ELECTRIC VEHICLE (EV) CHARGER

BESO Resilience Upgrade Measure

MEASURE INFORMATION

Credits: 2

Description:

Installing an electric vehicle (EV) charger offers flexibility and convenience, allowing EV owners to charge their vehicles at home and to choose when to charge. You will need a dedicated parking space, driveway or garage where you can charge. Charging during off-peak demand hours or using a solar photovoltaic (PV) system can lower the cost of charging. EVs and EV chargers should be set up to avoid charging during the peak pricing hours of 4pm-9pm. Level 2 chargers typically charge 13-25 miles per hour and must be professionally installed.

Installation Criteria:

Install a hard-wired electric vehicle charging station. Must be Level 2 (240V).

Required Verification Documentation:

- Permit + approved final inspection – *Include "for BESO compliance" in the scope of work section of your building permit application.*
- Contractor invoice with model info

Equipment Options:

- **Bi-directional EV charger** – EVs contain a significant amount of battery storage. A Bi-directional EV charger allows an EV battery to feed electricity back into a home during a power outage. Currently, only a few EV models are built to allow for bi-directional changing. Please consult with the EV manufacturer to determine if your EV is capable of bi-directional charging.
- **North American Charging Standard (NACS)** – Consider installing a NACS charger. The NACS EV charging connector is now becoming the industry standard across North America. Most major automakers are transitioning to NACS ports in their upcoming EV models. If your current EV uses a CCS (Combined Charging System) connector, a compatible adapter can allow charging at NACS stations.
- **Smart Charging** – Smart chargers allow you to program and monitor charging from your phone. Most cars, however, can also be programmed for smart charging.

Benefits:

Electric Readiness

ADDITIONAL RESOURCES

Permitting Resources:

- Electric Vehicle Charging Code Compliance Checklist
- PG&E Electric Vehicle Charger Installation Checklist
- For information about the permit process, including permit types and requirements, visit the City's permitting webpage. If you're new to the process or have questions, you can also schedule an appointment with a permit specialist for personalized guidance.

Avoid an Electrical Upgrade:

- **Smart circuit breakers** can help avoid a costly panel upgrade by allowing high-powered appliances, like an EV charger, to share a circuit with another appliance, such as an electric dryer or oven. These devices can be hardwired and can alternate power between appliances, ensuring that only one operates at a time. This allows homeowners to add new electric loads without exceeding their panel's capacity**,** making it a cost-effective solution for homes with limited electrical service.

Electricity Rates and Programs for Electric Vehicles:

- PG&E offers rate options specific to EVs that offer lower electricity rates for off-peak times. Enrolling in an EV rate plan and charging during off-peak hours can reduce electricity costs.
- Ava Community Energy's SmartHome Charging Program automatically shifts your charging to times when renewable energy is cheaper and more available. Join the program and earn up to $75 in one-time rewards and $25 annually per vehicle, in addition to an estimated $140 annual electricity bill savings.

Rebates & Incentives:

- PG&E's Residential Charging Solutions program offers rebates for approved EV charging equipment, covering 50% of the purchase price for most customers and 100% for income-eligible households based on household income. The rebate applies only to pre-approved equipment listed by PG&E. Check PG&E's website for a list of approved equipment.