



March 4, 2024

The Honorable Brian Feldman
Chair, Senate Education, Energy, and the Environment Committee
Annapolis, Maryland 21401

**SB 1063: Environment - Advanced Clean Cars II Program - Application and Enforcement
Position: Informational**

Chair Feldman:

The Alliance for Automotive Innovation¹ (Auto Innovators) appreciates the opportunity to provide the auto industry's perspective on the reasonableness and achievability of California Advanced Clean Cars II regulations in Maryland. While we appreciate the opportunity to submit comments, Auto Innovators has identified several areas of concern that we would like to address to ensure success for all parties in achieving this aggressive ZEV requirement.

Commitment to Net-Zero Carbon Transportation.

Auto Innovators and its members are committed to achieving a net-zero carbon transportation future for America's cars and light trucks. The auto industry is investing \$1.2 trillion globally by 2030 to advance vehicle electrification and will increase the number of EV models available from 111 today to around 200 by model year (MY)2026². In August of 2021, Auto Innovators and our members announced support for a goal of achieving 40-50 percent U.S. new light-duty vehicle market share of EVs nationally by 2030, with the right complementary policies in place.

There is much work to be done to significantly increase EV adoption across the nation. Our shared objectives require collaboration and a sustained commitment to fund and execute supportive programs and policies.

Maryland ZEVs sales comprised 11.51 percent of new vehicles sales in 2023³. The challenge of reaching the California Air Resource Board (CARB) ACC II mandate of 100 percent electric vehicle market share by 2035, requires Maryland to address several hurdles to consumer acceptance. We applaud Maryland's comprehensive approach to adopting state fleet requirements, but there are many important complementary measures needed for success. Examples include, but are not limited to:

- Deploying convenient, reliable, and affordable access to public EV charging and hydrogen refueling stations, as well as monitoring to ensure reliability not only the charger availability but also the charging power rate delivered at DC Fast Chargers (DCFCs).

¹ The Alliance for Automotive Innovation ("Auto Innovators") represents automakers that produce and sell approximately 98% of all the new light-duty cars and trucks sold in the U.S. Auto Innovators is the authoritative and respected voice of the automotive industry.

² [EVs, PHEVs hitting U.S. dealerships through 2026 | Automotive News \(autonews.com\)](#)

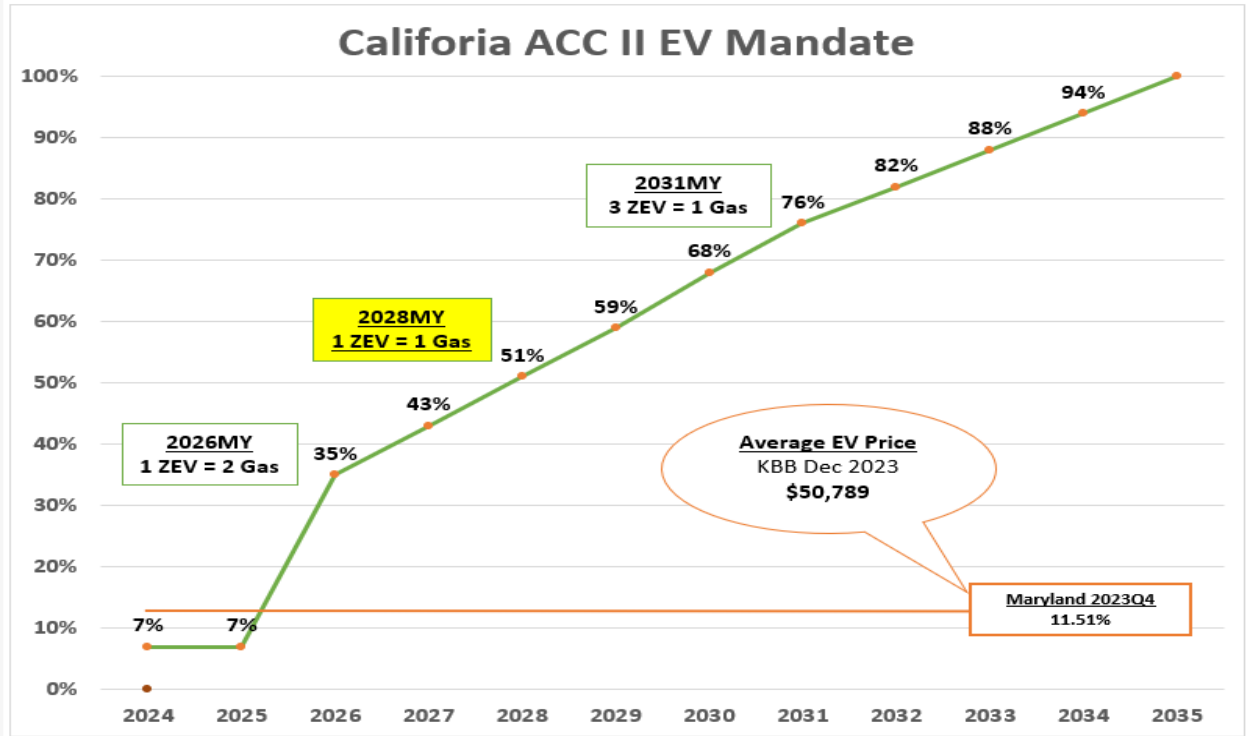
³ Compiled by Alliance for Automotive Innovation with data provided by S&P Global Mobility, sales figures represent new vehicle registrations in CY2023.

