ASSOCIATION OF AMERICAN RAILROADS

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29 October 2021

Mr. Tony Brasil, Branch Chief, Transportation and Clean Energy
Mr. Craig Duehring, Manager, In-use Measures Control Section
California Air Resources Board
Submitted via zevfleet@arb.ca.gov

Re: Comments on the Proposed Advanced Clean Fleets Regulation

Dear Mr. Brasil and Mr. Duehring:

The Association of American Railroads ("AAR"), on behalf of itself and its members, respectfully submits the following comments on CARB's Proposed Advanced Clean Fleets Rulemaking ("Proposed Rulemaking" or "Proposed Rule") and its Draft Total Cost of Ownership Discussion Document ("Draft TCO Document).

AAR is a non-profit industry association whose membership includes freight railroads that operate 83 percent of the line-haul mileage, employ 95 percent of the workers, and account for 97 percent of the freight revenues of all railroads in the United States. AAR also represents passenger railroads that operate intercity passenger trains and provide commuter rail service. AAR's members own or lease and operate trucks within the state of California. These trucks are an essential part of railroad operations and interstate commerce and are critical to both the national and global supply chain. AAR and its members therefore have a significant interest in this proceeding.

These comments are preliminary in nature and are based on the limited information about the Proposed Rule disclosed to date. They do not address CARB's regulatory authority to promulgate the Proposed Rule or the extent to which CARB is precluded from doing so by the Interstate Commerce Act, 49 U.S.C. § 10501(b), as amended by the ICC Termination Act of 1995 ("ICCTA"). AAR will supplement its comments as CARB provides additional information on the Proposed Rule's intent, analysis, and data, as well as revised draft regulatory language.

AAR's members are committed to reducing their emissions and impacts, as demonstrated by their reduction since 2005 of diesel particulate matter ("DPM") and oxides of nitrogen ("NO_x") emissions at California railyards by more than 70%. This reduction is based on emissions reductions between 2005 and 2017 reflected in the railyard emission inventories voluntarily developed by Union Pacific Railroad and BNSF Railway and provided to CARB and/or California Air Districts in 2019-2020. These emissions reductions correspond to a concomitant reduction in health risk from operations on a one-to-one basis. Over 40% of the reduction in DPM and over 75% of the reduction in NOx emissions at railyards were achieved through voluntary efforts, and reductions continue today through ever-improving operating efficiencies

and other advancements, including early adoption of zero and near-zero technologies, a NO_x fleet average that is below the 1998 MOU Agreement, and demonstration projects for zero-emissions locomotive technologies.

AAR and its members have a long history of cooperation with CARB through the investment in and development of new, lower emissions technologies. AAR offers the following recommendations to improve the feasibility of the Proposed Rule while permitting safe and reliable freight transportation to continue to serve California and the entire global supply chain.

I. CARB underestimates the costs associated with the installation of charging infrastructure.

CARB's Draft TCO Document omits several categories of costs associated with the installation of charging infrastructure. Specifically, although CARB accurately estimates the costs of chargers, it fails to include estimated costs of the civil engineering work required to install the chargers. For example, BNSF Railway has completed several ZE truck projects in its California railyards, and its experience from these projects demonstrates that the average cost per vehicle for the civil work and the chargers is currently $133,000. When combined with the average truck costs, the average cost per truck comes to a total of $320,000, or roughly three times that of a comparable diesel truck.

Additionally, CARB has proposed an aggressive timeline for implementation of the Proposed Rule. The costs associated with an accelerated rollout of charging stations statewide, including the associated engineering work, should be included in CARB's TCO Document.

II. CARB should expand the vehicle exemptions provisions.

CARB's Proposed Rulemaking offers three categories of exemptions: backup vehicle exemptions, daily mileage exemptions, and emergency response vehicle exemptions. CARB should amend the backup vehicle exemption to clarify that the 1000-mile limit only applies to miles accumulated in California. Furthermore, CARB should expand the daily mileage exemption to include both miles and operating hours and CARB should expand the emergency response vehicle exemption to include vehicles used by Providers of Essential Public Services.

a. The "backup vehicle" exemption should apply to vehicles operated for less than 5,000 miles or 600 hours within the State of California.

Under section 95692(b), CARB defines a "backup vehicle" as one that operates less than 1000 miles per year. Backup vehicles are used when a California fleet operator needs to temporarily replace a vehicle, for reasons such as maintenance and/or repair, or if additional vehicles are needed on a temporary basis. CARB rightly included this exemption to ensure that backup vehicles operated infrequently within California are not subject to the Proposed Rule. Fleet operators should be permitted to use out-of-state "backup vehicles" within California without regard to the number of miles the vehicle operated out of state.

