ALLIANCE FOR AUTOMOTIVE INNOVATION

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Subject: Comments on Revisions to the State of New Mexico Title 20, Chapter 2, Part 91

The Alliance for Automotive Innovation[1] (Auto Innovators) appreciates the opportunity to provide comments on New Mexico's draft revision to Title 20, Chapter 2, Title 91, that proposes to adopt the California Air Resource Board (CARB) Advanced Clean Cars II (ACC II) regulation. Our association supports the transformation to electrification and is committed to working cooperatively with New Mexico to ensure vehicles developed, produced, and sold in the state offer consumers a range of options that are increasingly efficient, clean, and affordable for all. As of the second quarter of 2023, New Mexico has been able to realize a market share growth in EV sales of 4.17%.[2] The CARB ACC II regulations are the most aggressive vehicle regulations in history and meeting them will be incredibly challenging even in California, which currently has EV market share of 20.66%[3]—five times higher than in New Mexico.

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[4] to advance vehicle electrification and will increase the number of EV models available from over 100 today to around 200 by model year (MY) 2026.[5]

There is much work to be done to significantly increase EV adoption across the nation, including in New Mexico. Our shared objectives require collaboration and a sustained commitment to fund and execute supportive programs and policies. There are many important complementary measures needed for success. Examples include, but are not limited to:

- Provide funding for EV incentives such as vehicle rebates and tax incentives.
- Deploy convenient, reliable, and affordable access to public EV charging and hydrogen refueling stations, as well as monitoring to ensure reliability of not only the charger availability but also the charging power rate delivered at DCFCs.
- Install 350kW DCFC at airports and major transportation hubs to fuel transportation network company (TNC) EVs and taxis. New Mexico should also consider installing H2 fueling stations at locations that would support TNC EVs and taxis.
- Adopt building codes addressing new construction and retrofit requirements for EV-ready residential and commercial parking.
- Ensure grid resiliency and utility electric rates that provide low-cost EV charging.
- Provide proportional credits to ensure the state credit bank is proportional to CA's credit banks.

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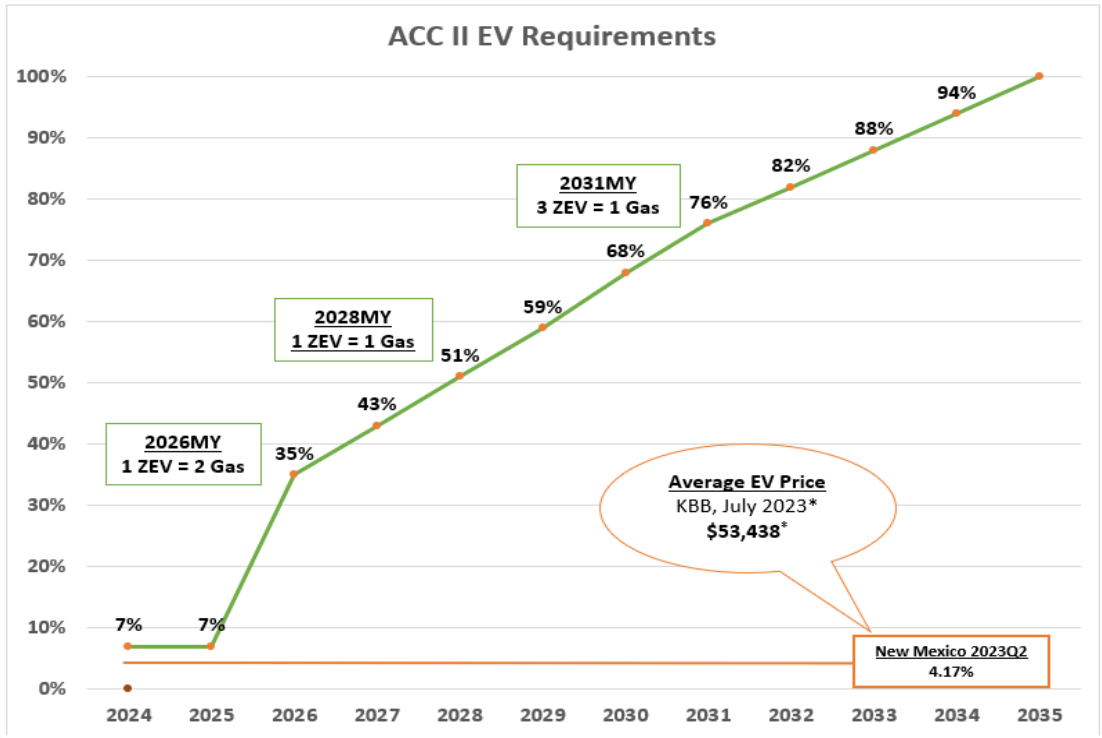
[1] From the manufacturers producing most vehicles sold in the U.S. to autonomous vehicle innovators to equipment suppliers, battery producers and semiconductor makers – Alliance for Automotive Innovation represents the full auto industry, a sector supporting 10 million American jobs and five percent of the economy. Active in Washington, D.C. and all 50 states, the association is committed to a cleaner, safer and smarter personal transportation future. www.autosinnovate.org.
[2] https://www.autosinnovate.org/EVDashboard
[3] https://www.autosinnovate.org/resources/electric-vehicle-sales-dashboard
[4] https://www.reuters.com/technology/exclusive-automakers-double-spending-evs-batteries-12-trillion-by-2030-2022-10-21/
[5] https://www.spglobal.com/mobility/en/research-analysis/fuel-for-thought-ev-marketing-challenges-vehicle-portfolio-grows.html

