



February 14, 2023

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

**SB 477: Residential Construction or Significant Renovation - Electric Vehicle Charging
Position: Favorable**

Dear Chair Feldman,

The Alliance for Automotive Innovation (Auto Innovators) requests a favorable report for SB 477, which seeks to update the state's building codes to accommodate the increasing numbers of electric vehicles (EVs) on Maryland's roads. 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.

Expanding EV Charging is Critical to Maryland's Goals

Maryland previously set a goal of 60,000 EVs on the road by 2020 and 300,000 EVs by 2025. To date, approximately 59,000 EVs have been sold in Maryland, well short of its goals.¹ Long ago, Maryland also chose to follow the California Advanced Clean Car rules which were updated last year to include a requirement for 100% of all new vehicle sales to be electric in 2035.

More work needs to be done to accomplish these goals, and it is on this point that SB 477 can help advance the acceptance of EVs.

The Time to Act is Now

According to the U.S. Department of Energy, roughly 80% of EV charging occurs at home, making access to home charging a top priority for customers considering an EV. Lack of access to home charging is a major barrier to EV adoption. As a first and most cost-effective step, states should immediately begin adopting residential building codes to require EV-ready charging capabilities in parking spots in new multi-unit dwellings (MUDs) and single-family homes.

According to BestPlaces.net², the median residential unit age in Maryland is 40 years. Housing being built today will likely be around through at least 2050 or 2060. Consequently, if EV

¹ <https://www.autosinnovate.org/resources/electric-vehicle-sales-dashboard>

² <https://www.bestplaces.net/housing/state/maryland>

charging infrastructure is not installed as a new construction, it will need to be a retrofit installation afterwards which is a costly endeavor.

Historically, only about 1% of residential units are newly constructed each year. Consequently, in 2035, the year the requirement for 100% of all new vehicle sales to be EVs would kick in, the language in SB 477 will still only cover about 12-15% of all residential units. It's not perfect, but it's a start.

MUD Residents Should be Able to Charge at Home

While most charging occurs at home, MUD residents often face the 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 nearly impossible to be an EV driver in a MUD.

Nonetheless, some suggest that while those in single family homes can charge at home, MUD residents can simply charge elsewhere, such as DC fast charge stations or public chargers. Not only is this patently unfair it also raises equity and access concerns for some communities where MUDs are the dominant housing option due to cost or geography. Ensuring access for all communities should be a priority particularly those that have been traditionally underserved.

Charging at home is far cheaper, far more convenient, and far more reliable. It would be unreasonable to expect MUD residents to pay 2 or 3 times as much for charging and spend hours away from home each week just to charge their vehicles. This will lead them away from EVs and is not consistent with Maryland's stated goals.

Updating Codes Will Save Money

Numerous studies show the costs to retrofit EV charging is several times more expensive than installing it during new construction.³ In fact, compared to the cost of a new residential unit, the cost of installing even 208/240v 7.2 kW EV Ready charging is relatively small and typically well under \$2,000 per charging station.⁴ Compare this to the California Public Utilities Commission's approval of ratepayers funding up to \$15,000 per charger make-ready to retrofit charging stations at MUDs.⁵

Failing to update building codes that do not adequately plan for 100 percent EVs, does not help long-term housing affordability. Instead, it trades small savings today for vastly higher costs down the road. Moreover, these higher costs will be borne by MUD residents (or ratepayers). To the extent MUD residents are lower income, this further exacerbates inequities and widens economic divides.

³ For example, see Pike, Ed, Jeffery Steuben, Shayna Hirshfield. 2020. City of Oakland Plug-in Electric Vehicle Readiness Grant. California Energy Commission. Publication Number: CEC-600-2020- 116.

⁴ Id. See Table

⁵ See CPUC Decision 20-08-045 "Decision Authorizing Southern California Edison Company's Charge Ready 2 Infrastructure And Market Education Programs," August 27, 2020.

The California Energy Commission (CEC) summarizes this well in their most recent study (January 2021)⁶:

Building codes are often a cost-effective tool to support state policy, ensure equitable outcomes, and reduce barriers to adoption. Increased charging options at MUDs are needed to ensure that all Californians have access to convenient charging. This is all too often an issue at apartments, condos, and for renters where the motivations of tenants and landlords do not always align. Building codes that address new construction as well as major renovations to existing buildings such as when new parking is added or during repaving of an existing parking lot can materially address the EV charging infrastructure gap.

EV Ready

In using the term, “EV Ready” we mean panel capacity, breaker installed, with wiring to the parking spot terminating in either a receptacle or EV charger. MUD residents (in many cases, renters) cannot be expected to bear the significant costs and coordination responsibility associated with obtaining landlord permission, local permitting, and hiring contractors to install breakers, wiring, and chargers. This is unlikely to happen, and residents need access to charging to realize Maryland’s EV goals.

Conclusion

Passing SB 477 aligns with, and will support, Maryland’s climate and transportation goals. The bill will also save Maryland residents money while ensuring they have access to EV charging in the future. Thank you in advance for your consideration of our views. For more information, please contact our local representative, Bill Kress, at (410) 375-8548.

Sincerely,



Josh Fisher
Director, State Affairs
Alliance for Automotive Innovation

⁶ 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.