

Electric Vehicle-Ready Parking 101 for Multi-Unit Dwelling Property Owners

Electric vehicle-ready building codes and ordinances help expand charging infrastructure

Minimum electric vehicle-ready requirements in building codes and ordinances increase electric vehicle (EV) adoption and access by ensuring that buildings have EV charging infrastructure that meets community needs. EV-ready building codes and ordinances also reduce the need for costly retrofits, as they tend to focus on future-proofing buildings and preparing for expected trends in the transportation sector.

In 2023, a law was enacted mandating the Minnesota Department of Labor and Industry (DLI) to establish EV-ready standards for new commercial buildings and multifamily buildings with four or more units.¹ While the DLI will implement this legislation through an administrative rulemaking process in 2026, the Construction Codes Advisory Council at DLI also approved a code change proposal, effectively expanding the requirements to all residential buildings. The proposal establishes rules for new single- and two-family homes and townhouses to provide an “EV-ready” or “EV-capable” space.²

What does it mean to be EV-Ready?

According to the Minnesota Statutes, three designations are used to identify the varying levels of EV charging infrastructure installed at a given site: EV capable, EV ready, and EVSE installed.

1. Parking spaces that are EV-capable have installed electric panel capacity and a raceway or path for wires from the electric panel to a future EV parking spot.
2. EV-ready spaces take another step, installing a dedicated branch circuit and a 240-volt (V) outlet or hardwired connection point.
3. EVSE-installed spaces take the final step of installing a physical EV charger to connect to the 240V outlet or hardwired connection.

Understanding these designations can help property owners plan incremental upgrades and stay in compliance with local EV building codes and ordinances.



Examples of cost savings from new construction vs. retrofits

Numerous studies have explored the cost difference between new construction and retrofits regarding EV infrastructure.

In Florida, the City of Orlando highlighted a local EV-ready building cost example before the passage of the city’s EV-ready ordinance in 2021. The city found that for a 116-unit affordable multi-family dwelling project, providing 20 percent of parking spots as EV charger-capable and 2 percent as EV charger-installed added just 0.0009 percent to the total construction costs.³

The city estimated that efforts to include EV infrastructure in new construction could save 75 percent in construction costs compared to retrofitting.

¹ Minnesota Legislature, “[SF 3035, 93rd Legislature \(2023\)](#),” Accessed October 28, 2024.

² Carolyn Berninger, “[Legislative Session Recap: Minnesota Makes Additional EV Investments in 2024](#),” Drive Electric Minnesota, August 13, 2024.

³ City of Orlando, “[EV Ready Code](#)” (presentation, March 17, 2021), 26.

Studies showing the cost difference between new construction and retrofits for electric vehicle charger installations

Study	Author	New construction cost per charger	Retrofit cost per charger
EV Ready Code	City of Orlando	\$916	\$3,460
Electric Vehicle Supply Equipment Installed Cost Analysis	Electric Power Research Institute	\$2,619	\$4,160
Electric Vehicle Infrastructure Cost Analysis Report for Peninsula Clean Energy & Silicon Valley Energy	Energy Solutions	\$1,410	\$4,443

Role of property owners in becoming EV ready

Property owners play a pivotal role in fostering EV adoption because they are the primary decision makers in providing accessible EV charging to tenants.

According to the National Multifamily Housing Council, about one-third of US households live in multi-unit dwellings, such as apartments and condos, and almost 75 percent of multi-unit dwellings have at least one vehicle.⁴

Property owners are responsible for keeping up with local EV-ready building codes and working with local governments to secure permits or schedule inspections to install EV charging infrastructure.

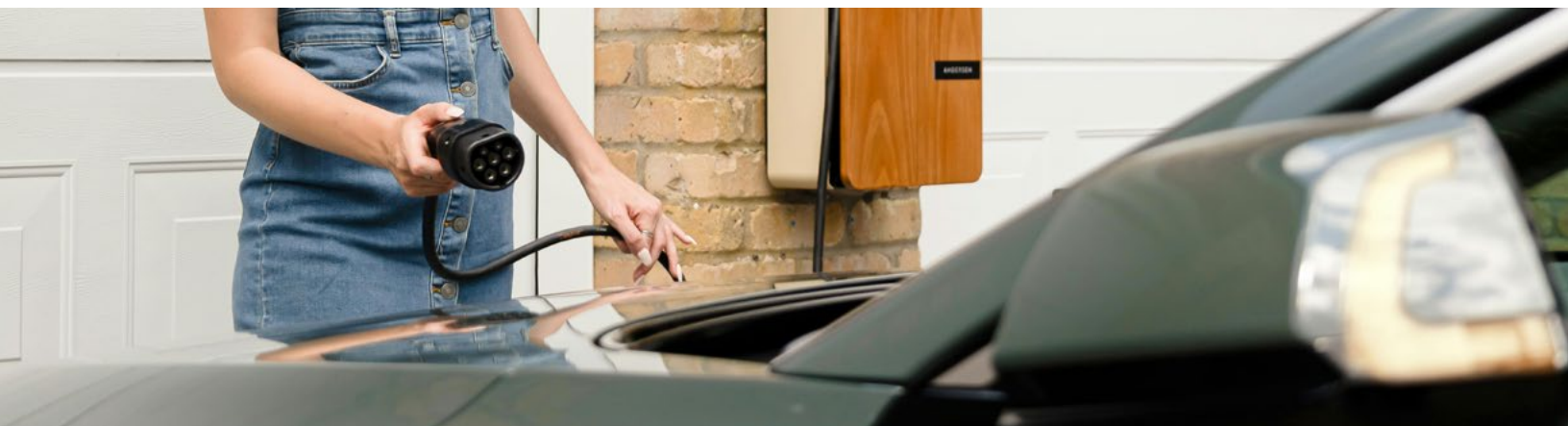
Benefits of expanding access to electric vehicle charging

Incorporating EV infrastructure in multi-unit dwellings benefits tenants, property owners, and employees.