In addition, the 1000-mile limit is far too low. Under this limit, a railroad moving a vehicle from Arizona to Northern California to serve as a backup vehicle would travel a significant portion of the 1000-mile limit before it even arrives to serve its backup function. For this reason, AAR suggests that CARB increase the mileage limit to either 5,000 miles or 300 hours of operation in California and amend the definition of "backup vehicle" to read:

> "Backup vehicle" means a vehicle, excluding yard tractors, that is operated less than 5,000 miles or 600 hours per year in California.

b. The "daily mileage exemption" consider engine hours in addition to miles driven.

Under section 95692.2(b), CARB allows a fleet owner to apply for a "daily mileage exemption" if it can demonstrate that available zero emissions vehicles ("ZEVs") cannot meet the daily mileage needs for the vehicle. CARB should consider engine hours in addition to vehicle miles traveled in applying this exemption. Many railroad vehicles require power for more than just miles driven, including not only motive power but also auxiliary power demands. It is not uncommon for these vehicles to operate necessary auxiliary equipment that has significant energy requirements for many hours per day, or many days at a time. For example, railroad vehicles provide power for safety functions such as communication with both trains and dispatchers and may operate for 12-16 hours per typical day (or more during safety-related responses).

Until vehicles are developed and commercially available on a large scale that can meet these high energy requirements and sufficient public fueling infrastructure is available in rural and metropolitan areas, exemptions for these vehicles are essential for railroad operations and interstate commerce.

c. The "emergency response vehicle" exemption should include vehicles used by PEPs.

CARB should also expand the emergency response vehicle exemption to include vehicles used by Providers of Essential Public Services ("PEPS"). A single Class I railroad may respond to over 100,000 grade crossing alarms in California each year. These alarms range from malfunctioning crossing gates and flashing lights to damage from motorists driving through gates. Each of these alarms is a public health and safety concern, and railroads are required promptly to respond and repair the issue under both CPUC and Federal Railroad Administration ("FRA") regulations. *See* General Order 75-D; 49 CFR Parts 234, 236. In addition, pursuant to FRA regulations, railroads inspect, repair, and maintain thousands of miles of track, signal, and telecommunication infrastructure on a 24-hour, 365-day schedule to prevent derailments and collisions. Given this, railroad vehicles must be able to respond to a wide range of emergencies even when there are disruptions to the electric grid (i.e., rolling blackouts, public safety power shutoff events, earthquakes, fires, and other natural disasters). To ensure the safety and

continuous operation of the rail network, vehicles necessary to perform essential system maintenance and to respond to emergencies should be exempted from the Proposed Rule.

Finally, CARB should include an exemption in the phase-in schedules in the Proposed Rule for situations where the commercially available zero- or near-zero emissions technology does not meet the criteria for "Specialty Use Vehicles" and would result in undue risk to public health and safety. The proposed method of requiring CARB Staff to use milage as determining factor of the technological readiness of Specialty Use Vehicles used by PEPs is inappropriate. Such a method would not take into account the reality that these Specialty Use Vehicles in use by PEPs may only travel 100-miles per day but may also require sufficient power to operate 12-16 hours on a typical day in support of safety functions described above. To rely on CARB Staff to make these technical determinations will lead to purchase delays and potential negative impacts on public safety if railroads cannot operate trucks capable of inspecting and maintaining rail infrastructure.

Railroads should therefore be permitted to exempt a vehicle for which a commercially available zero- or near-zero-emission alternative does not exist. This exemption should be certified under attestation at the time of fleet reporting. This is standard procedure for other CARB regulations such as the Off-Road Equipment Regulation that requires the Responsible Official to attest to the compliance of the fleet under penalty of perjury.

III. CARB should set a de minimus *threshold for vehicles operating in California to be considered part of the in-state fleet.*

Under the Proposed Rule, any railroad vehicle above 8,500 pounds gross vehicle weight rating that operates in California for as little as 1 hour would be included in a railroad's vehicle fleet and, therefore, would be subject to the ZE requirements of the Proposed Rule.

A single Class I railroad may have approximately 350 vehicles above 8,500 pounds GVWR based within California. However, if that railroad were required to include *any* vehicle that operates in California for at least one day per year, that number likely increases by more than 100% to approximately 850 vehicles. Many companies, and particularly PEPs, regularly operate across state borders and frequently use backup vehicles to maintain infrastructure that provides "essential public services" for part of the year, on an intermittent and project basis. A railroad, for example, may need to move a truck from Oregon to Nevada through California, or to temporarily use a truck registered in Oregon in California to respond to a specific situation. These *de minimus* forays into the state should not trigger the need to recalculate the California fleet's zero-emissions requirements.

All fleets, including the railroad fleet, should be granted some flexibility to move vehicles temporarily through California. AAR recommends that CARB allow a 90-day per year *de minimus* exception for out of state vehicles that operate briefly in California. Applying the proposed requirements to vehicles that are only in California for a short period of time would significantly increase the cost of the regulation and will make it almost impossible for fleet

managers to manage their fleets and also remain in compliance. Moreover, this proposal exceeds CARB's authority and would interfere with interstate commerce and U.S. rail operations. A *de minimus* threshold would reduce unnecessary reporting burdens on both vehicle owners and CARB.

