



July 28, 2022

Chair Liane Randolph and Members of the Board
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Subject: Advanced Clean Cars II 15-Day Notice, Auto Innovators Comments

Dear Chair Randolph and Members of the Board,

The Alliance for Automotive Innovation (Auto Innovators)¹ appreciates the opportunity to provide comments on the proposed “15-Day” changes to the California Air Resources Board’s (CARB’s) Advanced Clean Cars II (ACC II) regulatory proposals.²

As we noted in our original comments, these are, without question, the most sweeping and transformative regulations in the history of the automobile industry. The regulations fundamentally change personal transportation in California and the United States. Auto Innovators and its members are committed to this vision and share the ambition of California to converge upon a future mobility system of zero-emission vehicles.

Stringency

As shown in *Figure 1* below, the ACC II regulations currently proposed substantially increase the electric vehicle (EV)³ requirements from those published in December 2021. The largest increases were in the first few years, when manufacturers have the least flexibility and lead-time to construct a global supply chain needed for increased production. Moreover,

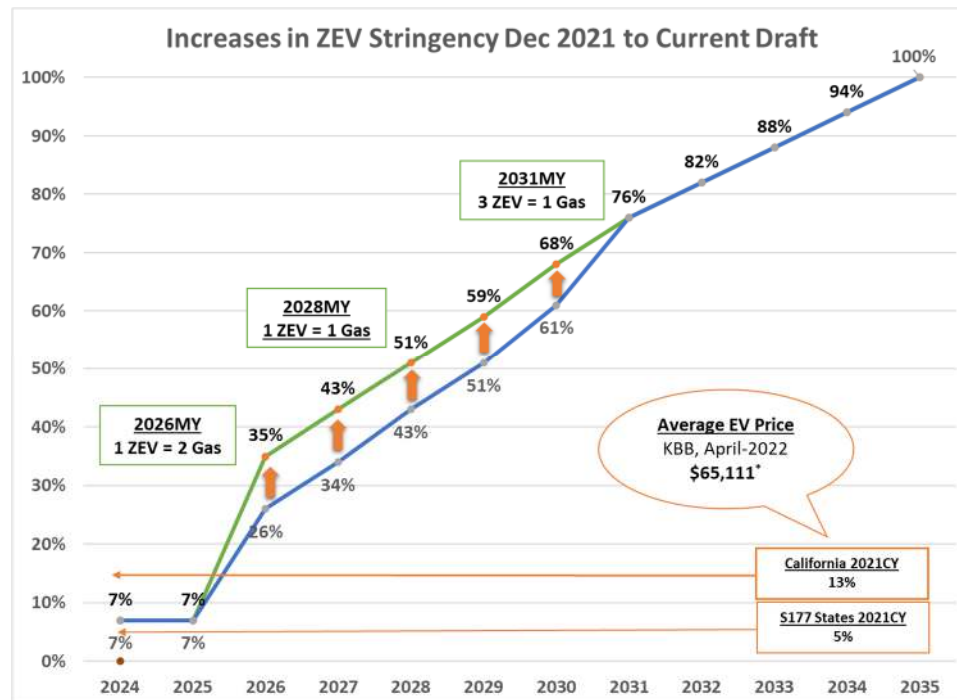
¹ The Alliance for Automotive Innovation members include vehicle manufacturers (BMW Group, Ferrari, Ford, GM, Honda, Hyundai, Isuzu, Jaguar Land-Rover, Kia, Mazda, Mercedes-Benz, Mitsubishi Motors, Nissan, Porsche, Stellantis, Subaru, Suzuki, Toyota, Volkswagen, and Volvo), original equipment suppliers, technology companies, and other automotive-related companies and trade associations. The Alliance for Automotive Innovation is headquartered in Washington, DC, with offices in Detroit, MI and Sacramento, CA. For more information, visit our website <http://www.autosinnovate.org>.

² “Proposed changes to CARB’s regulatory proposals” include the Notice of Public Availability of Modified Text and Availability of Additional Documents Public Hearing Notice and “15-Day Change” documents posted on July 12, 2022, and the errata notice posted on July 13, 2022, at <https://ww2.arb.ca.gov/rulemaking/2022/advanced-clean-cars-ii>.

³ For the purposes of this letter, “electric vehicles” and “EVs” refer to plug-in hybrid, battery, and fuel cell electric vehicles (PHEV, BEV, and FCEV, respectively).

automakers are currently facing chip shortages, supply disruptions, and battery critical mineral price spikes, which have combined to drive up EV costs.

