CalETC
California Electric Transportation Coalition

May 31, 2022

Liane Randolph, Chair
California Air Resources Board
1001 "I" Street
Sacramento, CA 95814

RE: Advanced Clean Cars II Regulation

Dear Chair Randolph & Members of the Board:

The California Electric Transportation Coalition (CalETC) appreciates this opportunity to support the Advanced Clean Cars II (ACCII) proposed regulations. The proposed regulations represent an ambitious set of requirements that would ultimately achieve 100% new EV sales share by 2035 when combined with customer pull and other complementary policies in addition to the regulatory push provided by ACCII. Regulatory success depends upon 100% buy-in of EVs by every Californian, far exceeding the current rate of consumer uptake of new ZEVs needed to meet our air quality and climate change goals. It is essential to the success of ACCII, once adopted, that California continue to strengthen and increase complementary policies such as the vehicle incentive programs, infrastructure incentives, building codes, and the Low Carbon Fuel Standard.

CalETC supports and advocates for the transition to a zero-emission transportation future to spur economic growth, increase fuel diversity and energy independence, contribute to clean air, and combat climate change. CalETC is a non-profit association committed to the successful introduction and large-scale deployment of all forms of electric transportation. Our Board of Directors includes representatives from: Los Angeles Department of Water and Power, Pacific Gas and Electric, Sacramento Municipal Utility District, San Diego Gas and Electric, Southern California Edison, Southern California Public Power Authority, and the Northern California Power Agency. In addition to electric utilities, our membership includes major automakers, manufacturers of zero-emission trucks and buses, electric vehicle charging providers, autonomous electric vehicle fleet operators, and other industry leaders supporting transportation electrification.

Complementary policies and programs are essential to the success of California's transition to full electrification of the transportation sector. The ZEV mandate is an essential element of California's and other states' transition to a zero-emission vehicle future. California's unprecedented market success is a result of the ZEV regulation in combination with other policies and programs, most notably the substantial investments California has made in ZEV technologies and supporting infrastructure, the Low Carbon Fuel Standard, and public/private partnerships like the EV Charging Infrastructure Strike Force. As the state moves to strengthen the ZEV program, it will be important to also fortify the other complementary policies that have helped make California a leader in electric vehicle adoption.

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CalETC encourages the CARB Board to approve the United Nations Global Technical Regulation (UN GTR) proposed durability requirements for battery electric vehicles. Although some minimum durability and warrantee requirements are beneficial, the staff's proposed durability requirements exceed the UN GTR proposed international performance requirements, will increase the cost of new and used electric vehicles, and do not anticipate the grid integration potential for electric vehicles.

The UN GTR durability requirements were developed over a 2-year process by the global community, including CARB, the US EPA, and regulatory agencies around the globe. The durability requirements proposed in 13 CCR §1962.4(d)(2) (80% Range at 10 years/150,000-miles) and implemented in §1962.7[1] could substantially increase ZEV costs and/or reduce utility for every electric vehicle (EV) produced by every Original Equipment Manufacturer (OEM) in California and Section 177 States. This same constraint might not exist outside of California. Given the technology advancements and pace of these advancements required by the proposed ACCII regulation, it is appropriate to set initial performance standards that align with international protocols. If more stringency in durability standards is determined necessary as the market accelerates, and data supports more stringency, it can be considered and evaluated more fully.

Publicly available data suggests that meeting the proposed durability requirements could require a battery 25% larger than needed by current industry sizing practices, thereby increasing cost without providing additional benefit to the new car buyer and with no guaranteed additional value to the used car buyer. The additional battery (known as "battery reserve") would not be available to the new vehicle owner but would instead be used to ensure the vehicle can meet the 80% range requirement at the 10-year point, a value for 10-year-old vehicles without any indication of whether customers are willing to pay for the costs associated with this value.

Data and polling consistently demonstrate that cost remains the biggest concern for Californians when considering the purchase of an electric car(s) or truck(s). This finding holds across income classes, vehicle types, and locations. In the context of the durability requirements, it is unclear whether consumers value an increase in durability relative to the associated cost, beyond the UN GTR durability standards. Data would suggest otherwise; the substantial amount of data and polling we can access indicates consumers considering an EV are most concerned about cost, and that cost will continue to be the number one concern for new EV buyers as the market for EVs expands beyond early adopters and fast followers. Those driving today's EVs are very happy with their cars, they are most concerned with access to charging infrastructure to extend the range, rather than increasing the range and price for used vehicles.