These policies will be critical to the feasibility of meeting future ZEV requirements. New Mexico 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 43% in MY2027.



The challenge of reaching the CARB ACC II mandate of 43% in 2027 all the way up to 82% EV market share by 2032 requires New Mexico to address several hurdles to consumer acceptance. In New Mexico, EV sales must increase tenfold in four model years. These are staggering required sales increases for a new technology that relies heavily on customer acceptance and market readiness. That required ten times sales increase is needed where the average transaction price of EVs is now about $53,438.[6] 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 New Mexico's new car buyers, and achieving 82 percent of the new car market will require reaching buyers of more moderate means.

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 strongly encourage New Mexico to consider providing rebates of consumer purchases of EVs and tax incentives over the coming years. Federal incentives are not enough to help New Mexico to reach its goals.

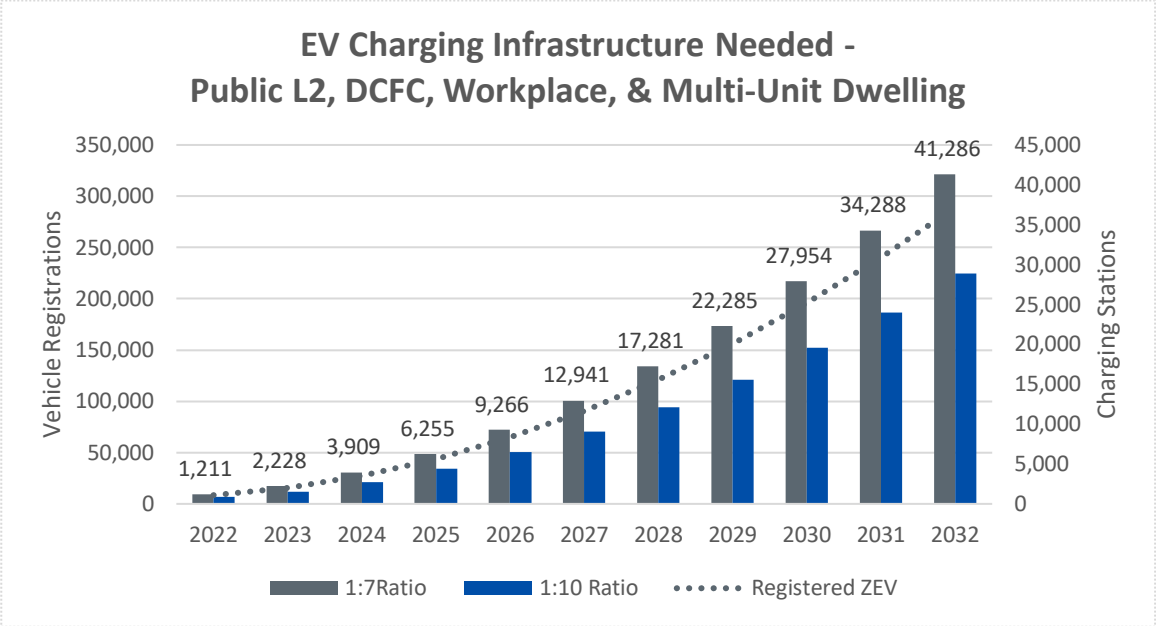
We applaud Governor Grisham's executive order requiring the state of New Mexico's government fleet to be 100 percent electric by 2035. This action will allow state and local governments to lead by example by

