

October 19, 2022

**RE: Comments on the State of Washington, Department of Ecology, on Chapter 173-423 WAC – Clean Vehicles Program**

The Alliance for Automotive Innovation<sup>1</sup> (Auto Innovators) hereby submits comments on the State of Washington, Department of Ecology (Ecology) on Chapter 173-423 WAC, Clean Vehicles Program. This will expand the adoption of California motor vehicle emission standards to include the Advanced Clean Cars II and the Low NOx Omnibus Rules (which includes the Phase 2 Greenhouse Gas Rules). As written, the regulations could result in zero emission vehicle (ZEV) standards that are more stringent in Washington than they are in California. We support Ecology’s proposed adoption of early action credits as part of the ACC I rule, and we also recommend Washington consider proportional credits—i.e., a starting credit banks for each manufacturer proportional to the number of credits in California—to avoid this outcome.

The ACC II regulations are the most aggressive vehicle regulations in history and meeting them will be incredibly challenging even in California, which not only has 60 percent higher ZEV sales than Washington, but also has large credit banks that manufacturers can draw on in the early years. While Washington has consistently had the second highest sales in the U.S., its ZEV sales are still far behind California’s.

When California developed ACC II, it assumed manufacturers would use the existing credit banks in California to meet the standards in the early years (model years 2026-2030). However, those credit banks simply do not exist in Washington. While we appreciate the early credit provisions that were contained in ACC I for 2023 model year (MY), these are not likely to result in equivalent stringency between Washington and California. For example, for the 2026MY requirements of 35 percent ZEVs, a manufacturer could comply in California by selling 30 percent ZEVs in MY2026 and using historical banked credits for the remaining 5 percent. Without equivalent credit banks in Washington that manufacturer would need to sell more ZEVs in Washington (i.e., 31-35 percent) to comply.

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<sup>1</sup> 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. Auto Innovators is focused on creating a safe and transformative path for sustainable industry growth by engaging directly in regulatory and policy matters impacting the light-duty vehicle market across the country. Auto Innovators’ members include motor vehicle manufacturers, original equipment suppliers, technology, mobility, and other automotive-related companies and trade associations

Thus, we request that Ecology include proportional credits in MY2025 to ensure the standards in Washington are not more stringent than California's ZEV standards.

**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 over \$515 billion globally over the next decade to advance vehicle electrification and will increase the number of EV models available from 83 today to around 130 by MY2026. Additionally, with necessary conditions in place, Auto Innovators and our members support a goal of achieving 40-50% U.S. new light-duty vehicle market share of EVs nationally by 2030, with supportive investments and complementary policies.

There is much work to be done to significantly increase EV adoption across the nation, let alone achieve ACC II requirements for MY2035. Our shared objectives require collaboration and a sustained commitment to fund and execute supportive programs and policies.