In addition to increasing costs for new and used EVs without any data that would suggest EV customers are willing to pay the additional costs for either new or used EVs, the proposed durability requirements could inadvertently harm other metrics of performance for EVs that customers value, specifically vehicle grid integration benefits which benefit EV drivers and all users of electricity, whether or not they drive an EV. Automakers may need to restrict vehicle grid integration capabilities that are attractive to consumers to meet the proposed durability standards. Although the proposed

[1] See **Appendix A-5**, §1962.4, and **Appendix A-8**: *§1962.7*

ACCII regulation attempts to address the issue of performance tradeoffs with vehicle grid integration, DCFC and high-temperature operation in §1962.7, the proposed regulations do not provide quantitative thresholds for these performance metrics. Instead, the proposal recommends leaving it to the CARB Executive Officer to determine, after-the-fact, based on good engineering judgment. Without quantifiable thresholds, these criteria could vary across time or vehicle make and may not align with vehicle grid integration (and DCFC and high-temperature operation) efforts underway between the OEMs, utilities, and other regulators.

CalETC recommends class 2b/3 vehicle credits be transferable between the Advanced Clean Truck and the ACCII regulations for the purposes of compliance. We recommend the transfer be allowed for all 2b/3 vehicles that exceed the ACT regulatory requirements and meet the ACT durability requirements. Currently the ACC regulations allow for this flexibility. Class 2b/3 vehicles are an exceptionally challenging market to electrify, in fact these vehicles are just now entering the market. There is no data that would indicate this class of vehicles can meet the ACCII durability requirements. Such flexibility may also make it more feasible for other states to consider California's ambitious ZEV regulations.

CalETC supports CARB's inclusion of plug-in hybrid electric vehicle (PHEV) technologies in the ACCII regulations. We believe PHEVs provide more than a bridge technology option over the next decade. As the state endeavors to catch up and build out adequate charging infrastructure and establish building codes and programs that allow all Californians to access affordable home charging solutions (e.g. chargers in parking areas of multi-unit dwellings, streetside chargers for renters or homes without access to off-street parking, or nearby affordable DCFC options) and hydrogen refueling stations, it will be crucial to ensure that hybrid options are available. Plug-in hybrid options may be the only viable and/or equitable electric solution for some single vehicle households, households with limited access to electricity fueling infrastructure, and/or drivers that use their vehicles for heavy work such as hauling or towing. The staff's recommendation to increase the all-electric range for ACCII qualifying PHEVs is appropriate, however the proposed requirements will limit the affordability and access to PHEVs, and CalETC recommends a more gradual increase in all-electric range requirements for PHEVs, to monitor technology development, equity considerations, and consumer experience.

Charging infrastructure that is accessible and affordable for all Californians is key to a full and equitable transition to zero-emission vehicle technologies. California has led the nation in implementing incentive programs and utility investment in EV charging infrastructure. Even with the impressive efforts to build out supporting charging infrastructure, California has lagged in its infrastructure efforts. There is currently insufficient charging infrastructure in place to support those EVs on the road today and the state is behind in building out sufficient infrastructure to support a full and equitable transition to transportation electrification. Continued public funding, building codes that support charging infrastructure, expedited permitting and interconnection timelines, and consumer and stakeholder support will need to accelerate quickly to support the requirements of the ZEV program and California's ambitious goals.

CalETC recommends against requiring that automakers equip all new EVs with a dual L1 and L2 compatible charger. This requirement simply increases costs for new vehicles without commensurate

benefits for many EV consumers. This requirement will also lock in outdated technology that does not provide any consumer benefit in an all-electric future. CalETC is also concerned that while 240V plugs that are designed to be safely used for charging EVs or other high-power purposes exist, they are not common in existing homes and MUDs and may not be safe for charging EVs in many existing structures. We recommend allowing the market to determine whether an L1 and/or L2 charger should be provided at purchase. The safety issues are a concern but with proper labeling etc., if an automaker believes an L1 and/or L2 on-board charger is attractive, then automakers can provide to the product to their customers. If the CARB Board strongly believes a convenience charger is essential, then we suggest requiring only L1 on-board.

Thank you for your consideration and CalETC looks forward to working with the CARB staff and Board on this important regulation.

Regards,

Eileen Wenger Tutt, Executive Director
California Electric Transportation Coalition