

Guide to Electric Vehicle Charging at Apartments, Condos, and Townhomes



EV owners need to have access to EV charging at home. As plug-in vehicles become more common, this guide will assist property owners, boards, managers and advocates in making informed decisions about installing EV charging infrastructure.



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Understanding Your Property and Equipment Options

CHARGING TYPE

Electric Vehicle Supply Equipment (EVSE) provides different levels of charging capabilities for plug-in vehicles: Level 1, Level 2, and Level 3 (DC Fast Charging).

CHARGING TYPE	LEVEL 1	LEVEL 2	LEVEL 3 (DC Fast Charging)
POWER NEEDS	120V, 20 amps	240V, 20-60 amps	480V, 3-phase
CHARGING SPEED	2-5 miles per hour of charging, 40 miles overnight	25 miles per hour of charging, full charge in 4-8 hours	Full charge in 30-60 minutes

Safety Considerations:

- EV charging equipment, when installed and operated correctly, is safe to use.
- Electric vehicle battery fires are less common than gasoline vehicle fires.

Assigned Parking:

- Property owners with assigned or deeded parking spaces have a "Right-to-Charge" in Maryland
- HOAs must give reasonable accommodations to install EV charging at the owners's expense.
- This may involve upgrades to the community's electrical panel and other common property.

Shared Parking:

- Shared Level 2 chargers can serve multiple EV drivers, typically installed in shared parking areas.
- Consider installing at least one charging port for every ten parking spaces.
- Access and pricing can be managed through an EV charging network subscription.

Load Management:

- The number of EV charging stations on the property is limited by the available electrical capacity of the property and subpanel.
- Splitting power between stations can mean lower electrical output per charger and longer charging times.
- Automated Load Management Systems control power usage among charging stations to allow simultaneous charging for multiple vehicles.

Planning for the Future:

- Communities should be aware that the EV market is growing fast and budget for necessary electrical upgrades to accommodate future EV drivers.
- Estimates predict 50% of vehicles may be EV in ten years.
- Investing in "make-ready" infrastructure, such as larger electrical panels and conduit, can streamline future installations.

Installation Process



Assess Needs

Survey residents about their plans to determine the number of EV chargers your community will need.



Seek Technical Assistance

Consult experienced electricians and contractors during the planning stage for project design and feasibility studies. Ask the Montgomery County Green Bank about technical assistance for your project.



Shop Around

Obtain quotes from multiple contractors and set clear expectations in your contract. The contractor should be responsible for obtaining all permits and passing inspection.



Contact Utility

Inform the utility provider of your plans. They will inform you if any upgrades are needed to complete the project. Be sure to explore incentives or rate programs that could reduce costs.



Get Community Approval

EV charging installation may require approval from a community's board or a majority of owners. Send clear communications to owners and residents about the project and ask for input during the planning phase to ensure community-wide support.



Adopt an EV Charging Policy

An EV charging policy can include how to accommodate requests to install charging in assigned spaces, who will be permitted to use shared spaces, how electricity costs will be paid and other topics.



Permitting

Apply for commercial electrical and construction permits through the Department of Permitting Services (DPS) online portal. Contractors and property owners may request a pre-design consultation with DPS to get guidance early in the process.



Installation

Licensed electricians will install the EV charging equipment, potentially requiring trenching for electrical connections.



Inspection

Ensure compliance with regulations through inspections by the DPS. If any digging is done, the project must be inspected before filling holes.



Commissioning

Set up access privileges and pricing with the equipment vendor.



Apply for Incentives

Submit final applications for available incentives and subsidies for your completed project. Check on the status of incentive programs at the beginning of the process to know what you can expect to receive.



Celebrate and Share Information

Inform residents about access to EV chargers and promote public availability through charger locators like Google Maps and PlugShare.

Economic Considerations

INITIAL INVESTMENT

Installation costs vary but may include upgrades to electrical capacity and new electrical service. Financing options, tax incentives, and hybrid ownership models can help offset these costs.

RETURNS

EV charging stations enhance property value and desirability, potentially generating revenue through user fees. Public availability can further increase usage and revenue potential.

Resources

VCI-MUD.org	Provides communication templates and case studies for EV charging projects.
Montgomery County Green Bank	Offers technical assistance and financing options for EV charging infrastructure.
Department of Permitting Services	Provides guidance on permitting processes.
Utility Rebates	Check with local utilities for incentives and rebates.
Maryland EVSE Rebate	Offers rebates for residential and commercial EV charging installations.
Federal Tax Credit	Provides tax credits for EV charging installations in eligible properties.

By following these guidelines and utilizing available resources, communities can effectively implement EV charging infrastructure, meeting the growing demand for electric vehicle ownership.

