



September 27, 2021

Ms. Liane Randolph
California Air Resources Board
8340 Ferguson Avenue
Sacramento, CA 95828

Subject: Comments on CARB Advanced Clean Fleet Workshop on September 9, 2021

Dear Chair Randolph,

The Harbor Association of Industry & Commerce (HAIC) is a non-profit industrial and commercial trade association that serves as a united voice on transportation, energy, environmental, and land use issues affecting the harbor business communities. In response to the California Air Resources Board (CARB) September 9, 2021, workshop on the Advanced Clean Fleet (ACF) rule, we refer to earlier comments submitted on March 17, 2021:

1. We would like to see a clear distinction between short-haul and long-haul heavy-duty (HD) trucks.
2. Allow for the accommodation of H2 fuel cell (H2) Zero-Emission Vehicle (ZEV) technology as one of the options for long haul trucks in upcoming drayage truck rulemaking and incentive programs.

Additionally, we are submitting comments on the CARB ACF draft rules and Total Cost of Ownership (TCO) document published on August 25, 2021. This comment letter evaluates both the CARB rule language and the cost calculations used to justify the timing of rule requirements. We have concerns about the acceleration of the rule schedule resulting in high costs in the early years and a disproportionate cost burden on the fleets that are part of the early compliance (drayage trucks and others).

In the battery-electric (BE) truck calculations, we have identified several factors increasing operational cost to short and long-haul operators, including the need for multiple charging stations and extra labor hours. To the extent that H2 trucks are considered as an alternative because of their higher suitability for long haul truck applications, it will be necessary for both H2 truck and H2 fuel production technology to be competitive with BE and diesel technology. Otherwise, the ZEV burden for long-haul trucks will become infeasible.

BE and H2 Vehicle Purchase Price:

The current (2022 delivery) BE truck purchase price is three times the purchase price of an equivalent diesel truck, based on HVIP references and other published sources (including SCAQMD). The assumption that the new BE truck purchase price will drop significantly by 2025 due to manufacturing efficiencies; such a price drop is unlikely.

For H2 trucks, the assumed purchase price decline is even more significant. The H2 truck price is currently approximately 4.0 times the purchase price of an equivalent diesel truck, based on extrapolation of vendor information found on the HVIP website. This translates to a price drop by a factor of 2.5 in three years (from 2022 to 2025), which again seems unrealistic.

H2 Fuel Purchase Price:

In the ACF TCO document, a chart showing H2 fuel price reaching \$5/kg in 2030 and remaining at that level afterward indicates that this is based on a quoted price projection. The \$5/kg is a price target for H2 trucks to be competitive with BE technology, not a price projection for 2030. The current H2 price is well over \$10/kg based on ARB's TCO document and other published sources (available upon request). Such a price drop (from \$10/kg to \$5/kg) is unlikely by 2030. We would recommend that CARB remove the assumption and change the rule timing for long-haul trucks.

As we further hone our environmental standards, we would like to see minimum performance standards for BE and H2 trucks, just as fuel efficiency standards have been set for other vehicles in the past. California has lofty climate goals, and the State has been the leader in green technology. We appreciate CARB's efforts in the rulemaking process and ask the Board to consider these comments on the need to consider H2 fuel cell technology for long-haul drayage trucks. I appreciate your attention on this matter, and we look forward to working with you to achieve a greener California.

Sincerely,



Henry Rogers
Executive Director
Harbor Association of Industry & Commerce