 4. Energy Densities and Conversion Factors for LCFS Fuels and Blendstocks*.

¹ The California Air Resources Board has estimated dairy biogas-based DME made by the Oberon process has a carbon intensity of -278. rDME® is a trademark of Oberon Fuels, Inc.

Other Comments

- **Carbon Intensity (CI) Benchmarks**

Oberon strongly supports the increased stringency to a 9% carbon intensity reduction in 2025 from the 5% originally proposed in the 45-day package. This adjustment reflects a necessary step toward more robust climate action. This single adjustment will translate into millions of additional tons of GHG emission reductions and act as a supportive market signal for new clean fuel projects that have been or are being constructed to bring more clean fuels to market.

We commend CARB for the inclusion of the Auto Acceleration Mechanism as a forward-thinking measure to ensure the program's dynamism. The proposed change in the Second 15-Day package to four quarterly announcements from one annual announcement for determination of whether an AAM trigger will occur further exemplifies CARB's dedication to the success of the program and their recognition of the importance of timely credit price stabilization to the market and the program's stakeholders.

The AAM is a necessary compliment to the CI target adjustment and as designed, will send a clear, supportive, and unambiguous market signal to continue investments in clean fuels by tightening the program in the event overperformance occurs. Adoption and implementation of this mechanism will ensure that potential emission reductions are not left on the table and will help California reach its climate goals faster if triggered.

- **Avoided Methane Crediting**

Oberon strongly supports the inclusion of avoided methane crediting in the proposed changes. Avoided methane emissions are a critical part of science-based life cycle assessments, and their inclusion in CI calculations is consistent with internationally recognized standards of carbon accounting. The Second 15-Day package proposes that a project certified before the effective date of the regulation are limited to three consecutive 10-year crediting periods, and projects certified after the effective date of regulation but before January 1, 2030, will be limited to two consecutive 10-year crediting periods.

As stated in our August 27, 2024, comment letter, while we understand CARB's intention is to better align the proposed end dates for avoided emission pathways with its mobile source regulations focused on transitioning to electric vehicles, we are concerned about CARB's proposed limitation on the number of crediting periods for avoided methane emissions projects. This change negatively impacts these projects, particularly those that are already in development or near completion that were funded with the expectation they would be eligible for up to three 10-year crediting periods. The reduced crediting period could undermine the financial viability of these initiatives, which rely heavily on LCFS credits to justify the significant investments required. We urge CARB to reconsider

this reduction, as it may inadvertently discourage the development of methane mitigation projects that are crucial to achieving California's climate goals. Maintaining the original structure of three crediting periods would provide the necessary support to ensure the long term viability of these projects while more accurately representing their life-of-project contributions to reducing greenhouse gas emissions.

- **Sustainability Requirements**

Oberon appreciates CARB's amendments to the Sustainability Requirements for Biomass in the Second 15-Day package which clarify the exception of "specified source feedstocks" listed in section 95488.8(g)(1)(A), previously referred to as "biomass" in the First 15-Day package. This proposed amendment provides additional clarity that is beneficial to identifying the proper requirements for different pathways and feedstock types.

- **Book-and-Claim – RNG Deliverability**

We recognize and appreciate CARB's efforts to enhance the integrity and accuracy of the proposed RNG deliverability requirements, consistent with RPS eligibility rules. We note the ZEV penetration metric in the Second 15-day package delivers an improved level of transparency from the previous language concerning "if the Executive Officer approves a gas system map by July 1, 2026".

While we wish to highlight that we do not believe imposing deliverability requirements is necessary to achieve the goals of the LCFS, and we respectfully urge CARB to work with biomethane stakeholders to find a better solution to these concerns, we also note below the implications that the early trigger date for the proposed deliverability requirements could have on biomethane stakeholders. The RNG deliverability requirements are slated to begin in 2041 or 2046 depending on end use, with the potential early trigger advancing the 2041 deliverability requirement for bio-CNG, bio-LNG, and bio-L-CNG pathways for CNG vehicles to apply after December 31, 2037, if the number of unique Class 3-8 ZEVs or NZEVs on December 31, 2029, exceeds 132,000 vehicles.

