

# Are You Ready for an EV Charging Station at Your Residence?

## Conduct Internal Assessments

### Self-assessment to determine your:

- Commitment to sustainability or the environment
- Concern for residents' health
- Commitment to the EV drivers at your residence
- Desire to distinguish yourself from competitors and attract new residents and tenants

### Resident survey to determine:

- Whether residents would like EV chargers installed
- Number of residents that own EVs
- Number of residents that would like to own EVs
- Whether EV chargers would increase residents' interest in driving electric

## Considerations

### Ownership:

If your property doesn't own the parking area, you should make arrangements to clarify ownership, operation, and revenue in advance.



### Select Charger Type:

Charger Type	Description	Cost of EVSE (electric vehicle supply equipment)
Level 2	<ul style="list-style-type: none"> <li>• 208 or 240-volt power supply to provide AC power</li> <li>• Provides 10-20 miles of range per hour charged</li> <li>• Potential to serve multiple vehicles throughout the day, but each driver must move after charging is complete</li> </ul>	\$500 - \$7,500
DC Fast Charger	<ul style="list-style-type: none"> <li>• 480-volt power supply to provide DC power</li> <li>• Provides up to 250 miles of range per hour</li> <li>• The most expensive and intensive infrastructure upgrade and typically not necessary for residence charging where people spend long periods of time</li> </ul>	\$25,000 - \$45,000

### Networked vs. non-networked chargers

**Networked charging stations** are connected remotely to a larger network of connected chargers. They are connected to an online portal or app which allows owners to:

- Monitor usage
- Control access
- Notify users when they reach charging or time limits, or when vehicle is fully charged
- Charge a fee
- Create usage reports
- Put the station on the network locator map

**Non-networked charging stations** are not a part of a specific network of EVSE and require more oversight and involvement from owners for the charger to be effectively managed.

### Related Policies

In 2020, Honolulu City Council passed Bill 25 which requires that every new commercial or residential building must at least have the electrical capacity and wiring to support the installation of EV charging stations in 25% of the parking stalls.

## Selecting the Site

- Choose a **visible** and **expandable** location
- Ensure the site is out of the **flood zone**
- Ensure availability of **adequate electrical supply** for the type of charger and try to minimize the distance between the electrical panel and EV charging station, this will help to reduce upgrade, trenching, and boring costs
- Be considerate of the **American Disability Act** when choosing the location
- Ensure there is **adequate lighting** and **shelter** for your employees
- Ensure there is **cellular signal** strong enough for EV users to access features associated with networked chargers



## Costs to Consider

- Purchase price of the actual charging hardware
- Labor costs for installation
- Cost of networking:
  - ~ \$300 - 400 per port per year
- Engineering and Permitting:
  - Engineering: ~ \$3,600
  - Permit: ~ \$1,000
- Any additional costs for electricity upgrades or trenching during construction
- If you may want to expand and install more stations in the future, it may be cost beneficial to upgrade all at once and future-proof the infrastructure
- Security to protect EVSE
- Annual or ongoing costs of EVSE maintenance

## Permitting

Acquiring a permit for EV charger installation will likely require the following information:

- Submittal of drawings from an engineer
- Property address, zoning or land-use, and owner identification
- Source of electric power, panel size, and circuit information
- Parking stall dimensions, aisle widths and support column placements
- Lighting, location of accessible parking spaces, and accessible routes to building entrances
- Location, number, charging level, and certifications and/or labels for charging equipment
- Charging equipment installation details and dimensions
- Charging business model (free, point of sale billing, subscription/membership, etc.)

## Ready to Install?

### Pricing Structure

You may choose to charge users for the amount of electricity used, the time spent charging, a flat fee, or have different rates for specific times of the day. You can also designate charging groups (i.e. residents charge for free and the public pays a fee) or create your own plan.

### Workplace Charging Policy

The policy should define ownership, set pricing mechanism, determine public availability and frequency and timing of access. It should also address the security of the equipment, include EV charging etiquette and policy on network management, if applicable.

### Create Signage

The signage should clearly designate which parking spaces are for EVs. Consider adding way-finding signage to lead people to the charging areas.



## Contact

If you want a knowledgeable advisor, companies like Aloha Charge and EverCharge Hawaii can walk you through the planning, permitting and installation process. For more information, contact Amber Stone with Aloha Charge at [amber@alohacharge.com](mailto:amber@alohacharge.com) or Shawn Moorhead at [shaun@everchargehawaii.net](mailto:shaun@everchargehawaii.net).

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