Trillium
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May 28, 2020

Clerk of the Board
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Via E-Submittal: https://www.arb.ca.gov/lispub/comm/bcsubform.php?listname=act2019&comm_period=1

Subject: Comments on Advance Clean Truck Regulation Appendix A – Proposed Amendments released on May 1, 2020

Dear Chairman Nichols and Members of the Board:

Trillium appreciates the opportunity to continue engaging in the Advanced Clean Truck (ACT) rulemaking. We are committed to building the infrastructure needed to help the state achieve its decarbonization *and* clean air quality goals, including the deployment of medium- and heavy-duty zero emission vehicles. Trillium is technology agnostic and supports all forms of clean (low-carbon) transportation solutions including: hydrogen fuel cell, battery electric and renewable natural gas (RNG).

While we appreciate the goals of the ACT rule, it sets nearly impossible goals for deployment of currently non-existent heavy-duty vehicles as targets, falls short in optimizing emissions from non- "ZEV" vehicles, and excludes private enterprise from the infrastructure/refueling space altogether. In short, this rule picks unproven technologies as the way forward with no backup plan, and sets up no means for private enterprise to deliver on these lofty promises.

Trillium understands the credit/deficit calculation is more complicated than the straight percentages given in proposed Table A-1, yet the basic ACT requirements that 5% of Class 7-8 Tractors in model year 2024 be "ZEV" means that local California companies must start purchasing Class 8 trucks in 2023. The number of available trucks has to then double two years later, and grow by 8x within 8 years. This is a huge leap of faith CARB is assigning to manufacturers, utilities, and California fleets under this regulation, given there are still no commercially available heavy-duty ZEV trucks on the road today. Furthermore, there is no system managing the public costs of those vehicles' usage of the highway. There's no knowledge of how much they will weigh, how much freight they will carry, how they will re-charge (and for how long). Therefore, Trillium believes this goal of "ZEV" deployment is not ready to be implemented on such a scale. These issues are not insignificant, nor are they cheap. There are too many unanswered questions about how to roll all of this out, and too little consideration of what to do if the technology proves unavailable.

Our viewpoint would be different if CARB was looking to speed the deployment of a well-understood, tested and commercially available technology, such as light-duty vehicles. Whereas purchasing a light-duty vehicle is a personal choice, based on likeability of the vehicle and personal finances, commercial purchases are not based on these factors, rather California businesses must make decisions solely based on performance and cost. There is also a compounding effect when so many leaps are necessary to

achieve successful implementation this type of regulation—technology, scale, performance, cost, infrastructure, and indirect regulatory barriers—see Rule 18 discussion below as an example.

On the flip side of this policy is a missed opportunity. These same ambitions around "ZEV" penetration into Class 7-8 trucks also lays bare a massive policy hole in this ACT rule. In pushing for greater and greater ZEV penetration, CARB has not done enough to reduce emissions from the other 95% of vehicles that will be purchased for 2024, nor even from the 60% of non-"ZEV" vehicles that may still be purchased in 2032 and beyond. There are a variety of existing technologies and renewable, low-carbon fuels types, including renewable diesel, biodiesel, and renewable gas, that are in the market today and are creating real GHG emissions savings today. Why not regulate to a GHG standard, and let the market figure it out? This is a market-based approach is currently used successfully in various areas by CARB now—why dictate a winner technology at this point? At the very least, why not allow these technologies to participate in a more robust manner in this rule? Not providing credits for RNG-fueled Low NOx trucks ensures the alternative to ZEV is diesel.

Additionally, CARB's prioritization of heavy- and medium-duty electrification strategy excludes private enterprise from infrastructure/refueling. But a California Public Utilities Commission (CPUC) rule—known as Rule 18 in Southern California Edison, but other IOUs have similar rules—currently in effect today prevents the sale of electricity as a fuel for medium- or heavy-duty vehicles by third parties, such as Trillium. MD/HD infrastructure has been a focus of this rulemaking from its inception, yet this issue isn't even discussed in the Updated Costs and Benefits Analysis for the Proposed Advanced Clean Trucks Regulation (released with these amendments)[1]. Table IV-8 (Attachment C) shows almost a $10 Billion infrastructure need. The ACT Initial Statement of Reason[2] discusses infrastructure and states "*LCFS credits are a form of incentive…*", but such an incentive is only available to the seller of the electricity, which by current CPUC rule cannot be a private party. Leaving the private market out of the infrastructure arena is a fatal policy flaw and undermines the aggressive amended vehicle sales requirements in Table A-1 of Section 1963.1.[3]

We support a clean transportation future, including zero emission technologies, and are investing in such technology, but this regulation ignores the renewable fuel investments Trillium and other stakeholders have made. These investments are in the hundreds of millions of dollars, and could be stranded if a more balanced approach to the medium and heavy-duty sector isn't pursued. Fundamentally changing the policy direction for this sector (previous Mobile Source Strategy[4] sought almost a million RNG trucks), will not lead to more investment but rather less.