[6] How Much Are Electric Cars? - Kelley Blue Book (kbb.com)

prioritizing adopting EVs (e.g., PHEVs, BEVs, and/or FCEVs) when making fleet purchases. There should be both public and private fleet purchase requirements that match regulatory requirements. This is truly an example of executive leadership and serves to bolster consumer interest in EV purchases.

Charging and Hydrogen Refueling Infrastructure.
Reliable and convenient access to charging and hydrogen refueling stations support New Mexico'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, New Mexico has 602 electric vehicle charging ports for approximately 8500 registered electric vehicles in the state.[7] This is a ratio of approximately one charging port for every fourteen electric vehicles. This is below the CARB recommendation of a 1:7 ratio and below the International Energy Association recommendation of 1 to 10.[8] To support the prospect of 82 percent ZEV sales in 2032, our analysis suggests that New Mexico's public charging capabilities will need to increase to a total of 28,900 to 41,286 charging ports by 2032. That is a substantial commitment and investment in only nine years.

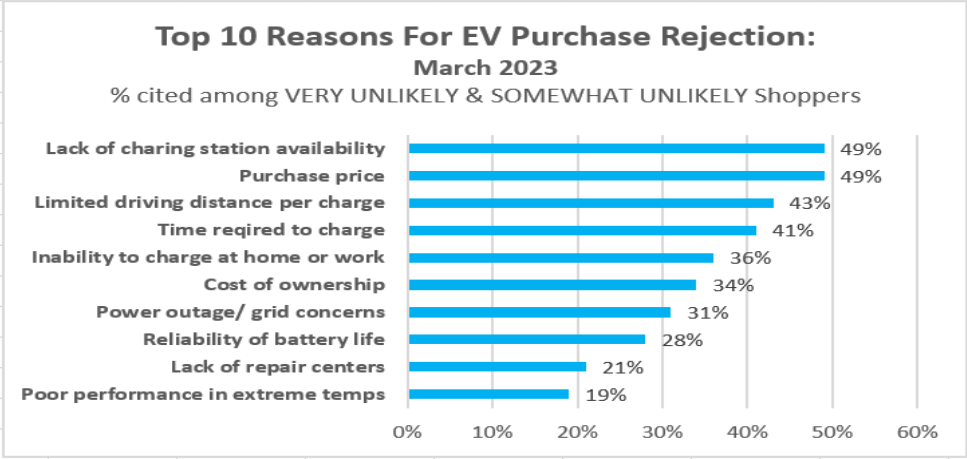


Residential and Commercial Building Codes - Retrofit and New Construction Updates Needed.
Numerous studies have shown that retrofitting residential and non-residential charging is five to six times more expensive than installing charging stations during new construction. For existing residential and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

[7] https://afdc.energy.gov/fuels/electricity_locations.html#/analyze?fuel=ELEC&region=US-NM

[8] https://evadoption.com/what-is-the-ideal-ratio-of-evs-to-charging-stations/

According to a NREL study,[9] 88% 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. Additionally, the April 2023 JD Power EV Index report[10] shared that the lack of charging and purchase price are tied for the biggest reasons preventing people from buying an EV.



