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May 28, 2020

Honorable Chair Mary D. Nichols
Honorable Members
California Air Resources Board
1001 I Street
P.O. Box 2815
Sacramento, CA 95812

Re: Proposed Amendments to the Proposed Advanced Clean Trucks Regulation

The California Electric Transportation Coalition (CalETC) appreciates the opportunity to provide our feedback on the Proposed Amendments to the Proposed Advanced Clean Trucks (ACT) Regulation. CalETC is a non-profit industry trade association that is committed to the successful introduction and large-scale deployment of all forms of electric transportation. CalETC supports and advocates for the transition to a zero-emission transportation future to spur economic growth, fuel diversity and energy independence, ensure clean air, and combat climate change. CalETC's board of directors includes Los Angeles Department of Water and Power, Pacific Gas and Electric Company, Sacramento Municipal Utility District, San Diego Gas and Electric Company, Southern California Edison, Northern California Power Agency, and the Southern California Public Power Authority. Membership also includes manufacturers of zero-emission vehicles in all weight classes, electric vehicle charging station providers, and other industry leaders supporting transportation electrification (TE). Not all views expressed in this letter are necessarily held by each of our board members or our membership.

CalETC would like to recognize the difficult times we are experiencing in California, the Nation, and indeed the world, as we battle COVID-19 and cope with the resulting economic devastation. CalETC commends the California Air Resources Board (CARB) and its staff for working through this difficult time and providing additional time for stakeholders to comment on this very important regulation. CalETC would like to be clear, however, that the comments made in this letter are not a response to the pandemic, are in no way affected by it, and are not requesting a delay in implementation. CalETC would submit these same comments regardless of the pandemic. CalETC does not have the expertise or a reliable method to quantify the impacts from this crisis on the implementation of the proposed amendments to the proposed ACT regulation. Therefore, CalETC's concerns and recommendations stem directly from the proposed rule and are made on that basis alone. Going forward, we recommend that CARB continue to monitor the impacts of the pandemic and make any necessary adjustments to ensure the success of the ACT rule.

CalETC strongly supports the state's goals of reaching carbon neutrality by 2045 and supports the role the ACT regulation will play in reaching that goal. Our recommendations are intended to

strengthen the rule and increase the potential for successful implementation of the rule. Transitioning the state's medium- and heavy-duty transportation sectors to zero-emission technologies is and will continue to be a challenging task. We agree with CARB staff and the Board that an original equipment manufacturer (OEM) sales mandate alone will not be sufficient to successfully transition the market within the timeframe provided. A suite of policies is essential to success, including adequate and reliable incentives, strategic investment in charging infrastructure, and other complementary policies such as the fleet regulations being developed in conjunction with the ACT regulation.

CalETC and its members are prepared to meet the infrastructure challenges associated with electrifying medium- and heavy-duty trucks operated in California. CalETC has consistently called for a public-private partnership that would collectively address the infrastructure challenges and ensure the successful and equitable installation of infrastructure needed to support California's zero-emission transportation future. CalETC is conducting a full assessment of the infrastructure needs of these trucks and the site configurations associated with that infrastructure, with an anticipated completion date of early Summer 2020. CalETC and its members stand ready to work with state and local government to ensure the infrastructure challenges are fully and efficiently met. We are already working with those sites preparing for fleet electrification to meet the increased demand for electricity and conduct any necessary utility-side upgrades. CARB's Transport Refrigeration Unit (TRU) Regulation currently being developed will be a well-timed proving ground for utilities as they work with CARB and the customers impacted by the regulation to ensure the infrastructure needs of TRUs are effectively and efficiently met.

CalETC would also like to emphasize that the transition to electric trucks will create good new family-supporting jobs on both the vehicle and infrastructure side. Macro-economic analysis conducted by CalETC and others demonstrates the economic and jobs benefits of electrifying the medium- and heavy-duty truck and equipment sectors.¹ For the infrastructure build out, the California workforce needs to be bolstered and trained to fill these new good jobs, which will include skilled construction workers, load management engineers, design engineers, and jobs in local jurisdiction permitting, inspection and planning offices.