- Installing 350kW DCFC at airports and major transportation hubs to fuel transportation network company (TNC)s EVs and taxis. Maryland should also consider installing H2 fueling stations at locations that would support TNC EVs and taxis.
- Adopting building codes addressing new construction and retrofit requirements for EV-ready residential and commercial parking.
- Ensuring grid resiliency and utility electric rates that provide low-cost EV charging.

These policies will be critical to the feasibility of meeting ZEV requirements. Maryland must continue to take immediate and substantial action to implement these critical measures to reach its goal.

Current State-of-Play.

As shown below, the ACC II regulations require very aggressive increases in EV sales starting with MY2026. In Maryland, EV sales must increase more than three-fold in about two model years. These are staggering required sales increases for a new technology that relies heavily on customer acceptance and market readiness.



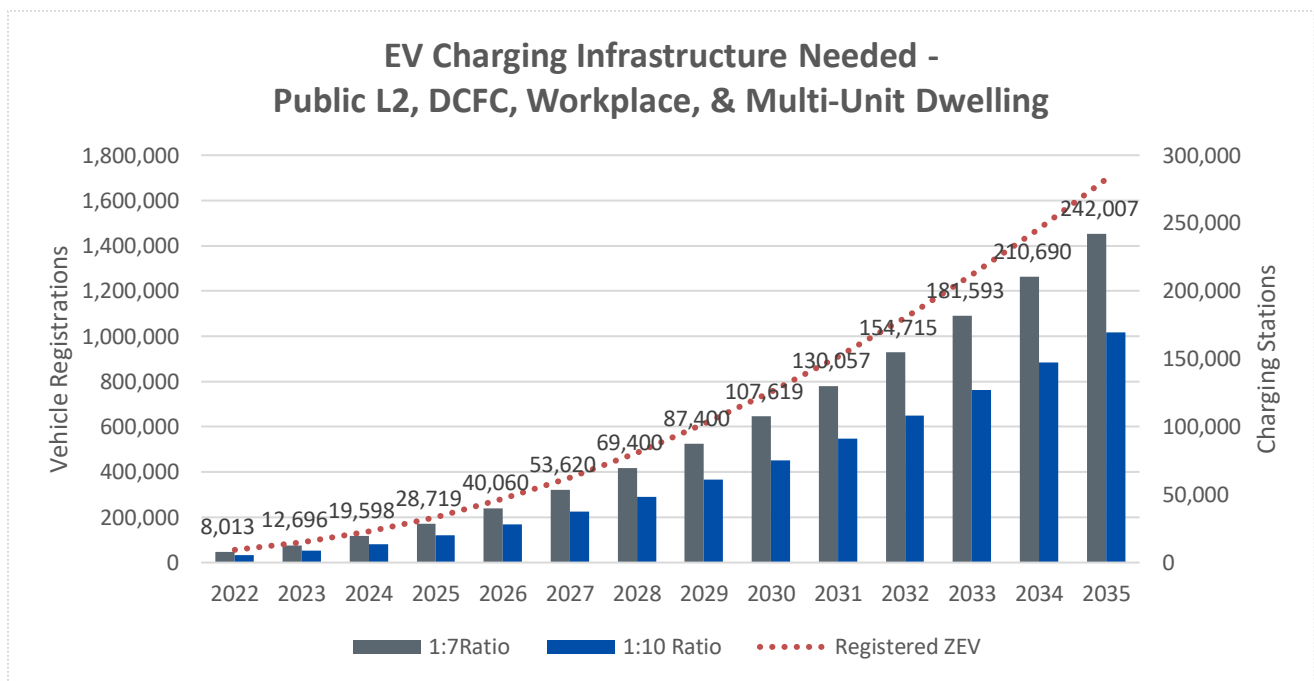
The required more than three-fold sales increase needed is based on 2023 EV sales where the average transaction price of EVs is now about \$50789⁴. Based on the average transaction price of EVs, EV buyers are far more likely to be affluent single-family homeowners with modern electric panels just a few feet from their garage where they will charge their EVs. These buyers do not represent a full cross-section of Maryland’s new car buyers, and achieving even 50, 70, or 100 percent of the new car market will require reaching buyers of more moderate means.

