



# Plug-In Electric Vehicle Residential Charging

## Considering a plug-in electric vehicle? Going electric has many advantages:

- Zero tailpipe emissions result in better air quality and community health
- Fewer greenhouse gas emissions per mile traveled
- Supports clean energy job creation
- In California it costs on average \$1.50 per gallon equivalent to run an electric vehicle
- Incentives may be available: check out [driveclean.ca.gov/pev/incentives.php](http://driveclean.ca.gov/pev/incentives.php)

Choose a **Battery Electric Vehicle (BEV)** that exclusively relies on a battery or a **Plug-In Hybrid Electric Vehicle (PHEV)** that uses both a battery-electric system and a gasoline engine.



## Ditch gas and take advantage of special rates on electricity




When charging at home, PG&E provides you with a number of rate options:

- **Keep your existing PG&E plan** and pay your existing rate for electricity you use to charge your vehicle.
- **Choose a whole house rate for a shared EV-A meter** with a “time-of-use” billing rate for both the house and the vehicle. Time-of-use charging offers a lower rate for charging at night compared to the day.
  - The EV-A rate eliminates tiered rates for the whole household so that EV drivers are not penalized for an increase in electricity consumption. We recommend this rate for most EV drivers.
- **Choose a separate EV-B meter** to install a dedicated time-of-use meter just for your vehicle.

Many electric vehicle owners elect to install a level 2 charger at home as opposed to using their existing level 1 wall outlets in order to receive a quicker charge.

Note that a network of level 2 and DC fast chargers are available for use while driving during the day, e.g., charge at the supermarket while grocery shopping or overnight while staying at a hotel.

## Types of Electric Vehicle Charging Stations

	Vehicle Type	Approximate Charge Time	Voltage
 <b>LEVEL 1</b>	All PHEVs and BEVs	5 miles/ hour of charge	120V e.g. Standard Outlet
 <b>LEVEL 2</b>	All PHEVs and BEVs	13-25 miles/ hour of charge	240V e.g. Dryer Outlet
 <b>DC FAST CHARGING</b>	Most Battery Electric Vehicles, check with auto manufacturer for details	30 minutes for 80% of a full charge	480V e.g. non-residential

## Step 1: Assessment

- Research your vehicle's charging specifications. What voltage is the onboard charger capable of? (Most are capable of receiving 240V.)
- Make sure your car will fit completely on your property while it is charging. It must be clear of the sidewalk. (When attached to the side of a building, the charging system must be at least 3' from the property line.)
- Have your electrical system assessed by a licensed electrician to determine if any upgrades are needed.
- Choose a level 2 charger that meets your needs. For example, you may need it to be outdoor-rated. Visit <https://pluginamerica.org/get-equipped/charging/> for detailed comparisons of charging options.
- Determine which jurisdiction your property is in, i.e. City of Eureka or the County. If your property is on the outskirts of the city, it may be administered by the County.
- Contact City of Eureka Building (707) 441-4155 and Planning (707) 441-4160 and/or Humboldt County Building (707) 445-7245 and Planning (707) 445-7541 to determine jurisdiction and permitting requirements.

## Step 2: Permitting

- Contact PG&E to apply for service and learn more about rate options. Call 1-877-743-7782.
- Apply for the required permit(s) with the City of Eureka or the County, depending on your property's jurisdiction. (The fee for the building permit will be approximately \$300, part to be paid before the work and part after.)
- Once the permit is obtained, work with your electrical contractor to install the level 2 charger.

## Step 3: Approval

- Contact PG&E to set-up rate and/or service. Call 1-877-743-7782.
- Work with your electrical contractor to obtain a final inspection from the City of Eureka or the County once the permitted work is complete. Call (707) 441-4155 for City of Eureka or (707) 445-7245 for the County.

**Note: a coastal permit may also be required for projects located in the Coastal zone.**

- The fee for a coastal permit, if required, will be approximately \$300.