Figure 1



*See Kelly Blue Book, <https://mediaroom.kbb.com/2022-05-10-Luxury-Share-Increases-in-April,-Pushing-New-Vehicle-Average-Transaction-Prices-Higher,-according-to-Kelley-Blue-Book>

Meeting the requirements in California requires tripling EV sales in just three model years. In most of the states following California, EV sales must increase five- to seven-fold in that same period. On the surface, these are staggering increases in a new technology, but these increases are based on 2021 EV sales where the average transaction price of EVs was about \$60,000.⁴ The average transaction prices suggest that average EV buyers are far more likely to be affluent single-family homeowners with modern electric panels just a few feet from their garage where they will charge their EVs.

Thus, current EV buyers do not represent a cross-section of California new car buyers, and achieving 30, 50, or 70 percent of the new car market will require reaching buyers of more moderate means, and it will require action well beyond automakers' ability to produce more

⁴ For example, the most recent Kelly Blue Book report, April 11, 2022, <https://mediaroom.kbb.com/2022-04-11-New-Vehicle-Transaction-Prices-Drop-for-Third-Straight-Month,-but-Remain-Above-MSRP-in-March,-according-to-Kelley-Blue-Book> retrieved May 7, 2022.

EVs. In the early years of these regulations (2026-2030), incentives will be essential to reduce EV costs and demonstrate the state (and federal) government's commitment to the technology.

Infrastructure

We remain concerned that infrastructure (both EV charging and hydrogen) is not sufficient to support widespread EV adoption (30, 50, 100%), and unlike the ZEV regulations, there are no requirements to ensure the infrastructure is in place. We recommend CARB or the state adopt requirements that will ensure infrastructure, particularly in the most vulnerable communities.

For example, as noted above, current EV buyers are more likely to live in single family homes with ready access to convenient, low-cost, and reliable Level 2 (L2) home charging. However, there is no clear path to ensure all communities enjoy the same. Residential infrastructure is essential not only for new EVs but also for the used EVs that will hit the market *en masse* in 2028, 2029, and 2030. Yet, to our knowledge, CARB is not even tracking the portion of multi-family homes or residential units in priority communities with L2 home charging.

Supply issues including critical battery minerals

Finally, we are concerned about supply-side issues such as the critical minerals needed to produce batteries. As demand for EV batteries increases to meet this regulation and similar ones around the world, critical mineral prices could continue to increase making EVs unaffordable to many. Developing the supply chains needed to reach these standards will require – even when the raw minerals are available – a herculean effort. However, existing critical mineral mines may not have the capacity to meet the global EV demand, and of course, lithium batteries are used in far more than just EVs. Discovering and permitting mines in the U.S. and in many other countries can take a decade or more and even then, processing facilities are needed to convert raw minerals into battery components.

Equity and Market Conditions

During the June 9 Board meeting, Chair Randolph asked that CARB staff provide an update to the Board on the market conditions in 2025 and an update on the implementation of the regulation and the market in the 2028 and 2029 timeframe. Moreover, Chair Randolph asked for more frequent updates around equity. We fully support the Chair's recommendation. Considering the challenges mentioned above, we recommend the Board Resolution direct CARB staff to report back, starting in 2025 and every year thereafter, on the historical 5-year trend of specific key metrics. For example, metrics could include percent of equity community residential units with L2 home charging, EV and ICE vehicle model availability and pricing by segment, battery chemistries, critical minerals availability and cost, public infrastructure availability and cost.

Conclusion

Automakers will work to meet the standards CARB adopts, but the Board should be aware the proposed requirements will be *extremely challenging* even in California and particularly in the early years. These standards may not be achievable in all the states that currently follow California's program.

We sincerely appreciate the work and thought the Board and CARB staff put into the ACC II regulations and their tireless work with all stakeholders to understand and address the concerns raised. We are committed to working cooperatively and constructively with CARB over the coming years to implement the regulations. We have attached recommendations to the proposed 15-Day Notice regulations that improve, streamline, and/or clarify the regulations.

Sincerely

A handwritten signature in blue ink that reads "Steven P. Douglas". The signature is fluid and cursive, with the first name "Steven" and last name "Douglas" clearly legible.

Steve Douglas
Vice President, Energy & Environment

Copy: ARB Members
Craig Segall
Jennifer Gress
Michael McCarthy
Joshua Cunningham