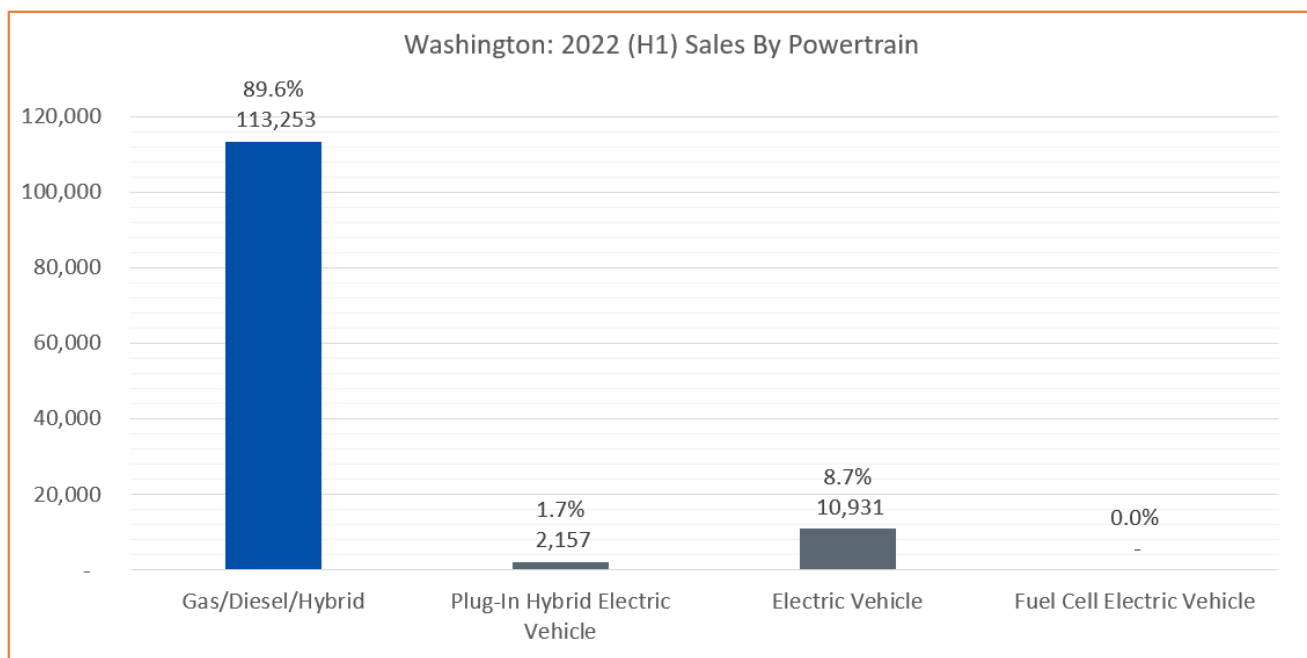
The challenge of reaching a 100 percent EV market by MY2035 requires Washington address several hurdles to consumer acceptance. There are many important complementary measures needed for success. Examples include, but are not limited to:

- Ensuring low- to moderate-income (LMI) and multi-family housing residents have the identical access to low-cost, convenient, and reliable level 2 (L2) home charging that single-family homeowners enjoy.
- Adopting state fleet requirements equivalent to or greater than the requirements in ACC II
- Deploying convenient and affordable access to public EV charging and hydrogen refueling stations.
- 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.
- Adopting and funding sustained and comprehensive state-level point-of-sale EV rebates
- Finalizing state action on low carbon fuel standard (LCFS).

These policies will be critical to the feasibility of meeting ZEV requirements. To facilitate Ecology’s review of the feasibility of meeting the ZEV sales requirements under ACC II, the following includes relevant EV data points for your state. Washington must take immediate and substantial action to implement these critical measures to reach its goal.