Relatedly, the Proposed Rule would mandate that fleets report any vehicle that is subject to the Proposed Rule within 30 days. Absent the above *de minimus* exception, this reporting requirement would apply to a truck that enters California for a single day. This is impractical. Many trucks enter California and leave without notification to the responsible official. This is especially true for PEPS that often operate across state lines or use out-of-state contractors. Accordingly, AAR recommends that CARB only require those trucks that operate in California for more than 90-days to be reported in its March 1 reporting requirement.

IV. CARB and CPUC should assure that safe, reliable, and cost-effective power will be available state-wide before fleets are required to purchase ZE vehicles.

Any path forward must protect the reliability of the fuel supply chain. Railroads cannot safely and effectively operate their truck fleets without access to an extensive public charging and fueling network in both metropolitan and rural/remote locations. Although railroads intend to install charging infrastructure at many of their facilities, they cannot safely perform necessary duties within their large service areas without an extensive network of hundreds, perhaps thousands, of public fueling/charging locations.

Therefore, before finalizing the Proposed Rule, CARB should ensure that reliable public fueling infrastructure is available throughout California. California has over 10,000 public fueling stations, and approximately half of all trucks operating in California use public fueling instead of depot fueling. Should alternative public fueling infrastructure not materialize to meet the requirements of the Proposed Rule and public demand, these ZE trucks will become stranded assets, eliminating the emissions reductions that these trucks would have otherwise achieved.

Beyond sufficient infrastructure, energy production, generation, and delivery must be stabilized before mandating the use of ZE vehicles. California is a hub of the global supply chain. Forty percent of all containers entering the U.S. travel through its borders. Any disruption in California's electric grid after the transition to ZE vehicles could cripple the entire global supply chain. CARB and the CPUC must ensure that safe, reliable, and cost-effective power will be available before fleets are required to purchase ZE vehicles.

V. Railroads should not be precluded from purchasing needed vehicles.

Railroad fleet managers place a heavy burden on their truck fleets, and they carefully manage their fleets to continually meet demand. New vehicles are purchased out of necessity, not convenience, and railroads cannot delay vehicle acquisitions simply because new ZE/NZE vehicles are not available when needed. CARB should establish clear and feasible purchase

alternatives so that fleets can purchase dependable, reliable, and commercially available vehicles with the lowest emissions possible at the time they are needed, even if ZE vehicles are not available.

In addition, AAR supports the recommendation of the Metropolitan Water District of Southern California to include a new definition of "commercial availability" that reflects potential supply issues associated with the procurement of ZE trucks. The proposed definition would define "commercial availability" as "a Zero-Emission Vehicle (ZEV) or Near-Zero Emission Vehicle (NZEV) that is commensurate with the purchaser's specifications and is available for delivery by vehicle manufacturers/vendors within 18 months from the time of purchase."

Similarly, AAR supports the recommendation of the Association of California Water Agencies to define "Specialty Fleet Vehicles" as "vehicles owned or operated by an entity or government agency that provides services with complex specifications unique to the service area topography, weather, physical environment and mission objectives beyond basic pickup and delivery functions, including, but not limited to, medium/heavy duty class 4-8 booms for aerial/overhead work, extended duty cycle PTO driven equipment, augers, cranes, water filtration, vacuum equipment, fumigation sprayers, communications devices, support vehicles and vehicles designated to deliver otherwise defined Specialty Fleet Vehicles."

These amended definitions would allow railroad fleet managers to purchase vehicles as needed and avoid situations where supply chain issues resulting from CARB's Proposed Rule would adversely impact railroad operations and interstate commerce.

VI. The ZEV requirements should be based on contract purchase date.

In situations where vehicles will not be delivered on the promised/contracted schedules, fleet owners should not be penalized. The Proposed Rule's ZE requirements should be based on the year of purchase identified on the purchase contract rather than on the delivery date.

VII. CARB should establish a technology review committee for commercialization determinations to assess ZEV availability and suitability, performance, and reliability risk for all fleet vehicles.

During recent public workshops, several commenters expressed concern with CARB determining ZEV availability, suitability, performance, and reliability risks for all fleet vehicles. AAR agrees that CARB must remove itself from this role and instead establish an independent panel of technical experts to evaluate vehicle commercialization status, real-world vehicle and charger reliability, market availability, and the viability of vehicle use in various duty cycles and applications. This independent panel should be required to publish annual determinations and adjust the ZE implementation schedules based on their findings.

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AAR appreciates this opportunity to comment on CARB's Proposed Rule and Draft TCO Document and hope that our history of meaningful cooperation and communication with CARB Staff continues.

Respectfully submitted,

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