October 17, 2022

FROM:
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TO:
Tony Brasil, Branch Chief, California Air Resources Board (CARB)
1001 I Street
Sacramento, CA 95814

SUBJECT: Comments regarding the proposed Advanced Clean Fleets Regulation

Dear Mr. Brasil,

Knight-Swift Transportation (Knight-Swift) appreciates the opportunity to provide public comment on the proposed Advanced Clean Fleets Regulation (ACF). As a nationwide motor carrier subject to the High Priority Fleet and Drayage Truck portions of the ACF Regulation, our review of the proposed rules has raised some concerns in a number of areas that will dramatically impact the entire truck freight industry. While Knight-Swift supports and is actively working towards reduced climate impact from freight transportation, practical methods must be employed to ensure that California and the truck freight industry do not inadvertently delay lower emission vehicles and reduce the benefits from decades of demonstrated and continuous improvement. Our points of concern are outlined below and we look forward to the opportunity to discuss any and all of these points with CARB when possible.

General Concern Regarding Rule Timing

In general, there are overall themes of the Regulation that require some deeper analysis. The sheer number of trucks that the Regulation will require to change to zero-emission (ZEV) technologies, currently limited to battery-electric (BEV) or fuel-cell electric (FCEV), is not supported by accompanying infrastructure projections in the State of California. California's SIP has shown that the need for electric charging infrastructure alone will far outpace any currently achieved or projected growth level. This immediately limits the effectiveness of the regulation, as infrastructure delays or shortcomings expected in the next 15 years will push fleets to find alternative solutions. In all likelihood, many fleets will be forced to keep diesel trucks on the road much longer, further exacerbating the very emissions issues this regulation aims to address.

California Fleet Definition

Next, the definition of "California fleet" is not consistent for all fleet types. Knight-Swift respectfully requests that the provision allowed for rental fleets be applied to interstate fleets as well. Because fleets rotate new trucks through and sell older trucks at a regular pace, the regulation as proposed

would require a larger number of trucks to comply in the earlier years than truck manufacturers and infrastructure maturity can support. Applying the quarterly average approach, as offered for rental fleets, would reduce a motor carrier's initial ZEV burden by 67% or more per our calculations. Enabling a slower but more steady growth of ZEV within fleets rather than forcing immature technologies to market too early will encourage much more direct and, therefore, rapid deployment of ZEVs within California. This will also hasten development of a secondary resale market, preventing "legacy" vehicles remaining on California roads for longer than today's trucks.

California Fleet Calculation

Furthermore, the final "California fleet" size determination should be clarified for the allowance of trucks removed from service. Sections 2015.2 and, more specifically, 2015.2(b), do not directly show how to account for vehicles removed from service. In a case where a fleet sells an in-scope vehicle during the calendar year, Knight-Swift requires confirmation that such vehicles not count towards "California fleet" count compliance whether it was replaced or not. In the case of replacement, the vehicle sold and the replacement should only count as one (1) unit for the California fleet. The current definition of the "California fleet" does not explicitly provide for this flexibility, potentially forcing fleets to a larger number of compliance vehicles than is truly necessary. Due to the frequent and cyclical nature of truck replacements with newer models, this compliance requirement and calculation must be more clearly defined for fleets to plan appropriately for the future.

Minimum Fleet Size for Applicability

High Priority fleet size restrictions for ACF scope and applicability are arbitrary. For this Regulation to be successful, all fleets operating in California must be subject to the same requirements. The trucking industry is made up primarily of smaller fleets. The limits on fleet size, as presented, will only serve to greatly limit any possible benefits for emissions savings as the majority of fleets operating in California will continue to operate as they do today. If combined with quarterly fleet size calculation requirements, the burden on small fleets could be eased greatly but still encourage all fleets to begin progressing through a ZEV transition in compliance and coordination with the ACF Regulation. Secondary and tertiary markets will also emerge, allowing for carriers of all sizes to participate in the emissions savings this Regulation seeks to achieve.

Incentivized Vehicles

Section 2015(n) does not explicitly state the disposition of incentivized vehicles purchased before January 1, 2024. Regardless, excluding vehicles purchased with incentives from the "California fleet" compliance count before or after any primary technology transition date is a direct disincentive for fleets to continue with such programs. A fleet would potentially have to purchase double the amount of vehicles needed for compliance at a higher cost in order to meet any minimum requirements for a given year if attempting to use accelerative incentive programs in the first place. The language, as provided in the proposed Regulation, leaves the determination of this qualifying count up to the incentive or grant program. Adoption of much more expensive FCEV tractors, in particular, will suffer a much slower adoption pace if the investment in such tractors does not count toward a fleet's increasing minimum in the years beyond 2024. Knight-Swift recommends that the ACF Regulation takes a stronger stance on this topic to allow for any incentivized vehicle to count for the "California fleet," or to delay

implementation of this restriction until such time that ZEV prices are at point where incentives should no longer be necessary.

