# Plug-in Electric Vehicle Charging Guide for Residents of Multi-unit Dwellings

So you've been eyeing the new models of plug-in electric vehicles and thinking about buying or leasing one. You like the idea of saving money on gasoline and doing your part for clean air. But, as a renter or condo owner, you wonder if you'll be able to charge your new car at home and what you'll need to do to convince your property manager to install a charging station.

## **Property Benefits**

Here are some points you might use to persuade managers to install charging.

- Charging stations will give the property a positive "green" image, which can be used for marketing.
- Charging stations can help make the property a leader in sustainable practices.
- As the PEV market grows, the number of requests for charging will undoubtedly grow.
- Charging stations can provide Leadership in Energy & Environmental Design (LEED) points for the property.

## **Do Your Homework**

Start by educating yourself and helping your property manager understand the options.

- **Demand.** A resident survey is a good way to find out how many residents already have PEVs or plan to buy them. Find a link to a sample survey in the Additional Resources section.
- Decision-making process. How do you obtain permission to install a charger? By law, condo property managers cannot prohibit the installation of charging, but they can set requirements and conditions.
- **Logistics.** Whether parking is assigned, deeded or first-come, first-served, each option has its own set of considerations.
- Electrical capacity. Do resident units have their own electric meters, are they accessible from the parking area and is there spare electrical capacity? Do common area meters, such as those for security lighting or laundry rooms, have spare electrical capacity? Are new service meters needed for the chargers?

Talk to your property owner, manager or homeowners' association (HOA) before you buy or lease a plug-in electric vehicle (PEV) to get them up to speed on installing a PEV charger. Talk to your neighbors, too.

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#### Guidelines for Multi-unit Dwellings

Plug-in Electric Vehicle Charging Infrastructure Guidelines for Multi-unit Dwellings is a comprehensive guide for property owners, managers and HOAs. It provides details on all the topics discussed here. See Additional Resources.



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- Charging choices. There are different levels of charging and dozens of brands of equipment. The units and features you choose will depend on your specific property's requirements and will determine associated costs.
- Cost recovery. Make clear that you are willing to cover or share the cost of the charger installation – as well as the ongoing cost of electricity.
- Incentives. Some local and regional incentives for charging station installations may be available to individuals or businesses. See the Additional Resources section to search for incentives.
- Neighbors. Find other PEV advocates among your neighbors to help you present your request and to demonstrate the level of support within the community. Address neighbors' concerns.

### **Overcome Concerns**

Prepare responses to concerns that may be raised. Table 1 lists some examples.

Concern	Responses
No one will use it.	PEV sales are growing and so is the demand for home charging. We can survey tenants to see how many currently own or hope to buy PEVs. We can start small with one or two chargers and plan to expand as needed.
It's too expensive.	There are many options for chargers and charging locations that can minimize cost. Incentives or grants may also be available.
No one else is doing it, so why should we?	With the PEV market continuing to grow, property owners across the country are responding to residents' requests.
How will this affect our electricity costs?	Some utilities offer special residential rates for PEV charging. Residents could be encouraged to charge during off-peak hours if the chargers are connected to a community meter. We could charge PEV drivers a flat rate or for their electricity usage (especially if using wall outlets). Depending on the building architecture, the charging station may be connected directly to the resident's electric meter.
How will this impact the number of parking spaces available?	Designating parking spaces for PEV charging should not impact the number of parking spaces required by local authorities.

Legal Obligations California Senate Bill

**880** sets out the rights and responsibilities of multi-unit property (legally known as common-interest developments) owners in providing charging for residents.

California Assembly Bill

**1092** requires the California Building Standards Code to include mandatory standards for the installation of future electric vehicle charging infrastructure in multi-unit dwellings and nonresidential developments. See Additional Resources.

Table 1. Responses to concerns that may be raised about PEV charging.

## Think Outside the Box

Despite your property manager's best intentions, it may be too difficult or too expensive to install charging at your multi-unit residence at this time. Other options may be available, including:

- Low-level charging. A 110-volt outlet or low Level 2 charger may work, as well as high-power Level 2 charging, and be easier to fit into the building's electrical capacity.
- **Charging at work**. Workplace charging is growing rapidly, and may provide an option for drivers who cannot install charging at home. See Additional Resources.
- Public or fast charging. Public charging stations convenient to your path of travel can provide an alternative to home charging.
- Car sharing. Car sharing services are purchasing PEVs and may provide a viable option.
- **Third-party managers.** Your property manager could contract with a third party, which would install, own and operate the charging unit. You would pay a monthly fee for the charger which may also include access to other chargers in the provider's network.





A San Diego condominium tower installed wiring hubs on each floor of the parking garage to accommodate charging station installations at residents' individual parking places. See the case study in *Plug-in Electric Vehicle Charging Infrastructure Guidelines for Multi-unit Dwellings*. See Additional Resources.



## **Additional Resources**

- California AB 1092 http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill\_id=201320140AB1092&search\_keywords=
- California Plug-In Electric Vehicle Collaborative Communication Guide How Do Multi-unit Dwellings Become PEV Ready? http://www.pevcollaborative.org/sites/all/themes/pev/files/Comm\_guide6\_122308.pdf
- California Plug-In Electric Vehicle Collaborative, Plug-in Electric Vehicle Charging Infrastructure Guidelines for Multi-Unit Dwellings (2013) http://www.driveclean.ca.gov/pev/Charging/Home\_Charging/MUD\_Guidelines.pdf
- California Plug-In Electric Vehicle Collaborative Resources for MuDs http://www.pevcollaborative.org/MuD
- California Plug-In Electric Vehicle Collaborative Workplace Charging http://www.pevcollaborative.org/workplace-charging
- California SB 880 http://leginfo.legislature.ca.gov/faces/billTextClient.xhtml;jsessionid=c37613110254f85c3b33641d0664?bill\_id=201120120SB
- Plug-in Electric Vehicle Resource Center Incentives Search http://www.driveclean.ca.gov/pev/Incentives.php
- Plug-in Electric Vehicle Resource Center, Multi-unit Dwellings (MuD) http://www.driveclean.ca.gov/pev/Charging/Home\_Charging/Multi-unit\_Dwellings.php
- Plug-in Electric Vehicle Resource Center, Multi-unit Dwellings (MuD) Property Manager Survey http://www.driveclean.ca.gov/pev/Charging/Home\_Charging/Multi-unit\_Dwellings.php#survey