By adding EV infrastructure, property owners attract tenants who already have or are looking to purchase or lease an EV. Adding chargers is a strategic investment for property owners, positioning them at the forefront of the transition to EVs and future-proofing their property for increased market demand and regulations.

For example, Green Rock Apartments in Minnesota have EV chargers as part of an effort to promote sustainable living. The investment has attracted current and future EV owners to live there because they are more comfortable owning an EV at a building where they can charge their vehicles overnight.⁵

While residents can charge their vehicles overnight at off-peak electricity rates and wake up to fully charged vehicles, the chargers at these buildings can also be used by building employees during the day. Workplace charging allows reliable charging access to individuals without access to charging at home.



⁴ Shannon Osaka, "[It's common to charge electric vehicles at night. That will be a problem,](#)" *The Washington Post*, September 22, 2022.

⁵ Amanda Nogueira Moreira de Souza and M. Moaz Uddin, "[Green Rock Apartments Leading the Charge on Electric Vehicles,](#)" Drive Electric Minnesota, June 20, 2023.

Getting started with EV charging infrastructure

The characteristics of multi-unit dwellings vary greatly, so there is no one-size-fits-all process for installing EV charging infrastructure. Property owners should talk with relevant parties to map out their specific EV charging installation plan:

1. Property owners may want to start by surveying tenants to gauge their EV interests and needs. Survey results can inform the number of EV-ready parking spaces to allocate, whether to network chargers, and more.
2. Next, property owners should contact their electric utility to discuss available incentive programs and installation requirements. The utility may recommend separately metering the charging load, which allows the electricity cost to be passed on to the tenant and the charging load to be excluded from the total building load.
3. After consulting with the utility company, it's time to identify a charging service provider that fits your needs to start installation. Some of the most popular charging service providers in Minnesota can be found on the [Atlas EvaluateMN](#) dashboard under the Charging Deep Dive section. Contracting with charging service providers eases the administrative responsibility for EV chargers. For example, charging service providers use networked chargers to manage billing, data collection, and load management.⁶

The [Drive Electric Minnesota Charging Guidance](#) web page walks through the major steps of EV charging installation and helps inform the decision-making process.⁷

Considering accessibility first

The Americans with Disability Act requires that site developers installing EV charging stations follow special design guidelines to accommodate people with disabilities.⁸ The US Access Board and the Minnesota Pollution Control Agency have issued guidance on the minimum standards to consider when installing infrastructure to avoid expensive retrofits later.⁹

Tesla, ChargePoint, and the California Electric Transportation Coalition conducted a study that found that retrofitting for accessibility requirements added between \$11,500 and \$32,500 in demolition and repair costs to remove and repair 100 to 300 linear feet of surface parking.¹⁰

Additional resources

- [MUDCharging](#) gives information and resources more specific to multi-unit dwellings, such as power/energy calculators and metering and payment tables.¹¹
- The [Drive Electric Minnesota Incentives Database](#) can be filtered to help identify relevant EV incentives, including ones provided by utilities.¹²

⁶ “[Charging Deep Dive](#),” Atlas Public Policy, December 2023.

⁷ “[Finding the Best Charging Option for Your Community](#),” Drive Electric Minnesota, accessed May 7, 2024.

⁸ U.S. Access Board, “[Technical Assistance Document for Electric Vehicle Charging Stations](#),” Accessed October 28, 2024.

⁹ Minnesota Pollution Control Agency, *Installation Requirements for Electric Vehicle Charging Stations* (Minnesota Pollution Control Agency, January 2021), <https://www.pca.state.mn.us/sites/default/files/p-gen4-20.pdf>; US Access Board, *Design Recommendations for Accessible Electric Vehicle Charging Stations*, last updated July 17, 2017, <https://www.access-board.gov/files/usab-evse-guide.pdf>.

¹⁰ Ed Pike, Cassidee Kido, Evan Kamei, and Kate DeVale, *Plug-In Electric Vehicle Infrastructure Cost Analysis Report for CALGreen Nonresidential Update* (Energy Solutions, 2019).

¹¹ “[Building Owners & Managers](#),” MUDCharging, accessed May 7, 2024.

¹² “[Learn about available and upcoming electric vehicle and charging incentives in Minnesota](#),” Drive Electric Minnesota, accessed May 7, 2024.



Facilitated by the Great Plains Institute, Drive Electric Minnesota is a partnership of electric vehicle (EV) champions, including automakers and auto dealers, utilities, charging companies, environmental groups, and state and local government. The coalition paves the way for the deployment of EVs and charging infrastructure through public-private partnerships, financial incentives, education, technical support, and public policy. Visit us at www.DriveElectricMN.org. Contact us at driveelectricmn@gpisd.net.