CalETC supports accelerating the transition to zero-emission technologies through a thoughtful policy approach that prioritizes promising sectors and use cases, often referred to as a beachhead or segmented approach. CalETC supports the goals of the proposed amendments to the proposed ACT regulation, but we have recommendations about the structure, metrics, and analysis provided in support of these proposed amendments and recommend an additional 15-day comment period to appropriately amend the proposed regulation. Here is a summary of our comments:

¹ See *Clean Transportation: An Economic Assessment of More Inclusive Vehicle Electrification in California* by Next 10, January 28, 2020 (available at <https://www.next10.org/publications/ev-benefits>); See *Comparison of Medium- and Heavy-Duty Technologies in California* by ICF, December 2019 (available at <https://caletc.com/caletc-research/>).

- CalETC supports increased percentages for Class 4-6, relative to the original staff proposal, as this market segment is ready for an accelerated conversion to ZEVs and is a growing vehicle market.
- CalETC agrees with the CARB Board's direction that the ACT regulation should take a more segmented approach by further separating the weight classes and increasing the percentages for the weight classes that are ripe for conversion to electrification but allowing more time for the other segments to develop. CARB staff's proposed amendments did the opposite by making the rule less segmented. CalETC recommends that the proposed amendments be revised to comport with CARB Board's direction and the segmented nature of both the consumer and OEM elements of the truck market:
 - Because the OEMs themselves are segmented in the medium- and heavy-duty market, a broad unsegmented approach may harm certain OEMs who only manufacture in less mature markets and benefit OEMs who happen to manufacture in the more easily electrified segments of the market. This will create unintended market winners and losers among the OEMs.
 - Class 2b-3 pickup trucks and Class 7-8 tractors are well behind Class 4-6 trucks in market development. Manufacturers of Class 2b-3 trucks are not necessarily manufacturing in other medium- and heavy-duty truck classes. CARB staff's proposal to remove the exemption for Class 2b-3 pickup trucks as originally proposed is not analytically supported and removes the more segmented original proposal.
 - For these reasons, we recommend reinstating the exemption for Class 2b-3 pickups until 2027 and returning to the sales percentages in the original ACT regulation for Class 7-8 tractors. CalETC supports the increased percentages for Class 2b-3 vans and suggests separating vans from pickups in Class 2b-3.
- CalETC believes the accompanying fleet regulations are essential to the ACT regulation's success and therefore supports strong resolution language linking the ACT regulation to the ACT fleet regulation. Additionally, the fleet rule should support the ACT regulation by creating demand for the truck segments that are market ready, like Class 4-6 and Class 2b-3 vans.
- Should the CARB Board decide to move forward with the staff's proposed amendments, CalETC strongly recommends the addition of some regulatory provisions that allow for regulatory relief should other significant market forces cause a failure to meet the sales percentages.
- CalETC supports the increase in the credit weight class modifier for Class 7-8 tractors to 2.5. Additionally, should the proposed amendments go forward, we recommend the weight class modifier for Class 2b-3 be increased to 1 at least until 2027, particularly in the case of Class 2b-3 pickup trucks, then it could step down to 0.8, if necessary.

CalETC respectfully provides the following more detailed feedback on the Proposed Amendments to the Proposed Advanced Clean Trucks Regulation:

- I. CalETC supports the increased percentages for the Class 4-6 trucks because that market segment has demonstrated it is ready to convert to ZEVs. However, we agree with the CARB Board's direction that the ACT regulation should take a more segmented approach to accelerate certain segments and allow others time to develop.

At the December CARB Board hearing, the Board requested that the ACT rule be more strategically segmented to fast track certain segments and allow others time to develop in the market, and in recognition of the segmented nature of the manufacturers building across classes. CalETC supports the increased sales percentages for Class 4-6 because that market segment is ready for the full transition to ZEV, with some models already in the 2nd and 3rd generation. There are ZEV Class 4-6 trucks offered for sale today and several companies are thriving in these segments. The existence of a viable market justifies setting more ambitious targets by increasing the sales percentages. This is not the case for the other weight classes and the regulation can be structured in a segmented fashion to reflect that reality.

At this time, there are no Class 2b-3 pickup trucks offered for sale. Of the pickup trucks that have been announced, two meet the USEPA definition of Class 2b-3 trucks². It is unclear whether the other four pickup trucks announced qualify for compliance with the Class 2b-3 ACT rule (we recommend, at the very least, that the rule clarify the definition of Class 2b-3 trucks that could comply with the rule). It is also unclear whether any of the six announced pickup trucks can offer the payload and towing capability equivalent to their diesel counterparts. Additional challenges are created as all the pickup truck announcements are merely announcements of trucks that will be offered for sale in the future and they will be the first generation of vehicles in this class. Announcements are not a reliable metric to justify removing the pickup exclusion until 2027 and further increasing the percentages beyond what was initially proposed.