To achieve these aggressive EV share numbers, it is important to ensure low- to moderate-income (LMI) and multi-family housing (MFH) residents have identical access to the low-cost, convenient, and reliable level 2 (L2) home charging that single-family homeowners enjoy. New Mexico 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% of new vehicles to be electric, 25% of LMI and multi-family housing units have access to level 2 charging at home.

New Mexico 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 that require:

1. Every new unit in a MFH 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. EV-Ready signage at each parking space.

This recommendation for L2 power charging levels should be considered the bare minimum requirement. Mainstream customer satisfaction may require higher power charging. In fact, this is why CARB in adopting the regulatory requirement for 100% 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 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 1% of all residential units each year. Thus, new building codes would only provide residential charging in about 15% of the residential units by MY2035. Consequently, New Mexico should consider public and private programs to support retrofitting of existing homes and MFHs, 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.

[10] https://www.jdpower.com/business/resources/ev-divide-grows-us-more-new-vehicle-shoppers-dig-their-heels-internal-combustion

In addition, special attention should be given to the infrastructure needs in New Mexico's underserved communities to ensure that access to affordable and convenient charging and hydrogen refueling options is made available on an equally aggressive timeline. MFH residents, however, often face the greatest, most costly, and burdensome obstacles to installing residential EV charging. For MFH 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 an MFH.

MFH 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 MFH residents to pay 2 or 3 times as much for charging and to spend hours away from home each week fueling their EVs.

Grid Resiliency/Utility Rate Setting Alignment.
A thorough review of New Mexico'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 electrical service, particularly when the majority of EV charging is done at home, could be devastating for increased EV adoption, for both 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.

Consumer Awareness Programs.
Consumer awareness, understanding, and trust of the technology are essential as we move from 4.17% New Mexico EV market share to 82% over the next nine 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 will 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.

Implementation "Gap Period"
Finally, we would like to address the "2026 gap year." The Clean Air Act's Section 177 allows a state to adopt California standards but requires the state to adopt such standards at least two years before commencement of the first applicable model year. Since the current ZEV and LEV III regulations in ACC I (13 CCR 1962.2 and 1961.2) sunset after 2025MY, and New Mexico will not adopt ACC II until 2023, New Mexico will have a "gap year" in 2026 without California regulations. We recommend the following during the gap period before implementation of ACC II in 2027 to ensure the smooth path to the state's electrification goals.

- ZEV and NMOG+NOx ACC I credit banks retained and converted as necessary.
- ZEV Sales:
    - Per ACC II, ZEV sales >7% receive banked ACC II Early Compliance Values (ECVs) available two model years prior to implementation (e.g., 2027 implementation, 2025-26MY)
    - ZEV sales < 7% receive credits under ACC I and those credits are then converted per the ACC II regulations.
- "Level-up Proportional Credit"

    - Provide proportional credits at the beginning of the implementation year, only to ensure the state credit bank is proportional to CA's credit banks; this will ensure New Mexico standards are not more stringent than California's standards.
- EJ Vehicle Values available per ACC II regulation in the following model years:
    - Community Clean Mobility – 2024MY
    - Low MSRP – 2026MY+
    - Off-lease EV – 2026MY+
- NMOG+NOx credits earned and banked using ACC I (= Tier 3) avg.
- OEMs continue reporting per ACC I/II.
- OEMs would also report to EPA as required for Tier 3.
- CA GHG regulations (1961.3) are unchanged in ACC II and would continue.

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

Sincerely,

Tom Miller
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