

October 17, 2022

California Air Resources Board
1001 I Street
Sacramento, CA 95814

RE: Notice of Public Hearing to Consider Proposed Advanced Clean Fleets Regulation

Clerk of the Board, California Air Resources Board:

The Compressed Gas Association (CGA) provides this letter in response to California's High Priority and Federal Fleet Requirements included in the Advanced Clean Fleets (ACF) proposed draft regulations.

CGA, founded in 1913, is an ANSI-accredited standards developing organization that is dedicated to the development and promotion of safety standards and safe practices in the industrial, medical, and food gases industry. CGA represents over 130-member companies in all facets of the industry — manufacturers, distributors, suppliers, and transporters of gases, cryogenic liquids, and related products and services. Through a committee system, CGA develops technical specifications, safety standards, and training and educational materials, and works with government agencies to formulate responsible regulations and standards and to promote compliance with these regulations and standards.

CGA and our members support the objectives of the proposed ACF regulations to reduce emissions from transportation but believe the requirement to purchase only zero emissions vehicles (ZEV) starting on January 1, 2024, imposes a significant burden on the industry and appears to be logistically impossible to meet within that timeframe. CGA and our members request additional flexibility to allow time to convert fleets. The vast majority of the industry's products are delivered by truck. These products include medical oxygen used to treat COVID 19, among many other therapeutic uses; hydrogen for powering fuel-cell vehicles and other clean energy sources; welding gases for the construction and fabrication businesses; specialty gases for the technology industry; and nitrogen and carbon dioxide gases for the food and beverage industry. CGA members operate over 540 class 8 vehicles and travel over 22 million miles each year in California.

CGA and our members request that CARB revise the draft regulations to:

- Extend the effective date.
- Provide a more efficient and expedited, and less burdensome, process to request exemptions.
- Exclude from the regulation vehicles that are domiciled out of state and that enter California only on a limited basis.
- Designate hydrogen internal combustion vehicles as ZEVs.
- Allow full or partial credit for **renewable** natural gas vehicles as ZEVs.

We ask that CARB consider extending the January 1, 2024, effective date to one when ZEVs are more readily available and the infrastructure to support their widespread use in the State is better established throughout California.

CGA and our members have three primary factors of concern for January 1, 2024, effective date:

- the limited availability of class 8 ZEVs;
- the limited range of ZEVs currently available; and
- the limited infrastructure to refuel/recharge and maintain ZEVs.

Although manufacturers are developing class 8 ZEVs, those available today are primarily demonstration or pilot vehicles and are not readily available for general purchase. Companies ordering a class 8 ZEV today face a considerable wait for the vehicle to be delivered. Even the current availability of diesel and natural gas fueled class 8 vehicles is severely constrained due to supply chain issues. For example, a class 8 diesel tractor ordered today will not be delivered until late 2023, or later. This makes long term vehicle replacement difficult to plan and uncertain.

The limited number of class 8 ZEVs available today are primarily battery electric vehicles with ranges of 300 miles or less. This limits these vehicles to a maximum one-way range of less than 150 miles and a considerably shorter practical range to ensure the vehicle can return to its depot before depleting its battery. In addition, the payload of the vehicle is significantly reduced to account for the added weight of the batteries. Reduced payload results in more Class 8 ZEVs being needed to serve customer demand relative to the current diesel Class 8 vehicle fleet. This will put additional strain on an already strained road infrastructure system. This also leads to the need for a larger fueling/charging infrastructure relative to what is currently established today for diesel tractors to service the larger number of Class 8 ZEVs. More Class 8 ZEVs also requires more drivers, which is already a critical problem.

Infrastructure to charge battery electric Class 8 vehicles or refuel hydrogen fuel cell electric vehicles is currently very limited. This is an issue not only for publicly available charging and refueling infrastructure, but also for infrastructure installed at vehicle depots. Building out the needed public and private infrastructure will take time. The equipment needed to install this infrastructure has a reported 24-to-36-month lead time. This further reduces the practical range of use until the necessary charging and refueling infrastructure is adequately deployed.

In addition to extending the deadline for the requirement to purchase new ZEVs, CGA respectfully suggests CARB provide a more expedited and less administratively burdensome exemption request mechanism. We appreciate that the proposed regulations provide exemptions, but the current proposal is very cumbersome, requiring individual applications for each vehicle to be replaced. This places a significant administrative burden on both our members, who must complete the requests, as well as CARB staff, who need to review and approve each request. CGA requests the exemption process be simplified to expand the unavailability exemption list to include range thresholds so that fleets can more easily exempt vehicles based on range requirements without the burden of individual applications for each vehicle. We further suggest extending the vehicle delivery delay extension to specify when the manufacturers can provide the vehicles and the refueling and recharging infrastructure can support widespread use versus the one-year limit.

CGA suggests CARB consider an allowance for limited use for out of State vehicles. We believe the focus of the regulation should be limited to those vehicles domiciled in California. The broad scope of the regulations, requiring the inclusion of any vehicle operated in California, regardless of the mileage operated in the state, significantly increases the size of the affect on the Class 8 vehicle population. Products such as hydrogen, helium and argon are produced in limited

locations in the US and are often transported into and out of California. The vehicles transporting these products could operate with relatively little mileage in California.

This broad scope could limit the willingness of small fleet operators, domiciled outside of California, to accept deliveries into and out of the State. Both of these factors could limit the availability of products produced elsewhere and delivered in California as well as prevent California produced products from being exported to other States. Truck operators may also avoid travel through California which could add to the distance traveled to deliver goods and work against the objective of reducing emissions from transportation.

CGA also respectfully suggests that hydrogen fueled internal combustion engine (ICE) vehicles be recognized as ZEVs within the regulation. Several manufactures are developing hydrogen ICE engines for use in California that will produce zero carbon emissions and NOx emissions at reduced levels of up to 75% less than today's heavy duty diesel trucks. The hydrogen ICE trucks may be a better fit for fleets that are highly negatively impacted by increased tractor weights as hydrogen ICE trucks are expected to be at least 2000 pounds lighter than their fuel cell equivalents. This will encourage the hydrogen market to grow for transportation, allow a level of flexibility for compliance, and likely facilitate the earlier adoption and deployment of alternative fuel vehicles.

Finally, CGA suggests CARB consider Class 8 vehicles powered by renewable natural gas as ZEVs. These vehicles are currently available and the infrastructure to support their use is rapidly being built out.

The CGA and its members support the long-term ambition to implement more ZEVs in the State of California. However, the CGA asks the State to take a longer term and pragmatic approach, allowing flexibility based on limitations of the ZEV availability, fueling and maintenance infrastructure, and potential implications to reliability of supply of critical products. Our recommendation is to begin implementing the ACF when ZEVs and the infrastructure to support their use are more widely available.

Please feel free to contact me at rcraig@cganet.com if I can provide further information on our request.

Sincerely,



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