WPGA
WESTERN PROPANE GAS ASSOCIATION

2012 H ST, SUITE 203, SACRAMENTO, CA 95811
P: (916) 447-9742 | F: (916) 447-9740
WESTERNPGA.ORG | USECALIFORNIAPROPANE.COM

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

RE: Low Carbon Fuel Standard – November Workshop

The Western Propane Gas Association (WPGA) is pleased to submit its comments in response to the Low Carbon Fuel Standard (LCFS) Public Workshop: Concepts and Tools for Compliance Target Modeling, held on November 9, 2022, including comments regarding the proposed California Transportation Supply (CATS) Model as developed by the California Air Resources Board (CARB) staff.

We appreciate the hard work in preparing for the next rulemaking on LCFS, but believe there are a number of items which must be accounted for in any model affecting the distribution of credits or treatment of carbon intensity (CI) within the fuels segment. We have identified a number of open items as raised in CARB documentation and during the workshop itself that must be addressed in any rulemaking.

NEED TO EXPLICITLY INCLUDE RENEWABLE PROPANE IN LCFS

First, we would like to note that the presentation and supporting materials neglected to acknowledge renewable Liquified Petroleum Gas (rLPG, or renewable propane) in any part of the CATS model or LCFS program generally. LPG engines and drivetrains fueled by renewable propane will prove integral in decarbonizing fleets and off-road vehicles – including significantly reducing NOx and other emissions harmful to air quality – as adoption increases. Readily available as a drop-in alternative, renewable propane can deliver up to 90% carbon emissions reduction and emits the same low NOx, SOx, and PM as conventional LPG. The South Coast Air Quality Management District is a prime example of where renewable propane can be utilized to cost-effectively meet their NOx emission goals of 67% beyond the 2037 baseline emissions and 83% below current levels.[1]

It is noteworthy that there are already nine CARB-approved LCFS-eligible fuel pathways providing Californians with affordable low-carbon renewable propane (the lowest of these pathways has a CI of 20.5), with more in development.

Orphaning these resources in any future LCFS rulemaking would be highly concerning for segments of the state that rely on propane resources for its reliability, availability, and affordability. According to calculations completed by our association, some 600,000 California households are not connected to the electric grid and rely on propane for power, heating, cooking and/or hot water. It is important that any modelling from within CARB – let alone for LCFS – recognize that transportation is only one aspect of renewable propane's uses. Propane

[1] http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/final-2022-aqmp/climate-change_final.pdf?sfvrsn=4

and its renewable partner are already being used in a host of residential, industrial, commercial, and agricultural settings – for heating, cooling, electricity generation, transportation, combined heat & power systems, microgrids and backup generation, fleet decarbonization and NOx emission reduction, industrial engines, and more.

We are already in the market, making deliveries, and decarbonizing fleets. Available in every U.S. state, renewable propane has been efficiently fueling school bus fleets in our own backyard for years. The Elk Grove School District currently deploys 20-30 propane-powered buses, contributing to the health benefit of its students and significant financial savings to be reinvested in their education.[2] Renewable propane's flexibility is reflected across numerous market segments in the state – and is doing so in very difficult-to-decarbonize regions of California. Renewable propane is identical in chemistry to legacy propane, providing a seamless transition without need for modification in existing LPG equipment. We humbly request that CARB staff recognize our state's reality in its modelling and future draft documentation.

STABILITY OF THE CREDIT MARKET AND INCREASED FUEL PATHWAYS DEPEND ON ACCURATE MODELLING

The inclusion of outlier years within the model (those inclusive of COVID-19 pandemic years 2020 and 2021) are problematic from best practices on data collection, as is relying on any historic occurrences in developing trendlines. However, the specific call-out within the hearing of an "oversupply" of credits during those pandemic years is cause for serious concern. CARB can develop any model, but considering the importance of LCFS for decarbonizing the fuels segment, drawing significant conclusions from these years could leave the model open to questions regarding its accuracy.

Along the same lines, there were some statements made during the workshop regarding the development of a "self-adjusting fuel pathway mechanism." Any inclusion of such a mechanism would be a significant impediment to investment into new fuel pathways. The development of fuel pathways requires years of research, infrastructure, and specialty personnel. Despite limited financial support through the program, these investments are borne by individual companies and stakeholders, and must be amortized over a period of time for these private enterprises to bear out the cost. Changes to the program from "adjustments" will create significant impediments to longer-term investments and infrastructure.

OUT-OF-STATE AND NET NEGATIVE RENEWABLE FUELS AND FEEDSTOCKS CRITICAL FOR MEETING CI TARGETS

California cannot and should not treat itself as an island for energy or fuels. Indeed, neighboring states and many across the country are already looking towards California as they begin to develop their own carbon-reduction programs in the fuels segment. Encouraging the continued support for low- and near-zero carbon fuel pathways from across the country is the only way to prevent the abandonment of massive capital and infrastructure investment made by refiners and retail marketers while improving the national market for renewable fuels.

