PROPANE education & research COUNCIL
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October 29, 2021

Mr. Tony Brasil
Mr. Craig Duehring
Mr. Paul Arneja
Mobile Source Control Division
California Air Resources Board
1001 I Street, Sacramento, CA 95814

RE: Comments on Proposed Advanced Clean Fleets Regulation

Dear Mr. Brasil:

Thank you for the opportunity to provide comments on the draft Advanced Clean Fleets (ACF) regulation proposed by the California Air Resources Board (CARB). The Propane Education & Research Council (PERC) respects the continued investment in climate initiatives pursued by the State of California, and we seek to be a valuable contributor in the development and adoption of this regulation as well as its related policies and procedures.

PERC takes prides in its industry-leading propane safety and training programs and its investments in research and development of new propane-powered technologies. In support of its diverse consumer base, PERC has identified potential unintended climate, environmental, and equity related consequences that may transpire as a result of the rapid transition away from conventional, alternative fueled and hybridized internal combustion engine vehicles to ZEVs under the draft ACF regulation. As such, PERC provides the following comments, considerations, and recommendations on the ACF regulation as drafted:

Near-Zero and Renewable Technologies Reduce Emissions

To realistically achieve the swift emissions reductions targeted by this proposed rule's transition to cleaner transportation technologies, it is imperative that CARB continue to consider the benefits of near-zero emission (NZE) technologies and the adverse impacts on the transportation industry if they are discounted. Renewable alternative fuels are a currently available, ultra-low emission and cost-effective technology for a holistic emissions reduction strategy. The production and availability of renewable propane across the country and in California is increasing steadily, creating opportunities for immediate emission reductions at a low price point. There is currently enough renewable propane supply to replace fifteen

percent (15%) of traditional propane use in California's transportation sector. Vehicles fueled by renewable sources are currently available, are already in circulation, and have proven capable of meeting operators' needs at lower fueling costs. Including NZE medium- and heavy-duty vehicles fueled with renewable propane will help California meet its climate, air quality improvement, and clean energy goals sooner.

Underlying Problems with Zero Emission Vehicles

Although zero-emission vehicles (ZEV) do not have tailpipe emissions, there are non-exhaust related pollutants from vehicle production and physical use as well as other underlying issues related to load capacity that need to be considered. Examples of physical use emissions include the emissions from brake wear, tire wear and resuspension that all vehicles produce. The sheer additional weight of batteries causes more wear-and-tear on tires and resuspension, which release particulate matter (PM) into the air. If non-exhaust emissions are not considered, both greenhouse gas and criteria pollutant emissions will simply move from the vehicle to the powerplant that now has increased demand. The routes ZEVs travel may experience less tailpipe emissions, but those living near powerplants can in turn experience more emissions. Finally, ZEVs do not have the same range and load capacity as ICEVs. As such, fleets may need to purchase several ZEVs to move the same amount of goods. This will compound issues associated with ZEVs and the burden put on fleets. This is pertinent for Class-7 and Class-8 vehicles, where the governing metrics are evaluated on emissions per ton-mile and cost per ton-mile. Overall, a wells-to-wheels approach is necessary to evaluate CO2, NOx, and PM emissions from ZEVs.

Market Developments

Dependence on a single transportation technology is not a solution. One technology will not fit the needs of all fleets or be achievable for every manufacturer. The incremental cost of ZEVs is high, sometimes three times as much as an ultra-low emission propane engine. Forcing the highest cost options onto fleet operators is prohibitive for the businesses that rely on commercial vehicles, prohibitive for consumers who will have to pay higher prices, and prohibitive for an economy already damaged by multiple crises.

Requiring original equipment manufacturers (OEMs) to drastically ramp up ZEV production shortens the timeline to test vehicles, work with fleets to incorporate feedback, and carry out pilot projects to increase market comfortability. This threatens the quality of the vehicles that fleet operators will be forced to purchase

due to the ACF regulation. ACF will place additional strains on a truck market already experiencing production delays, labor issues, and decreased COVID-19 sales. With no other ARB compliant cleaner fuel option readily available, fleet operators may have to run older and dirtier diesel engines longer.