The Class 2b-3 pickup truck segment has a wide range of use cases and an enthusiastic customer base. CARB staff estimated the average daily driving range for Class 2b-3 pickup trucks and suggested that a 65-mile range is suitable for these pickup truck customers, with a 97-mile range considered "long range". These customers' driving range can vary substantially on any given day,

² The USEPA defines a Class 2b truck as weighing 8,501-10,000 lbs. but defines a Medium-Duty Passenger Vehicle (MDPV) as "any heavy-duty vehicle (as defined in this subpart) with a gross vehicle weight rating (GVWR) of less than 10,000 pounds that is designed primarily for the transportation of persons. The MDPV definition **does not include** any vehicle which: (1) Is an "incomplete truck" as defined in this subpart; or (2) Has a seating capacity of more than 12 persons; or (3) Is designed for more than 9 persons in seating rearward of the driver's seat; or (4) Is equipped with an open cargo area (for example, a pick-up **truck box or bed**) of **72.0 inches in interior length or more**. A covered box not readily accessible from the passenger compartment will be considered an open cargo area for purposes of this definition." Available at <https://www.govinfo.gov/content/pkg/CFR-2009-title40-vol19/pdf/CFR-2009-title40-vol19-sec86-1803-01.pdf>

and we know from experience with light-duty ZEVs and specific medium- and heavy-duty applications that the suggested average daily driving mileage is not sufficient; customers require vehicles that can meet the full range of their driving needs. Class 2b-3 pickup truck customers have high expectations of their trucks to do “work,” and they will be satisfied with a ZEV when that truck provides at least the utility of their diesel counterparts. While we have no doubt that eventually ZE pickups will be able to compete with and even outperform internal combustion engine pickups, at this time Class 2b-3 pickup trucks are not a beachhead class and it will take time to develop the technology and design necessary to build ZE Class 2b-3 pickup trucks that satisfy these unique duty cycles and win over the customer base.

CARB staff’s TCO assessment for Class 2b-3 pickup trucks is incorrect in cases where the pickup trucks are owned by individuals and small businesses (retail), not large fleets. Retail (small business and individual ownership) is most typical for Class 2b-3 pickup trucks as it represents 70 to 90 percent of these customers. The CARB staff TCO analysis assumes only 30 percent of the Class 2b-3 vehicles do not directly generate LCFS credit value, since they are in the individual and small business category and are likely charged at the residence of the owner who does not own the charging infrastructure. As such, CARB has underestimated the costs associated with the majority of these Class 2b-3 ZEV pickup trucks (i.e., need to exempt the majority of these customers from LCFS credit). Further, the owner of the truck in this case would not benefit from SB 350, as assumed in the TCO assessment. For these reasons CalETC recommends clarifying the definition of Class 2b-3 trucks in the ACT rule, reinstating the exclusion for Class 2b-3 pickup trucks until 2027, and allowing them to enter the sales mandate from there.

We believe there are good reasons to separate out vans from Class 2b-3 and maintain the increased percentages in the proposed amendments for this segment. Class 2b-3 vans are often being used for last mile delivery services and are more likely, relative to Class 2b-3 pickup trucks, to be owned as part of a fleet. These characteristics make Class 2b-3 vans a good candidate for electrification, and therefore, we support the increased percentages for vans, so long as vans are separated from pickups in Class 2b-3.

The fledgling market for Class 7-8 tractors does not warrant the significant percentage increases that are included in the Proposed Amendments. We are concerned that accelerated requirements for Class 7-8 tractors before the customer base is comfortable and the technology has some real-world experience could poison the well in these customers’ minds and result in market delays. Therefore, we recommend returning the sales percentages for the Class 7-8 tractors to those proposed in the original ACT rule.

- II. **CalETC supports strong resolution language that links the ACT rule to the fleet regulations and additional provisions in the regulation that would provide relief should other significant market forces cause a failure to meet the sales percentages.**

An important aspect that will significantly contribute to the success of the ACT rule is the expedited development and adoption of the commensurate ACT fleet regulation. Therefore, CalETC believes it is essential that the ACT rule and the ACT fleet regulation be linked by regulatory language. Without a fleet regulation to drive demand, there is little chance the OEMs will be able to sell medium- and heavy-duty trucks on the open market in the quantities and within the timeframe laid out in the CARB staff's proposed amendments. The ACT rule must include regulatory language that ties the percentages in the ACT rule to the fleet rule. It is urgent that the fleet rule be expeditiously developed and adopted so that OEMs have sufficient lead time to develop the models of trucks fleets will need and so that fleets have sufficient lead time to install the necessary infrastructure. Alternatively, if specific language cannot be included in the regulation, language should be included in the resolution that describes how the two rules are linked and a petition or exemption process should be included in the regulation, similar to the exemption provisions in the Innovative Clean Transit Rule Section 2023.4.

