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February 17, 2015

California Environmental Protection Agency
Air Resources Board
1001 I Street
Sacramento, CA 95814

Re: Proposed Regulation on the Commercialization of Motor Vehicle Alternative Diesel Fuels

To Whom It May Concern:

Oberon Fuels supports the proposed CARB Alternative Diesel Fuel Regulation regarding the Commercialization of New Alternative Diesel Fuels. As an innovative, San Diego-based company, having a clear pathway by which emerging fuels such as dimethyl ether (DME) can be certified by the state of California is imperative. These proposed regulations provide that clarity.

As background, Oberon Fuels is launching DME in North America as a cleaner alternative to diesel for the truck, agricultural, and construction markets. Using various, domestic feedstocks such as food waste, landfill gas, and flare gas, Oberon has developed a small-scale process that cost-effectively converts two greenhouse gases, methane and carbon dioxide, to DME. DME is a clean-burning, non-toxic, potentially renewable fuel that offers diesel-like performance with propane-like handling properties. With a high cetane number (55-60) and quiet combustion, DME is an excellent diesel alternative that will meet strict emissions standards and assist in lowering greenhouse gases. Oberon Fuels' first facility in Brawley, California came online in the Summer of 2013 and is producing fuel-grade DME that is being used in US-based demonstrations of heavy-duty, DME-powered Volvo trucks.

On the regulatory front, Oberon is working with a variety of state and federal agencies to ensure that the proper regulations are in place to support the commercialization of DME as a transportation fuel:

- **CARB.** Oberon is currently working with CARB to navigate the Multimedia Assessment process, which has recently moved to Tier 2. DME Tier 1 Report was posted to CARB's website on February 13, 2015.
 - **ASTM International** passed a new standard specification ASTM D7901-14b for "Dimethyl Ether for Fuel Purposes" initially in February 2014 with two, updated versions passed later in 2014.
 - **California Department of Food and Agriculture (CDFA).** Because of the establishment of this ASTM consensus standard, DME is now approved for use as vehicle fuel in the state of California. CDFA filed new regulations to the California Code of Regulations with the Secretary of State, legalizing dimethyl ether for use in vehicles, after the passing of the ASTM Specification for DME as a transportation fuel.
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- **EPA.** Biogas converted to DME by the Oberon process is now eligible for both D-3 and D-5 RINs credits under the EPA's Renewable Fuel Standard. EPA determined that Oberon's biogas-based DME resulted in 68% reduction in greenhouse gases.

Greenhouse Gas (GHG) Reduction; AB32 goals. DME will assist in GHG reduction, as it will contribute to the displacement of the 2.6 billion gallons of diesel currently used in California. Pure DME contains no sulfur compounds, which makes it a clean burning fuel that generates no SOx or particulate matter in the exhaust gas. Additionally, because DME can be made from biogas, the production process sequesters both carbon dioxide and methane, which further reduces GHG emissions in California. Volvo has tested DME engines in heavy-duty applications since 1999, first with a DME-powered bus. Current Volvo demonstrations of DME in Europe show a 95% reduction in CO₂ emissions for commercial operations when using black liquor as a feedstock. These results demonstrate that DME production will continue to assist with California's emission requirements codified in AB32.

Proposed Regulation Streamlines Fuel Certification Process. The proposed regulation will allow companies to more effectively navigate the fuel certification process. This regulation proposes to outline the specific testing and emissions evaluations that CARB requires when certifying a fuel. By compiling the information, companies will only have to review one source of requirements to determine what they need to test for during the certification. Providing the specific criteria ahead of time will also streamline the process and allow for companies to be able to prepare themselves for the required multimedia evaluation. While we understand that many of the provisions of this regulation are already legally required, we believe that placing the framework in one regulation will increase understanding and allow innovative companies to more quickly bring safe and viable alternative fuels to market.

Local Benefits. Streamlining the commercialization of DME will immediately assist with reduced emissions, better air quality, and more green jobs in California.

Oberon strongly believes that the proposed CARB Alternative Diesel Fuel Regulation will allow us to more quickly bring a viable and clean fuel to market, while providing guidance as well to additional fuels that may arise in the future.

Please feel free to contact us should you have any questions or if we can offer additional support.

All the Best,



Rebecca Boudreaux, Ph.D.
President, Oberon Fuels