

Electric Vehicle-Ready Parking 101 for Local Governments

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.

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.

- 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.
- EV-ready spaces take another step, installing a dedicated branch circuit and a 240-volt (V) outlet or hardwired connection point.
- EVSE-installed spaces take the final step of installing a physical EV charger to connect to the 240V outlet or hardwired connection.

Local governments can use these designations to increase EV adoption and meet climate goals while balancing their communities' current and future needs.

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.¹

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



¹ 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 local governments in becoming EV ready

Local governments can encourage EV adoption and boost local economies by strategically placing chargers at accessible locations like public parking lots, shopping centers, and residential areas where potential EV owners may not have access to charging at home.

Cities can also leverage their unique position to accelerate EV infrastructure build-out and ensure long-term savings by optimizing commercial parking requirements and parking area designs through zoning ordinances. While local zoning ordinances can influence development in many ways, including determining permitted land uses, setting minimum requirements for construction, and setting safety and signage requirements, they cannot supersede the Minnesota building code.

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.² 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.³

In the meantime, local governments can accelerate EV readiness and remove barriers to electrification by participating in Charging Smart, a designation program led by the Interstate Renewable Energy Council. The Great Plains Institute is a lead partner in the program and provides free one-on-one technical assistance to communities.⁴

Additionally, local governments can refer to a [Summary of Best Practices in Electric Vehicle Ordinances](#), created by the Great Plains Institute. The summary aggregates, by best practice category, inventoried municipal EV ordinances and provides ideas on creating a successful EV ordinance.⁵



² Minnesota Legislature, “[SF 3035, 93rd Legislature \(2023\)](#),” Accessed October 28, 2024.

³ Carolyn Berninger, “[Legislative Session Recap: Minnesota Makes Additional EV Investments in 2024](#),” Drive Electric Minnesota, August 13, 2024.

⁴ “[Charging Smart](#),” Energy Ready, Accessed October 28, 2024.

⁵ Claire Cooke and Brian Ross, [Summary of Best Practices in Electric Vehicle Ordinances](#) (Great Plains Institute, June 2019).

Benefits of expanding access to electric vehicle charging

Incorporating EV infrastructure benefits many different users, including but not limited to residents, employees, and tourists.

Many EV drivers can easily charge at home on a Level 1 or Level 2 charger. For those without access to home charging, including many multi-unit dwelling residents, deploying EV-ready solutions for multi-unit dwelling residents and other people without access to at-home charging will speed up EV adoption by removing barriers.⁶

In the meantime, adding chargers at workplaces and public spaces will enable residents without access to at-home charging to pursue EV adoption. Further, publicly accessible EV charging at city centers, shopping plazas, and parking ramps can provide tourists and residents with convenient vehicle charging locations in these high-traffic areas. This can elevate cities and towns to EV road trip destinations.

Considering accessibility first

The Americans with Disability Act requires that site developers installing EV charging stations follow design guidelines to accommodate people with disabilities.⁷

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.⁸

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.⁹

Additional resources

- The [Drive Electric Minnesota Charging Guidance](#) web page walks through the major steps of EV charging installation and helps inform the decision-making process.¹⁰
- The [Drive Electric Minnesota Incentives Database](#) can be filtered to help identify relevant EV incentives, dependent on the utility provider.¹¹

⁶ U.S. Department of Energy, "[Charging at Home.](#)"

⁷ U.S. Access Board, "[Technical Assistance Document for Electric Vehicle Charging Stations.](#)" Accessed October 28, 2024.

⁸ 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>.

⁹ Ed Pike, Cassidee Kido, Evan Kamei, and Kate DeVale, *Plug-In Electric Vehicle Infrastructure Cost Analysis Report for CALGreen Nonresidential Update* (Energy Solutions, 2019).

¹⁰ "[Finding the Best Charging Option for Your Community.](#)" Drive Electric Minnesota, accessed May 7, 2024.

¹¹ "[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.