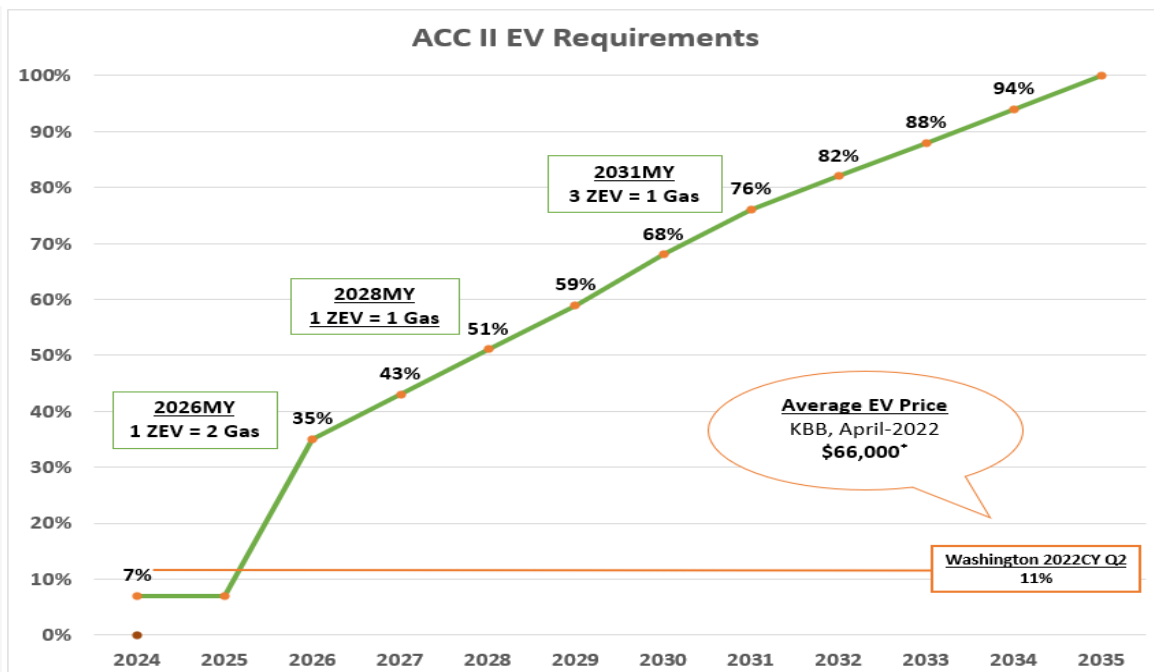
**Current State-of Play.**

In Washington, EVs comprise 10.4% new vehicle sales in 2022 (H1)<sup>2</sup>



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

<sup>2</sup> Compiled by Alliance for Automotive Innovation with data provided by S&P Global Mobility, sales figures represent new vehicle registrations between January 1, 2022 – June 30, 20212.



\*See Kelly Blue Book: [Average New Vehicle Price Sets Record, But Don't Panic - Kelley Blue Book \(kbb.com\)](https://www.kbb.com/news/average-new-vehicle-price-sets-record-but-dont-panic/)

The required three-fold sales increase needed is based on 2022 EV sales where the average transaction price of EVs is now about \$66,000. 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 Washington's new car buyers, and achieving 30, 50, or 70 percent of the new car market will require reaching buyers of more moderate means. It will also require action well beyond automakers' ability to produce more EVs.

### State and Local Fleet Increase.

State and local governments can lead by example by prioritizing adopting EVs (e.g., PHEVs, BEVs, and/or FCEVs) when making fleet purchases. This is truly an example of executive leadership and serves to bolster consumer interest in EV purchases. These fleets can also act as an accelerator and should adopt EVs at a faster rate than what the ACC II rule requires of automakers and their customers.

