

February 20, 2024

California Air Resources Board
1001 I Street
Sacramento, CA 95814
VIA ONLINE SUBMISSION

RE: Low Carbon Fuel Standard Potential Amendments

The Western Propane Gas Association (WPGA) is pleased to submit its comments in response to the Low Carbon Fuel Standard (LCFS) proposed amendments. Aligned with our recent meeting with CARB staff on February 1, 2024, the focus of our letter is on the value of renewable propane as an eligible fuel for LCFS.

As mentioned in our previous letters, we would like to thank CARB staff for recognizing the value of renewable propane in decarbonizing “hard-to-electrify” segments of California, and for justly calculating a lower Carbon Intensity (CI) of conventional propane under the GREET4.0 proposed model (Lookup Table Pathways, Pg 24)¹.

CORRECTING CI OF CONVENTIONAL PROPANE IN GREET MODEL

However, WPGA also supports adjusting the baseline CI for propane further based upon corrected assumptions and modeling. Please see our letter submitted on April 29, 2023² for detailed CI calculations.

In short, WPGA proposes that CARB update its modelling of the CI for conventional propane within the lookup table to result in **80.06 gCO₂eq/MJ** due to corrections on:

- Upstream combustion emissions – from a CI of 64.84 to 64.58 (determined by existing GREET 2021 model updates for school buses),
- Assumptions regarding refining source – from 75% oil/25% natural gas mixture for conventional propane to 59.5% oil/40.5% natural gas within California per Argonne National Laboratory reporting³, and
- Transport distance for delivery – fewer than 100 miles traveled for final delivery, based upon industry reporting and best practices.

AIR & WATER QUALITY BENEFITS OF TRANSITIONING TO PROPANE

The current CI of renewable propane ranges from half- to one-quarter of the CI of California’s current electric grid – and new sources keep going lower still. Like traditional propane, renewable propane has no methane and therefore does not suffer leakage issues or fugitive GHG emissions like natural gas. Likewise, it does not run the risk of groundwater or soil intrusion from spills like liquid fuels or degrading electronic waste, such as batteries or solar panels.

¹ https://ww2.arb.ca.gov/sites/default/files/classic/fuels/lcfs/ca-greet/lut_update_2023_2.pdf

² WPGA, Comment Letter, RE: GREET4.0 – Propane Carbon Intensity Calculation, Submitted to CARB April 29, 2023

³ Backes, S. E., Beath, J., Sebastian, B., & Hawkins, T. R. (2020, September). Sources of Propane Consumed in California. Chicago; Argonne National Laboratory.

There would be a significant air quality benefit to transitioning from fuels with significant air emissions like CARBOB (California gasoline blend), natural gas, and diesel to the no-SOx, no-black-carbon, and ultra-low-NOx solution of renewable propane. To meet 2022 Scoping Plan goals and other emission reduction mandates such as the State Implementation Plan (SIP), renewable propane serves as the bridge fuel to meet timeline goals in fuel sectors where using electric technology is not yet affordable nor feasible. It is the perfect fuel for hard to decarbonize areas and sectors of the state, like off-road and heavy-duty transportation. Renewable propane can be prioritized in underserved communities where electric infrastructure is not afforded to them or where service is intermittent due to power shutoffs or natural disasters.

TRANSPORTATION EMISSIONS AND BOOK & CLAIM

Acknowledging that the transportation of fuel is included in the CI, ideally renewable propane production would be in California. There are already facilities in the state producing renewable propane, with additional sources coming rapidly online. One of them is Global Clean Energy, which utilizes the energy-rich cover crop camelina seed; currently qualified as an LCFS compliant fuel. While many renewable diesel and sustainable aviation fuel (SAF) plants produce renewable propane, it is currently being utilized onsite to lower the CI of other existing LCFS-compliant fuels. This limits the amount of renewable propane on the market.

WPGA proposes that CARB apply its Book & Claim and avoided emissions reporting to renewable propane. While renewable propane is currently only deliverable in California by truck or rail, CARB, through amendments, has the capacity to generate enhanced distribution and use of renewable propane. Given renewable propane's low CI score, CARB could, through adopting its Book & Claim and avoided emissions framework, play an instrumental role in lowering the CI score in California and increasing production to offset fuels with larger air quality or GHG emissions footprints.

Similar to its provisions pathway for renewable biomethane, CARB could develop a provisional pathway for avoided emissions for renewable propane.

- One pathway would involve booking propane produced outside of California, and exchanged for renewable propane produced in California, allowing a lower CI score to and to avoid the added CI for transmission.
- A second proposed provisional pathway would account for reduced or nominal CI additions for renewable propane shipped by rail or truck, as renewable propane should not be excluded by a failure of useful infrastructure.

CARB has a unique potential to both stimulate renewable propane production and demand, while lowering CI scores and improving environmental justice communities, all by providing for Book & Claim and avoided emissions accounting for renewable propane. Through this process, CARB can ensure the best available fuel for particular communities and uses, while at the same time lowering the CI score of the fuel utilized.

STREAMLINE PATHWAY APPROVAL PROCESS FOR DELIVERY MODELS

Alongside Book & Claim efforts, there are other steps that CARB can take that would improve the supply and usage of renewable propane within California.

WPGA proposes that CARB adopt a streamlined approval process for the following additional delivery models of fuel:

- 1) Pathways that would incentivize production of electricity used in the charging of battery electric vehicles: Currently, renewable and conventional propane can be used in fast-

charging mobile or stationary applications to charge battery electric vehicles across many classes. Offering a streamlined pathway to incorporate the delivery of already-approved renewable propane to these charging applications is directly in line with existing LCFS intent and will provide greater reliability for electric vehicle charging networks within California.

- 2) Updated GREET model (and/or pathways) that incorporate the usage of renewable fuels or technologies within the transportation of renewable propane for delivery. In-state transportation emissions could further be reduced by using renewable propane to fuel the vehicles involved in transportation and delivery. WPGA is working with vendors to bring ultra-low-NOx renewable propane-powered Autogas vehicles to the California market to supplant diesel. CARB could create a streamlined process to incorporate those reductions in the CI of transportation within the CI of the fuel itself.

CONCLUSION

With approximately 15% of all propane used in transportation being renewable today, the industry has a goal of reaching 100% renewable propane across California's propane transportation market by 2035 or sooner. WPGA remains committed to transitioning its fuel within California and bringing additional resources to the non-transportation markets served by our members.

WPGA appreciates the opportunity to submit feedback on the LCFS potential amendments. We will continue engaging with CARB staff to support a path for the continued development of renewable propane.

Sincerely,



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