[2] Baldwin, R. M. R. N. Y. Z. M., Nimlos, M. R., & Zhang, Y. (2022). (tech.). Techno-economic, Feasibility, and Life Cycle Analysis of Renewable Propane. National Renewable Energy Laboratory. Retrieved December 20, 2022, from https://cloudinary.propane.com/image/upload/v1658950685/website-media/FinalReport_V26-23-22FINAL-1.pdf.

If CARB intends to use LCFS as a primary method of reducing carbon emissions over the next several decades – its response to the global problem of anthropogenic climate change – then it makes sense that any solution should likewise cast as wide of a net as possible. Challenges to in-state refining capabilities, including difficulties in permitting and siting, securing available feedstocks, and ensuring adequate supply to meet demand across sectors, dictate that out-of-state producers must be eligible to participate in the program if it is to have long-term success and encourage similar efforts elsewhere.

For these same reasons, there was significant criticism raised regarding the usage and crediting of net-negative CI feedstocks and fuels. WPGA cannot overstate the importance of net-negative fuels in meeting California's 2045 emission goals. The ability to blend net-negative CI fuels with existing legacy fuels provides an immediate reduction in CI across the entire fuels segment while also providing additional time for infrastructure investments and newer technologies to bear fruit.

While we recognize that this could be viewed as further perpetuating the legacy fuels market, the reality is that net-negative CI fuels' absence from LCFS would mean CARB could not meet its accelerated 2030 goals in Alternative A or B without significant hardship within the market and disproportionally affect fuel consumers – both in price and availability.

IMPROVED CREDIT ACCOUNTING

The existing method of calculating LCFS credits under book-and-claim creates a significant challenge for smaller retailers of fuels and technologies, and creates a market in which smaller suppliers are discouraged from participating within the program. In order to meet any of the accelerated 2030 goals, as proposed, and 2045 goals, it is vital that CARB staff improve the method of accounting and distributing credits. We ask that staff consider holding a workshop solely for users of LCFS credits to aid in the refinement of their accounting system in advance of the upcoming rulemaking. Greater adoption of LCFS by medium- and small-sized businesses could accelerate the overall goals as set by the program.

We also seek that CARB treat molecule balancing across all delivery modes equally in the crediting process moving forward – including truck, tank, and cannister versus pipeline or grid interconnection. The model must recognize that there are varied methods of delivering these fuels across California. We note that decarbonizing legacy fuel industries, including the propane industry, have existing infrastructure for delivery of our fuels (including renewable propane) – a net cost savings to consumers and the state that is not currently accounted for in current modelling.

QUESTIONS ON ASSUMPTIONS REGARDING ZEV AVAILABILITY IN CERTAIN SEGMENTS – INCLUDING FORKLIFTS

Assumptions must include better detail on accessibility and functionality of ZEV supply – particularly in medium-duty fleets, as well as battery-electric forklifts – before developing ideal requirements. It seems the CATS model only accounts for availability of supply for heavy-duty ZEVs based on the proposed Scoping Plan. Though it is arguable that medium-duty vehicles and off-road vehicles may benefit more from renewable fuels and provide a simpler transition. We have significant concerns that the assumptions about availability for most ZEVs may prove unrealistic within an actual market, considering the existing challenges with supply chains and manufacturing, as are currently being witnessed in the state's efforts to automate and decarbonize our ports. Some of these challenges can be swiftly addressed with the inclusion of

renewable fuels, such as renewable propane, to power forklifts, port fleets, and other on-site equipment. There are several LPG engines and powertrains in development that can rapidly decrease smog and carbon emissions in goods movement in the coming years that will not require significant infrastructure investments to accomplish.

In addition to questions about availability of supply and transition potential for ZEVs generally, we believe that the inclusion of language specific to electric-only forklifts again ignores the presence of renewable propane within the LCFS program and its potential to further decarbonize the off-road transportation sector. While we are heartened that the Alternatives as presented only explicitly included "limited" battery-electric forklifts within its calculations, we request that any inclusion in the future is explicitly identified for discussion since there remain serious flaws with the concurrent ZEV forklift program rulemaking.

AGGRESSIVE EARLY ACTION WOULD COUNTER PROGRAM GOALS

Last, but arguably most important, is to reiterate comments made during the workshop that Alternative C as presented (or any that presented far too much pressure to meet more aggressive 2030 goals) would have the effect of placing tremendous pressure onto the market for low- and near-zero fuels in a way that could potentially have the adverse effect of actually harming the market for low-carbon fuels and discouraging the continued development of these fuels:

- consumers of fuels would be significantly harmed by increased direct costs from accelerated costs of development, higher replacement costs versus legacy fuels within the market, or negative economic impacts from lack of replacement fuels;
- providers of fuels would face difficulty providing available supplies with the sudden significant increase in demand within the market; and
- economic and market impacts of availability could weaken public support for the decarbonizing fuels segment.

CONCLUSION

WPGA appreciates the opportunity to submit comments on the most recent CARB workshop. We look forward to working with CARB staff to further clarify any concerns and provide additional technical data to assist in improving the CATS model and LCFS program in advance of any rulemaking.

Sincerely,

Krysta Wanner
Manager of Government Affairs, WPGA
krysta@westernpga.org