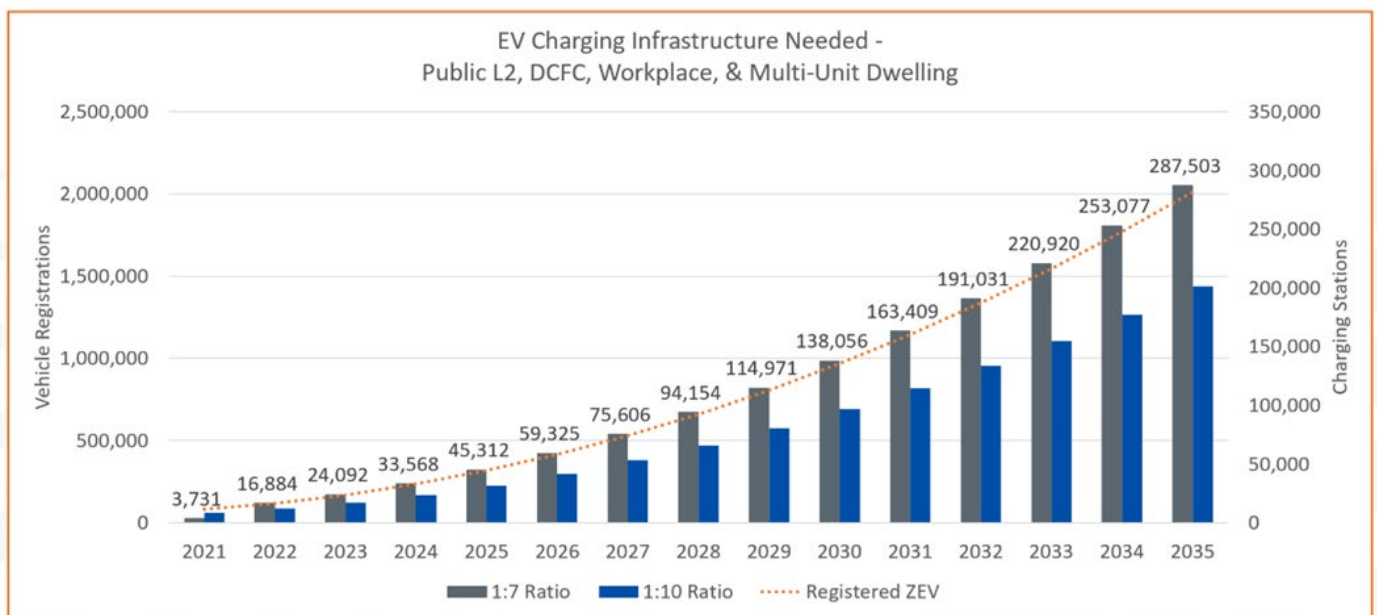
### Charging and Hydrogen Refueling Infrastructure.

Reliable and convenient access to charging and hydrogen refueling stations support Washington 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. We know that hydrogen vehicles are

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. Here is a snapshot of Washington’s current EV charging/hydrogen refueling infrastructure<sup>3</sup>:

- Number of non-proprietary L2 public charging outlets: 2,870 (at 1381 stations)
- Non-proprietary DC fast charger outlets: 428 (at 197 stations)
- Hydrogen stations: 0

To support the prospect of 100 percent EV-only sales in MY2035, Washington’s charging capabilities will need to increase 7,606% within the next 13 years to be in line with the California infrastructure assessment of the required ratio of seven EVs to charger port. Even at a one-to-ten ratio, charging outlets will need to increase by nearly 5,294%<sup>4</sup>. The chart below depicts the substantial increase needed in Washington’s public and MUD charging infrastructure through 2035.



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

According to the 2017 NREL study, 88 percent of EV charging occurs at home, making access to home charging a top priority for customers considering an EV. As a result, the converse is also true, lack of access to home charging is a major barrier to EV adoption. As a first and most cost-effective step, Washington should immediately adopt residential building codes to require EV-ready charging capabilities in 100

<sup>3</sup> Charging information from U.S. Department of Energy Alternative Fuels Data Center, as of 6/30/2022.

<sup>4</sup> Department of Energy, Alternative Fuels Data Center, <https://afdc.energy.gov>, Accessed 6/10/22

percent of parking spots in new multi-unit dwellings (MUDs) and single-family homes<sup>5</sup>. Washington 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. Numerous studies have shown retrofitting residential and non-residential parking is five to six times more expensive than installing charging stations during new construction<sup>5</sup>. Moreover, the building codes should also include requirements to install the same infrastructure during any significant renovations, such as parking lot paving, electrical panel upgrades, etc.

We recommend the State of Washington to adopt codes in the intervening code cycle that require:

1. Every new unit in a multi-family housing development with available parking to have 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. Prioritizing access to the lowest-possible electricity cost for charging.
4. EV-Ready signage 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 presumably why the California Air Resources Board (CARB) in adopting regulatory requirement for 100 percent electric vehicles (EVs), 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 is a common-sense and lowest-cost first step, it is not nearly enough to support Washington's goal to adopt regulations that require 100 percent EVs by MY2035. 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 – the year Washington will require 100 percent EVs. Consequently, Washington must adopt 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.

