



December 19, 2022

Cheryl Laskowski, Ph.D.  
California Air Resources Board (CARB)  
1001 I Street  
Sacramento, CA 95814

**RE: Comments on the November 9 Low Carbon Fuel Standard Workshop: Support for Alternative C and new transportation electrification strategies**

Dear Dr. Laskowski:

US Hybrid appreciates the opportunity to comment on the November 9th Low Carbon Fuel Standard (LCFS) workshop and proposed changes to the program. We strongly support CARB pursuing strong new targets to ensure the LCFS can continue to play its important role in reducing emissions from California's largest source – the transportation sector. We also urge CARB to support efforts to convert existing vehicles to zero emissions through the LCFS and other programs, in order to accelerate the State's transition to zero emission vehicles (ZEVs) and support the State's climate change and air quality goals.

**About US Hybrid**

US Hybrid is a California-based company, with over 60 employees between its headquarters and manufacturing facilities in Southern California. We specialize in designing and manufacturing zero-emission powertrain components for electric, hybrid and fuel cell medium and heavy-duty municipality vehicles, commercial trucks, buses and specialty vehicles worldwide.

Our products are used in commercial vehicles worldwide, logging millions of miles of accumulated operation, including in battery and fuel cell drayage trucks for the Port of Los Angeles and Long Beach, fuel cell-powered street sweepers for Caltrans, transit buses in California and Hawaii, mining trucks, hybrid street sweepers for the New York Department of Sanitation, and many vehicles globally for the US military.

**Geofencing and existing vehicle conversions offer promising new emissions reduction strategy, which CARB should support**

US Hybrid recently received nearly \$2 million in grants from the South Coast Air Quality Management District (SCAQMD), U.S. Department of Energy and National Renewable Energy Laboratory to demonstrate parallel hybrid class 8 trucks. We have successfully done so, and have customers interested in converting hundreds of existing compressed natural gas trucks into parallel hybrids using US Hybrid's highly efficient, battery-electric zero emission propulsion

system. This unique combination of powertrains provides the vehicles with a combined range of 750 miles or more, including an all-electric, zero-emission drive mode of up to 55 miles.

Importantly, using a GPS system, we can automate the pure zero-emission mode to activate when the truck gets within a preset distance of a port, railyard, low-income or disadvantaged community, or other priority region and to stay in zero-emissions mode until it leaves the port or priority community and is a preset distance away from it. This “geofencing” technology has been identified by CARB and others as a promising, community-based strategy to reduce emissions from trucking, especially in communities hardest hit by diesel pollution.<sup>1+2</sup> Deploying this combined set of cost-effective and demonstrated technologies, which are available today, can have an immediate and measurable impact on reducing emissions in our most polluted communities and facilities.

We are excited to work with CARB to deploy these technologies and introduce new tools – including converting existing combustion vehicles to ZEVs – to support the State’s transportation electrification efforts. We urge CARB to consider opportunities to convert existing vehicles to ZEVs in its LCFS-related modeling and throughout its transportation-related programs – including in its ZEV-related incentive programs and by allowing parallel hybrid conversions with geofencing capabilities to continue serving in drayage applications under the proposed Advanced Clean Fleets regulation.

### **Support carbon intensity (CI) reduction targets in Alternative C**

US Hybrid is thankful for CARB’s tireless efforts toward the mission of reducing greenhouse gas (GHG) emissions and decarbonizing California’s transportation sector. The LCFS program has been, continues to be, a vital tool in the growth of alternative low carbon fuels, promoting clean technologies, and reducing the State’s CI levels. It is exciting to see CARB’s proposals to improve upon the success of the LCFS program and further accelerate the GHG reduction targets.

The scale of our climate problem is only growing, and it is paramount that CARB takes the most stringent and rapid approach feasible to address this challenge. Accordingly, we support Alternative C as described in the November Workshop, and encourage CARB to further evaluate scenarios based on the Final Scoping Plan to identify whether even greater CI reductions might be appropriate. Electrification and emission reduction efforts are ramping up throughout the state, and setting more accelerated reduction targets in the near-, mid- and long-terms will help to maintain and even hasten this momentum towards developing cleaner technologies. If we are to reach our 2045 net-zero goal, then we should embrace practices that will reduce the highest amount of GHGs, diminish our reliance on fossil fuels, and encourage the development of zero emission technologies in the here and now. We at US Hybrid recognize the importance of the LCFS program in attaining California’s lofty climate goals and we see the Alternative C pathway as the most direct line to carbon-neutrality.

<sup>1</sup><https://ww2.arb.ca.gov/our-work/programs/resource-center/strategy-development/strategy-snapshots>

<sup>2</sup>Boriboonsomsin, K. et al (2020) Geofencing as a Strategy to Lower Emissions in Disadvantaged Communities, Final Report prepared for the California Air Resources Board, UC Riverside, December. [https://ww2.arb.ca.gov/sites/default/files/2021-01/17RD009\\_0.pdf](https://ww2.arb.ca.gov/sites/default/files/2021-01/17RD009_0.pdf)

## **Conclusion**

US Hybrid thanks you for the opportunity to comment and participate in the LCFS improvement process. Like CARB, US Hybrid is devoted to advancing ZEV technology and moving towards a more sustainable future. We appreciate your consideration of these comments and look forward to continuing this important dialogue into the future.

Sincerely,



Macy Neshati, CEO

US Hybrid