Drayage Truck Requirements and Timing

Per the proposed Drayage Truck Requirements in the ACF Regulation, class 8 drayage trucks in California will be required to be zero-emission vehicles without any exceptions for near-zero (NZEV) options as provided in the High Priority Fleet portion of the rule. Available class 8 ZEV options are notably much heavier than current diesel options, meaning many payloads from marine ports or other locations will be overweight for most roads leading away from the pickup point. Shippers and carriers will incur increased costs from third-party transloading, inefficiencies from reduced payloads, or other unforeseen logistical issues with this shift in legal payload capacity. This will have a direct, increasing impact on consumer and end-user costs in the State of California.

Additionally, the timing of the Drayage Truck Requirements (must be ZEV starting in 2024) does not reflect the current technical capability of ZEV trucks and their usage in California. While some demonstrations have shown positive outcomes, fleets operating from greater distances from California's ports will experience significant efficiency losses in their operations if the Regulation goes forward as written. For example, if a fleet has a depot location in Ontario, CA, and services the Port of Long Beach, a trip to the port and back to the depot is approximately 115 miles. When fully loaded, this distance does not allow sufficient margin to the maximum range of any available BEV class 8 tractor to make a second trip in the same day. While the vehicle can be recharged, the time required for the re-charge and an accounting for traffic, wait times at the port, and other typical time delays will mean that truck can only make one trip to the port and back during a driver's shift. Currently deployed diesel trucks can support two such trips, if not three, depending on the same traffic and port conditions at the time. This loss of productivity will require a fleet to keep additional trucks, likely diesel powered, in the fleet to complete the work. This will, again, reduce effectivity of the Regulation and will introduce additional costs in supply chains that will directly affect California consumers. Any available BEV trucks with larger ranges (>250 miles) are too heavy to support most port cargo, as previously mentioned. FCEV trucks that would be considered for this work are not expected to be commercially available before the rule takes effect in 2024 and will still be very heavy compared to existing tractors. Furthermore, the costs for FCEVs in 2024 will be prohibitive for any wide-spread adoption. FCEV class 8 tractors have also not yet proven their ability to haul freight reliably over the typical distances experienced by fleet trucks today in these more remote, but very common, origin points.

Long-Haul Drayage

Port drayage experience with a ZEV is only made worse for other drayage providers that come from out of state or need to take a container picked up in the port to a destination beyond California's borders. Without any relief for such situations, a fleet will be required to transfer the load from the port to another tractor at some point near the port. This adds a great deal of inefficiency to operations and will, once more, negatively impact consumers in California and beyond. Knight-Swift recommends an allowance for NZEV vehicles for drayage operation, utilizing zero-only operation in defined zones at or near the applicable port or railyard location. This option would allow a greatly increased rate of zero-emission operation at such facilities while allowing fleets the flexibility to determine options that may fit broader operational needs with higher efficiency and lower initial cost until such time that full ZEV options are plausible.

Technology Readiness and Costs

With only battery-electric class 8 trucks coming into commercialization today but with greatly reduced capability for long-haul applications, CARB can only assume that technology will scale and enhance in the next 10 to 15 years to support ACF Regulation requirements. Class 8 fuel-cell electric vehicles offer promise for long-haul applications but have not been fully proven, nor are such vehicles flexible enough to operate in a fleet as a complete replacement for today's vehicles. For both BEV and FCEV, the cost for any fleet to adopt the sheer number of vehicles required for compliance is astronomical. Current FCEV prices are over four times the cost of a typical fleet-spec class 8 tractor, while BEV is beyond two times the cost. CARB's long-term cost assumptions for ZEV class 8 tractors in the SRIA do not match with industry expectations of battery and fuel cell pricing over the next decade or more.

Alternative Fuel Options for the ZEV Transition Period

Knight-Swift, along with many fleets, invest heavily each year in new tractors, which include the latest in OE manufacturer improvements for engine efficiency, aerodynamics, and emissions controls. The proposed ACF Regulation does not allow any flexibility to account for low-emission alternative fuels such as renewable diesels and renewable compressed natural gas, among many others. These fuels are known to greatly reduce emissions but are, unfortunately, left off the table for any possible future emissions-saving options within the ACF Regulation. Restricting the solutions to ZEV only, especially for drayage operation, closes a technical development window that may eliminate otherwise viable options from consideration. Further, CARB has not provided for any transition period of at least greatly reduced emissions that may be possible with interim technologies, some of which could be complementary to ZEV development and would help accelerate deployment naturally. Knight-Swift kindly requests a re-evaluation of a time at least until 2030 where existing low-emission technology could be expanded and utilized in place of full ZEV requirements in High Priority Fleet and Drayage Truck operations.

Closing

Once again, Knight-Swift urges CARB to reconsider key elements of the ACF Regulation to account for the lack of infrastructure to support such changes. Without flexible considerations mentioned above and others suggested by members of the truck freight industry, the emissions goals of the Regulation are likely to collapse in the long run. We urge you to amend the ACF Regulation for more flexibility so that the Regulation catches up with technology and does not force technology to catch up with the Regulation. Thank you again for the chance to discuss this with you and to speak into this process of Regulation development.

Thank you,

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