The proposed rule would eventually prevent OEMs from selling low-cost, NZE renewable fuel vehicles that have substantial and proven public health benefits over diesel. Business owners are not going to invest in technology they do not feel confident can integrate or replace their fleet seamlessly. Propane and other low carbon renewable fuels are already available, reliable, and trusted. Increased air quality and climate benefits are needed immediately, and renewable propane used in NZE engines can meet this need.

Grid Impact

Without careful planning and coordination, large-scale electric deployments threaten to stress California's already overburdened electrical grid. Conditions outside human control, such as wildfires and heatwaves, have continually demonstrated the grid's vulnerabilities. Power safety shutoffs have become a regular occurrence, leaving some communities without power for days at a time. For a fleet operator, unreliable electricity is worsened by inconsistent rates and load considerations for charging. Additionally, in hard-to-reach locations not currently connected to adequate power, local permitting and rough terrain can prevent or prolong charging infrastructure installation.

ZEVs are only as clean as the fuel sources powering the energy grid they pull from, and rapidly increasing grid demand may force utilities to draw on power from sources that are less clean than California's typical energy makeup. Additionally, marginal (or non-baseload) grid emissions are much higher in California compared to the average grid emissions, representing yet another factor in understanding the full implications of ZEV deployment. Alternative fuels that are portable and do not rely on the grid allow these communities to still participate in realistic and actionable emission reductions strategies.

Infrastructure

The cost of propane fueling infrastructure is nominal compared to electricity and can be installed quickly in virtually any location in California. Propane vehicles can fuel faster than electric vehicles and for a lower cost. These specifications represent high priorities for fleets. The low cost associated with renewable fuels and NZE vehicles allows fleets to scale more easily, resulting in fewer diesel vehicles

operating and, as a result, more emissions reductions. CARB should continue to analyze the costs and implementation timeline of electric vehicle charging infrastructure as well as the considerable expansion in both production and delivery systems that will be required to respond to the increase in ZEV technologies to comply with ACF.

Negative Impact on Rural Communities

Removing NZE solutions from the market will continue to hurt rural communities that suffer from poor air quality and lack the wherewithal to navigate the myriad of challenges associated with entry into the electric vehicle market. The infrastructure required to replace existing NZE vehicles with ZEVs represents another massive obstacle that these communities cannot afford. In comparison, these communities currently operate substantial propane infrastructure to support themselves. The use of renewable propane in NZE commercial vehicles only serves to accelerate the displacement of diesel engines, which will deliver public health benefits so desperately needed in these communities.

Rural communities know that propane is a fuel they can depend on to meet their operational needs and remain within their total cost of ownership (TCO) budgets. We urge CARB to closely analyze the upfront costs necessary to acquire new ZEVs as well as the agency's assessment of TCO. Rural communities are likely to suffer negative consequences if they are not given greater flexibility in procuring and deploying cleaner commercial vehicles.

Conclusion

PERC has worked in partnership with state and local agencies, fleets, and OEMs throughout California to educate and assist in the implementation of cleaner propane and renewable propane technologies. The emission reductions realized by NZE technologies can be felt immediately. As CARB continues to modify the ACF regulation, PERC recommends that CARB reconsider the costs of mass ZEV deployment on customers, manufacturers, utilities, the grid, and communities that may suffer by the loss of their most affordable renewable fuel. PERC also asks that CARB consider the benefits of renewable propane and consider its growing availability as proof that it is a reliable fuel that can support California's emissions reduction strategy. In short, a drop-in and a cost-effective fuel such as renewable propane employed in NZE vehicles will not only significantly reduce greenhouse gas emissions but also criteria pollutants, thereby helping the state of California achieve its climate and low emissions goal. A cost-effective solution such as renewable propane can be implemented extensively and achieve rapid decarbonization.

Thank you for the opportunity to submit comments on CARB's ACF rule. PERC looks forward to working with CARB on this issue to ensure the ACF rule provides the most equitable benefits to fleets, communities, and OEMs.

Sincerely,

Tucker Perkins
President & Chief Executive Officer
Propane Education & Research Council