The early trigger, if reached, would impose unforeseen requirements on businesses and investors who may have already committed to long-term agreements. RNG offtake typically operates on long-term agreements, with contracts frequently spanning 10 years or more. This long-term framework allows for stability and predictability, which are essential to securing investment, ensuring operational viability, and achieving decarbonization goals. It is important to note that many RNG agreements are finalized well in advance of the contract start date, with contracts often signed multiple years prior to the commencement of offtake obligations and multiple years before the project breaks ground. This means that even projects with offtake agreements signed several years before December 31, 2029, could face deliverability requirements that were unforeseen at the time of contracting significant RNG volumes and before an early trigger was determined.

We respectfully urge CARB to reconsider the necessity of RNG deliverability requirements and to avoid the introduction of an early trigger mechanism. Should CARB not be amendable to this reconsideration, we encourage CARB to incorporate resolution intent language that honors the integrity of long-term offtake agreements finalized on or before December 31, 2029, for exception from the early trigger mechanism. Such language would provide a more certain and transparent timeline for developers, operators, and investors to base critical business decisions upon, while still aligning with the state's broader climate objectives.

- **Credit True-up**

Oberon strongly supports CARB's proposal to expand the LCFS credit true-up provisions to include periods using temporary pathway CIs after annual verification. This is a highly positive change, particularly for projects that operate with conservative, temporary CI scores. By allowing these projects to reconcile their credits based on verified CI data, this helps to protect the financial viability of low carbon fuel projects by allowing them to recover lost value that might otherwise be forfeited due to conservative early reporting. Moreover, it promotes greater accuracy and transparency in the program, ensuring that stakeholders are rewarded based on their true environmental performance. This adjustment ultimately strengthens the LCFS program by fostering a more accurate and equitable system. We commend CARB for recognizing the importance of this adjustment and for taking steps to support the integrity and financial viability of renewable fuel projects. The proposal also includes true-up provisions that adjust credits based on verified operational CIs relative to certified CIs, applying a penalty of four times the spread for shortfalls. However, the justification for this 4X multiplier is unclear, as a smaller multiplier, such as 2X, would still effectively discourage overconfidence in CI analysis.

Recommendations for Future Action

Oberon encourages CARB to ensure there continues to be a market for low-CI liquid and gaseous fuels as they are a critical decarbonization tool, especially in sectors that are hard to decarbonize. Oberon recommends that CARB send a clear policy signal that biofuels (e.g., biomethane, renewable propane, renewable DME) are necessary and effective decarbonization strategies in these sectors (e.g., residential, commercial, industrial, and agricultural stationary applications) and are fundamental to the state meeting its ambitious GHG reduction targets.

As the state transitions out of combustion in the transportation space, gaseous and liquid fuels will continue to support the substantial volumes of fuels required by industrial, commercial, residential, and agricultural sectors with escalating pressure to drive down GHG emissions. One approach for doing so is stronger signals and incentives for the production and use of low-CI fuels in these sectors to support meeting the State's

substantial and necessary climate targets.

Expanding the LCFS or creating a LCFS-like structure to facilitate the decarbonization of other gasoline-, diesel-, fossil natural gas-, propane-fueled applications in such markets is an opportunity that merits attention. Doing so would reward investments and use of cleaner fuels by these legacy sectors that are not anticipated to be electrified for many decades. In the last year new domestic and international policies have been established to apply the LCFS approach beyond transportation fuels such as Vermont's Clean Heat Standard, the Canadian Clean Fuel Regulation, and the EU ETS II which cover both transportation and non-transportation fuel. Policy expansion, as signaled in the Initial Statement of Reasons for the proposed LCFS amendments, will support the vast opportunity for reductions in greenhouse gas emissions in these sectors and drive the continued market development of low carbon fuels such as renewable DME in sectors where their GHG reducing benefits are needed.

Thank you for your time and consideration. Please do not hesitate to contact me at cristin.reno@oberonfuels.com with any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Cristin Reno".

Cristin Reno
Manager, Regulatory Affairs
Oberon Fuels