⁴ <https://b2b.kbb.com/dealer-resources/news/ev-purchase-high-2023/>

Charging and Hydrogen Refueling Infrastructure.

Reliable and convenient access to charging and hydrogen refueling stations support Maryland’s customers that buy or lease EVs. Publicly available charging stations not only ease perceived "range anxiety" concerns but also substantially increase consumer awareness of the technology. In addition, hydrogen vehicles may be better suited for some customers, especially those that do not have access to charging at home or the workplace, or those that have a lifestyle that requires short refueling times and a similar refueling process as gasoline.

Currently, Maryland has 4603 electric vehicle charging ports⁵ for 95,233⁶ registered electric vehicles in the state. This is a ratio of approximately one charging port for every twenty-one electric vehicles. This is below the CARB recommendation of a 1:7 ratio or worst case, 1:10 ratio.



Source: Compiled by Auto Innovators with data provided by S&P Global Mobility, sales figures represent new vehicle registrations in CY2022

Residential and Commercial Building Codes - Retrofit and New Construction Updates Needed.

Numerous studies have shown that retrofitting residential and non-residential charging is five to six times more expensive than installing charging stations during new construction. For existing residential and non-residential buildings, installing infrastructure during any significant renovations, such as parking lot paving, electrical panel upgrades, etc. also substantially reduces costs.

According to a 2017 NREL study⁷, 88 percent of EV charging occurs at home, making access to home charging a top priority for customers considering an EV. The converse is also true: lack of access to home charging is a major barrier to EV adoption.

⁵ [Alternative Fuels Data Center: Electric Vehicle Charging Station Locations \(energy.gov\)](https://www.energy.gov/alternative-fuels-data-center/electric-vehicle-charging-station-locations)

⁶ [Electric Vehicles - MDOT \(maryland.gov\)](https://www.maryland.gov/transportation/electric-vehicles)

⁷ <https://www.nrel.gov/docs/fy17osti/69031.pdf>

It is important to ensure low- to moderate-income (LMI) and multi-family housing residents have identical access to the low-cost, convenient, and reliable level 2 (L2) home charging that single-family homeowners enjoy. Maryland should set targets for residential charging and then monitor and track progress toward meeting those targets. For example, it seems reasonable that in 2030, when ACC II requires 68 percent of new vehicles to be electric, that 25 percent of LMI and multi-family housing units have access to L2 charging at home. There are many important complementary measures needed for success.

Maryland should also adopt non-residential building codes that require installation of EV-ready charging capabilities in a significant portion of all new parking at workplace and public locations.

