

March 15, 2023

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

### **Comments on February 22, 2023 Workshop LCFS Regulation**

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

Thank you for the opportunity to provide comments in response to the “Public Workshop to Discuss Potential Changes to the Low Carbon Fuel Standard” held February 22, 2023. We appreciate CARB hosting this workshop.

As background, Oberon is an innovative California company founded in San Diego 12 years ago with a focus on decarbonizing the global LPG/propane industry while laying the foundation for green hydrogen. We are accomplishing this today by producing renewable dimethyl ether (DME) at our Brawley, California production facility. Oberon Fuels’ 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, thereby creating commercial opportunities under the program, avoiding wasteful non-fuel uses of low carbon feedstocks and providing similar or reduced greenhouse gas emissions for the DME lifecycle.<sup>1</sup> Oberon’s rDME 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 market; and 3) diesel substitute. This range of creative applications for clean fuels such as DME is underscored in the recently adopted 2022 Scoping Plan Update if the state is to reach its legislatively-mandated greenhouse gas reduction targets.

### **Responses to February 22, 2023 Workshop Presentation**

#### **Avoided Methane Crediting**

The avoided methane concept presented has merit, however, Oberon strongly encourages staff to extend the window for new pathways receiving avoided emissions credits from 2030 to 2040.

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<sup>1</sup> 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.

We also note a problem with the draft regulatory language. The current language in § 95488.9(f)(3)(A) does not provide a separate crediting period for other “organic waste projects”. This is a good opportunity to add clarity for other “organic waste projects” that should receive avoided methane credits such as poultry manure. Doing so is consistent with the objectives of the LCFS and will reduce uncertainty. CARB should recognize that for feedstocks other than dairy and swine manure and organic material diverted from landfill there is no need for regulatory harmonization. That is because the market is just beginning to emerge, has not received the same years of support, is not otherwise regulated, and thus merits a longer timeline.

### **Biomethane Crediting - Guiding Principles**

We strongly agree with and support the guiding principles presented.

### **Biomethane Crediting - Book-and-Claim**

CARB should expand the exemption to the deliverability requirements beyond hydrogen to include use in fuel production where biomethane is an intermediate feedstock if the finished fuel is physically delivered into California.

Oberon Fuels and many other market participants would expand the number of organic feedstock sources to produce a wider-variety of biogas-based transportation fuels, thereby reducing overall carbon intensity of transportation and hard-to-decarbonize sectors, *if* the LCFS recognized book-and-claim use of renewable natural gas: 1) produced from a wide variety of methane-mitigating waste streams; and 2) used as a feedstock and/or process energy to produce any LCFS-eligible finished fuels (not just CNG or LNG). Recognition of the role of renewables in supporting the production of low-carbon intensity finished transportation fuels is consistent with the design of the LCFS and supports needed investments and innovation. This theme is also consistent with the 2022 Scoping Plan update where the need to drive down greenhouse gas reductions in every sector (including supporting low carbon intensity intermediate feedstocks) is paramount if the state is to reach its reduction targets.

With appropriate limits and the verification and validation procedures CARB already has in place, we believe that any compliance risks can be reasonably managed.

### **Streamline Implementation**

We also refer to Oberon’s comments on the August 18, 2022 Workshop regarding avoided emissions credits from feedstocks other than dairy, swine, and organics diverted from landfill. CARB’s draft regulatory language is silent on this topic.

While we believe the current Tier 2 process is sufficient for a user to develop and CARB to approve avoided emissions credits for feedstocks such as poultry manure, project developers and users may benefit from further regulatory clarity with explicit statements of support by CARB.

### **Book-and-Claim of Low-CI Hydrogen**

We recognize that meeting California's ambitious goals for deploying large scale hydrogen projects will need to incorporate low carbon intensity hydrogen carriers such as DME. We ask that CARB consider adding explicit language or clarity around the opportunity to apply Book-and-Claim to hydrogen pathways that involve an intermediate step or use of carrier-molecule. For example, biomethane injected into a pipeline and withdrawn at a combined methanol/DME plant to produce a Book-and-Claim renewable DME. This DME could then be moved to California and reformed into hydrogen at the point of use. This would be an appropriate application of the existing allowance if reviewed under the Tier 2 process.

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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Oberon Fuels