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[1] Attachment C - https://ww3.arb.ca.gov/regact/2019/act2019/30dayattc.pdf
[2] https://ww3.arb.ca.gov/regact/2019/act2019/isor.pdf
[3] https://ww3.arb.ca.gov/regact/2019/act2019/30dayatta.pdf
[4] https://ww3.arb.ca.gov/planning/sip/2016sip/2016mobsrc.pdf (Latest CARB Mobile Source Strategy)

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Additional May 1, 2020 Amended Section-Specific Comments

- Section 1963(a) states the purpose of this rule is to "accelerate both the market for on-road zero-emission vehicles AND to reduce emissions of oxides of nitrogen…". Yet, the rulemaking does not incorporate any incentives for Low NOx RNG medium- or heavy-duty vehicles.
- Section 1963(c)(16) defines "Near-zero-emission vehicle" as one of two hybrid configurations. This definition is inconsistent with other CARB and legislative NZEV definitions. Trillium suggests additional amendments to redefine "Near Zero Vehicles" to include the cleanest certified NOx vehicles in California today. This will incent a clearer than diesel baseline under section 1963(d) (also amended in this package)
- Section 1963.3 defines regulatory compliance, but does not provide any alternative to the strict ZEV mandates specified in the rule. Other than a single year extension of compliance, there is not appeal process, technology determination, variance process, force majeure or other provisions to protect compliance entities. Such alternatives have been included in adoption of recent HD ZEV regulations[5]. Trillium suggests language similar to that included used in adopting the Advanced Clean Transit regulation[6].

CARB should to do more to support *all* advanced clean truck technologies and not just zero emission technologies. The technical and cost-effectiveness case for low NO_x trucks is clear, and a sales/production mandate should be included in this rulemaking. It is a clear policy goal of Governor Newsom to replace the current fleet of older diesels as soon as possible[7]. This regulation, and these amendments, do NOT accomplish that key goal.

The South Coast Air Quality Management District and San Joaquin Air Pollution Control District are both extreme non-attainment regions and must reduce regional NOx emissions by up to forty-five percent by January 1, 2023 or face federal regulatory and financial consequences. The vehicles subject to this regulation will NOT play a substantial role in NOx reduction until after the looming deadline with the amendments released on May 1. The RNG vehicles left out of this rulemaking also contribute to the state's climate change goals by being as much as carbon negative and an immediate alternative to diesel fuel. CARB is leaving short-term emission reductions off the table. The omnibus NOx truck rule will not be adopted for several years and will not be implemented for several more. HD RNG vehicles are available today.

This rule, including the recently proposed amendments, is a strategy of hope. With no alternative options available, no Plan B, this is a policy roll of the dice. CARB has historically been more diverse and pragmatic in its policy thinking, and has been successful in achieving significant emission reductions even if a particular technology failed. The current strategy is a significant departure, and will carry with it significant risk of failure.

Trillium is supportive of all technologies, and will be there to provide California customers their necessary infrastructure and fuel, no matter what they choose, but a choice is key.

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[5] https://ww2.arb.ca.gov/our-work/programs/innovative-clean-transit
[6] https://ww2.arb.ca.gov/sites/default/files/2019-10/ictfro-Clean-Final_0.pdf
[7] https://sd09.senate.ca.gov/news/20190920-gov-newsom-signs-sb-44-"ditching-dirty-diesel"

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For all of the reasons above, Trillium urges the Board of CARB to direct staff to revisit the proposal to accomplish its purpose of accelerating both on-road zero-emission vehicles and to reduce NOx and other criteria and toxic emissions in a reasonable timeline. The current proposal retains the status quo until a significant step function occurs, which has been historically shown to be a long-shot.

Thank you for your time and consideration.

Sincerely,

JP Fjeld-Hansen
Vice President of Trillium