



March 14, 2022

The Honorable Rob Ecklund  
Chair, Labor, Industry, Veterans and Military Affairs Finance and Policy  
Minnesota House of Representatives  
Saint Paul, MN 55155

**HF 4066: Infrastructure required to support the charging of electric vehicles**  
**Position: Support**

Dear Chairman Ecklund,

The Alliance for Automotive Innovation (Auto Innovators) is writing to express our support for HF 4066, which seeks to update the state's building codes to accommodate the increasing numbers of electric vehicles (EVs) on Minnesota's roads. Auto Innovators represents car companies that produce about 99 percent of new vehicles in the United States, original equipment suppliers, technology, and other automotive-related companies and trade associations.

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 100% of parking spots in new multi-unit dwellings (MUDs) and single-family homes.

**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 near 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 should be forced charge elsewhere, such as DC fast charge stations or public chargers. 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 Minnesota's 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.<sup>1</sup> 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.<sup>2</sup> Compare this to the California Public Utilities Commission's approval of ratepayer funding of up to \$15,000 per charger make-ready to retrofit charging stations at MUDs.<sup>3</sup>

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.

The California Energy Commission (CEC) summarizes this well in their most recent study (January 2021)<sup>4</sup>:

*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 Minnesota's stated goals.

---

<sup>1</sup> 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.

<sup>2</sup> Id. See Table

<sup>3</sup> See CPUC Decision 20-08-045 "Decision Authorizing Southern California Edison Company's Charge Ready 2 Infrastructure And Market Education Programs," August 27, 2020.

<sup>4</sup> 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.

### **The Time to Act is Now**

Residential units built in 2023 are likely to still be in use for decades to come. Using the American Housing Survey data, new construction residential units historically represent only about 1% of total housing units each year. Consequently, in 2035 (when many states will likely require 100% EV sales) only about 12-15% of residential units will have been built under the codes being considered today. Even in 2050, only about 25-30% of new residential units will have been built under these codes.

### **Conclusion**

Passing HF 4066 aligns with, and will support, Minnesota's climate and transportation goals. The bill will also save Minnesota residents money while ensuring they have access to EV charging. Thank you in advance for your consideration of our views.

Sincerely,

A handwritten signature in black ink that reads "Josh Fisher". The signature is written in a cursive, slightly slanted style.

Josh Fisher  
Director, State Affairs  
Alliance for Automotive Innovation