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<sup>5</sup> Nrel.Gov, 2022, <https://www.nrel.gov/docs/fy17osti/69031.pdf>.

In addition, special attention should be given to the infrastructure needs in Washington'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.

Every study conducted by national labs and the California Energy Commission reports customers charge at home 80-90 percent of the time<sup>6</sup>. Nonetheless, some suggest that while those in single family homes can charge at home, MUD residents should be forced charge elsewhere such as DC fast charge stations or public chargers. We do not agree. 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 Washington'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, the state 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.

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<sup>6</sup> For example, see: (2) Crisostomo, Noel, Wendell Krell, Jeffrey Lu, and Raja Ramesh. January 2021. Assembly Bill 2127 Electric Vehicle Charging Infrastructure Assessment: Analyzing Charging Needs to Support Zero-Emission Vehicles in 2030. California Energy Commission. Publication Number: CEC-600-2021-001. (2) Eric Wood, Clément Rames, Matteo Muratori, Sessa Raghavan, and Marc Melaina, September 2017, National Plug-In Electric Vehicle Infrastructure Analysis, National Renewable Energy Laboratory

### **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 the governor and House of Representatives for approving new funding this year for consumer purchases of EVs. However, funding for consumer purchase incentives will need to be significantly increased to meet the requirements of ACC II.

As you are aware, the recently enacted Inflation Reduction Act (IRA) establishes new clean vehicle credits. Eligible battery-powered electric vehicles must meet critical mineral and battery component content and other requirements to qualify for credits of up to \$7,500 per vehicle. Unfortunately, with these new requirements about 70% of electric vehicles do not meet that standard and are immediately disqualified from the tax credit. In January 2023, when the provisions in the IRA become fully effective, the number of zero electric vehicles that will qualify for the credit are expected to drop further. This means Washington's state-funded consumer purchase incentives will become all the more critical to the state's goals of greater consumer EV adoption.

### **Consumer Awareness Programs.**

Consumer awareness, understanding, and trust of the technology is essential as we move from 11 percent Washington EV sales to 100 percent in the next 13 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.

### **Expected Federal Activity.**

While Ecology considers a range of state policies, it should be aware of activity at the federal level which will likely overlap with state considerations. Section 1 of President Biden's EO 14037 set a nationwide goal that "50 percent of all new passenger cars and light trucks sold in 2030 be zero-emission vehicles, including battery electric, plug-in hybrid electric, or fuel cell electric vehicles."



In December 2021, U.S. EPA adopted the most aggressive GHG emission reduction standards in history for MY2023-26 model years. In fact, those standards are even more stringent than the California standards in MY2026. Auto Innovators and our members supported EPA's proposed GHG standards and the appropriate and necessary flexibilities that encourage a higher production of EVs. We noted that policy actions are needed today to help grow EV sales significantly through model year 2026 and beyond. When litigation was brought against this rule, we intervened in support of EPA.

In April, the National Highway Traffic Safety Administration (NHTSA) followed EPA in adopting the most aggressive increase in fuel economy standards in history for MY2024-2026. However, to fulfill President Biden's EO of 50 percent ZEVs by 2030, both U.S. EPA and NHTSA are currently working on regulations for MY2027 and beyond. We expect draft regulations from both agencies within the next 6 to 8 months and final regulations by March of 2024. We continue to work cooperatively and constructively with EPA, NHTSA, California, Washington, and other stakeholders to reach our common goal of electrified transportation.

Thank you for the opportunity to provide the auto industry's perspective on a range of policies that Washington must adopt to meet its climate goals. As a reminder, it is essential that Washington adopt ACCII by December 31, 2022, to allow for a start date in 2027. Many of the actions necessary for success must start now, and we stand ready to work with the state and key stakeholders.

Sincerely,



Thomas Miller  
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Alliance for Automotive Innovation