### Permit Application Submittal Requirements:

To determine your project's permitting requirements, contact the City of Eureka **Building (707) 441-4155** and **Planning (707) 441-4160** or the Humboldt County Building (707) 445-7245 and Planning (707) 445-7541 departments, depending on your property's jurisdiction. The agency may be able to issue a permit over-the-counter. If not, agency staff can determine what information will need to be submitted to permit your project. Information that may be required includes, but is not limited to:

- Size (height, width and depth) of charging system, with a single one-line electrical plan;
- Type of charging system: level 1/level 2, with approved product listing agency number (i.e., UL);
- Manufacturer's specifications, installation guidelines, and, if applicable, ventilation requirements;
- Existing panel rating, proposed charging load & calculations for systems over 240V and/or 40A;
- If installing an EV-B meter, meter must be labeled as "PEV Charging Only."
- Assessor's parcel number (APN)

### Application Submittal:

Depending on your jurisdiction, you may submit your application(s) to and obtain your permits from:

- City of Eureka building and/or planning departments on the 3<sup>rd</sup> floor of City Hall, 531 K Street, Eureka. The department hours are 8:00 a.m. to noon and 1:00 p.m. to 5:00 p.m. Monday through Friday.
- Humboldt County building and/or planning departments at 3015 H Street, Eureka. The department hours are 8:30 a.m. to 5:00 p.m. Monday through Friday.

### Resources & Incentives:

City of Eureka Building Department: [www.ci.eureka.ca.gov/depts/building/permit.asp](http://www.ci.eureka.ca.gov/depts/building/permit.asp)

PG&E Information: [www.pge.com/electricvehicles](http://www.pge.com/electricvehicles)

PG&E Bill & Meter Rate Calculator: [www.pge.com/pevcalculator](http://www.pge.com/pevcalculator)

Incentives: [driveclean.ca.gov/pev/Incentives.php](http://driveclean.ca.gov/pev/Incentives.php)

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REDWOOD COAST  
**Energy Authority**

Rev 1.0, July 2016





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Rev 1.0, Jan 2017



Schatz Energy Research Center

**SERC**



## Step 1: Assessment

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- Choose a level 2 charger that meets your needs. For example, you may need it to be outdoor-rated. Visit <https://pluginaamerica.org/get-equipped/charging/> for detailed comparisons of charging options.
- Determine which jurisdiction your property is in, i.e. City of Eureka or the County. If your property is on the outskirts of the city, it may be administered by the County.
- Contact Humboldt County Building (707) 445-7245 and Planning (707) 445-7541 to determine jurisdiction and permitting requirements.

## Step 2: Permitting

- Contact PG&E to apply for service and learn more about rate options. Call 1-877-743-7782.
- Apply for the required permit(s) with the County. These permits are available over the counter. (The fee for the building permit will be approximately \$125, part to be paid before the work and part after.)
- Once the permit is obtained, work with your electrical contractor to install the level 2 charger.

## Step 3: Approval

- Contact PG&E to set-up rate and/or service. Call 1-877-743-7782.
- Work with your electrical contractor to obtain a final inspection from the County once the permitted work is complete. Call 707-445-7245.
- **Note: a coastal permit may also be required for projects located in the Coastal zone.**
- The fee for a coastal permit, if required, will be approximately \$300.

### Permit Application Submittal Requirements:

To determine your project's permitting requirements, contact the Humboldt County Building (707) 445-7245 and Planning (707) 445-7541 departments, depending on your property's jurisdiction. The agency may be able to issue a permit over-the-counter. If not, agency staff can determine what information will need to be submitted to permit your project. Information that may be required includes, but is not limited to:

- Size (height, width and depth) of charging system, with a single one-line electrical drawing;
- Type of charging system: level 1/level 2, with approved product listing agency number (i.e., UL);
- Manufacturer's specifications, installation guidelines, and, if applicable, ventilation requirements;
- Assessor's parcel number (APN)

### Application Submittal:

You may submit your application(s) to and obtain your permits from: .

- Humboldt County building and/or planning departments at 3015 H Street, Eureka. The department hours are 8:30 a.m. to 5:00 p.m. Monday through Friday.

### Resources & Incentives:

County of Humboldt Planning and Building Departments: <http://www.humboldt.gov.org/156/Planning-Building>

PG&E Information: [www.pge.com/electricvehicles](http://www.pge.com/electricvehicles)

PG&E Bill & Meter Rate Calculator: [www.pge.com/pevcalculator](http://www.pge.com/pevcalculator)

Incentives: [driveclean.ca.gov/pev/Incentives.php](http://driveclean.ca.gov/pev/Incentives.php)

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