By helping create demand, the fleet rule will ensure the ACT rule's success. CalETC recommends that the fleet rule be designed to create a market for all of the truck classes covered in the ACT rule, but also include a segmented approach that will allow for the faster transition of the market segments that are more developed. For example, the fleet rule should target Class 2b-3 vans and Class 4-6 trucks because these market segments are ready for transition to electrification. These segments are frequently owned as part of a fleet and have duty cycles that are compatible with electrification. Furthermore, applying the segmented approach in the fleet rule will give OEMs a strong signal to build the classes that are moving toward electrification and help them meet the ACT rule's percentages.

Due to the increased targets set in the proposed amendments, CalETC suggests CARB include at least two specific dates by which staff will conduct a review of the medium- and heavy-duty ZEV market, one before the ACT rule takes effect and one a year or two after the regulations take effect, as well as consistent periodic assessments during the course of regulatory implementation. We recommend CARB staff develop metrics to aid the rollout of the regulation. Metrics could help improve complementary policies and programs essential to market success. The market review can then demonstrate whether the market is on its way to feasibly comply or over-comply with the proposed regulations, as compared to what is currently expected. Metrics could include, for example, commercial availability and costs of vehicle models to meet fleet requirements; the uptake of vehicles by fleets; availability of incentives for vehicles and infrastructure; battery, infrastructure, and fuel costs; and other indicators. These same metrics could also be used to assess the state-of-health of the market periodically after the regulations take effect and as the percentages increase. If the assessments show the ACT rule needs to be adjusted, then CARB could consider adjusting targets, by either decreasing or increasing the requirements of the regulations across vehicle classes, to support the advancement of the medium- and heavy-duty ZEV market.

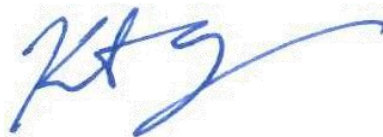
CalETC also recommends removing the reference to sales “to the ultimate purchaser” in sections 1963.1(a) and 1963.2(a). Based on public workshops and as cited in 17 CCR 1963.4 (a)(5), we believe CARB’s intent in the ACT rule is to stay consistent with light-duty ZEV regulations, which clearly state that ZEV products are “reported” based on when they are delivered for sale. The proposed regulatory text, which CalETC supports, is consistent with this understanding: “*a manufacturer must report...to CARB for each type of on-road vehicle produced and delivered for sale.*” (See Section 1963.4(a).) However, the proposed amendments appear to include conflicting language elsewhere. The proposed language addressing OEM deficits and credits states that such deficits and credits are incurred “*when the on-road vehicle is sold to the ultimate purchaser in California.*” (See Sections 1963.1(a) and 1963.2(a).) This does not align with the “delivered for sale” approach and we recommend that CARB strike this text in the credits and deficits sections so it is clear that CARB’s intent is to report ZEVs based on where they were delivered for sale.

III. CalETC supports the increase of the weight class modifier for Class 7-8 tractors to 2.5 and recommends increasing the weight class modifier for Class 2b-3 to 1.

Assuming the sales targets are not revised, CalETC recommends increasing the weight class modifier to 1 for Class 2b-3 for a limited time to give this fledgling market additional assistance to meet the sales percentages. As noted above, there are no ZE Class 2b-3 pickups for sale at this time and customer demand in this specific class is less understood than for other classes of medium- and heavy-duty vehicle classes (this is also the case for Class 7-8 tractors). Increasing the weight class modifier would provide OEMs with an additional incentive to build vehicles in this class and help buoy the market through what will be a very difficult initial phase. If necessary, the weight class modifier could be stepped down to 0.8 in 2027 when pickups were initially scheduled to become subject to the sales mandate.

CalETC thanks CARB staff for their commitment to involve stakeholders throughout development of the ACT rule and thank you for your consideration of our comments. Please do not hesitate to contact me if you have any questions at kristian@caletc.com or (916) 551-1943.

Sincerely,



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