We support building codes requiring that:

1. Every new unit in a MUD with available parking has at least one EV-Ready parking space.
2. Each EV-Ready space above provides, at minimum, Low-Power Level 2 (LPL2) (208/240V, 20A) terminating in a receptacle or an electric vehicle supply equipment (EVSE).
3. EV-Ready signage is posted at each parking space.

This recommendation for L2 power charging levels should be considered as the bare minimum requirement. Mainstream customer satisfaction may require higher power charging. In fact, this is why the California Air Resources Board (CARB), in adopting a regulatory requirement for 100 percent electric vehicles, also mandated that every new MY2026 and later EV contain a portable charger capable of charging the vehicle at 5.76 kW (208/240V, 30A).

While building codes that address new construction are a common-sense and lowest-cost first step, they are not nearly enough to support a transition to electrification. For example, new residential construction typically accounts for about one percent of all residential units each year. Thus, new building codes would only provide residential charging in about 15 percent of the residential units by MY2035. Consequently, Maryland should consider public and private programs to support retrofitting of existing homes and MUDs, such as apartments, condos, and townhouses. As noted, retrofits are far more expensive than incorporation of EV-ready infrastructure at the time of new construction, but they will be necessary to support increasing customer adoption of EVs.

In addition, special attention should be given to the infrastructure needs in Maryland's underserved communities to ensure that access to affordable and convenient charging and hydrogen refueling options are made available on an equally aggressive timeline. MUD residents, however, often face the greatest, most costly, and burdensome obstacles to installing residential EV charging. For MUD residents, the additional costs to upgrade the electrical panel, install conduit between the electrical panel and their parking space, and the logistical challenges of securing building owner approval, coordinating the billing with the building owner, and persuading an owner to make a long-term investment on a rental property, make it near impossible to be an EV driver in a MUD.

MUD residents could be forced to charge elsewhere such as DC fast charge stations or public chargers. Charging at home is far cheaper, more reliable, and vastly more convenient. It is unreasonable to expect MUD residents to pay 2 or 3 times as much for charging and spend hours away from home each week fueling their EVs.

Grid Resiliency/Utility Rate Setting Alignment.

A thorough review of Maryland’s electric grid to determine the viability of expanded access in both the near- and long-term makes strong practical sense. Public confidence in the resiliency of the grid will only help spur faster EV adoption. Failure to provide consistent service, particularly when the majority of EV charging is done at home, could be devastating for increased EV adoption, both for the light- and heavy-duty vehicle sectors.

Auto Innovators suggests that as part of the review, Maryland commit to a transparent dialogue with the utility commission and energy companies about making home and public charging affordable and convenient. In addition, an education campaign about the different types of charging systems (L1, L2, DCFC) and suggestions about prime charging times to lessen the load on the grid should be addressed.

Sustained Consumer EV Purchase Incentive.

Purchase incentives can be a persuasive and effective way to address vehicle affordability and interest customers in purchasing an EV. EVs continue to cost substantially more than a comparable gasoline-fueled vehicle, and so the compounded effect of the federal and state incentives is necessary to equalize purchase costs. We applaud Maryland for providing tax rebates of consumer purchases of EVs and support additional funding to expand these rebates.

Consumer Awareness Programs.

Consumer awareness, understanding, and trust of the technology is essential as we move 11.51 percent Maryland’s EV sales to 100 percent in the next 11 years. Raising awareness can happen in many ways, and we encourage the state to explore a variety of options. For example, we’ve mentioned above that public and workplace chargers and hydrogen stations provide an excellent means of raising consumer awareness. State and local fleet purchases of EVs also substantially raise awareness – particularly if these vehicles are used in high visibility areas such as Department of Transportation (DOT) road crews, police, and fire. Additionally, state-led programs may also be necessary to support the ZEV requirements.

Thank you for the opportunity to provide the auto industry’s perspective on a range of policies that Maryland must adopt to meet its climate goals. Many of the actions necessary for success must start now, and we stand ready to work with Maryland and key stakeholders.

Sincerely,



Josh Fisher
Senior Director, State Affairs
Alliance for Automotive Innovation