



## *City of Elk Grove* Guide to Electrical Vehicle Supply Equipment (EVSE) Permits for Residential

Do you own an Electric Vehicle, or are you considering buying one? Depending on your charging needs, building permits may be required if work needs to be performed in your home to upgrade or replace your electrical panel, outlets, or to add a second meter. Please contact SMUD for possible additional requirements.

### **Definitions:**

- A **Hybrid** is a vehicle that has an internal combustion engine as well as an electric motor and battery to increase gas mileage and decrease tail pipe emissions.
- A **Plug-In Hybrid Electric Vehicle (PHEV)** is a hybrid with a larger battery pack that produces superior gas mileage and reduced emissions comparable to a hybrid, and has the capability to be plugged in to charge the battery for increased efficiency.
- An **Electric Vehicle (EV)** or **Battery Electric Vehicle (BEV)** is 100% electric and has zero tail pipe emissions with no internal combustion engine.
- A **Plug-in Electric Vehicle (PEV)** refers to all vehicles that have a battery on board that can be charged/plugged in to an electrical outlet, such as PHEVs, Extended-Range Electric Vehicles (EREVs), BEVs and EVs.
- **Electric Vehicle Supply Equipment (EVSE)**, or charging station, is your connection to the grid or charge connector for your **Plug-in Electric Vehicle (PEV)**

### **Is my home ready?**

Depending on the charging requirements that your vehicle needs, your home electrical panel may need to be upgraded or replaced to accommodate the Electrical Vehicle Supply Equipment (EVSE) recommended for your vehicle.

There are two levels of electric vehicle (EV) charging systems for single family residence (one- and two- family dwellings) installations:

Level 1 charging: (120 VAC, 15/20 A), this is the standard electrical outlet found in most homes. This charging level can take 8-15 hours to fully charge a vehicle, depending on how drained the battery is.

Level 2 charging: (240 VAC, 40A or larger), many newer homes use this type of an outlet for a clothes dryer. This level of charging can take 4-6 hours to fully charge a vehicle, depending on how drained the battery is.

To find where public and existing electric vehicle charging stations are currently located, view the Google map here: <http://www.evchargermaps.com/>

Or the U.S. Department of Energy Alternative Fuels & Advance Vehicles Data Center:  
<http://www.afdc.energy.gov/afdc/locator/stations/>

### **SMUD Billing Rates and Rebates**

An optional discounted electric rate is available for PEVs, and is separate from standard residential electric rates. This option is for residential customers who own or lease licensed passenger electrical vehicles or PEVs and take electric service under the optional Residential Time-of-Use Electric Vehicle Rate (RTEV). To qualify for the RTEV rate, a separate meter/sub-meter must be installed. The City requires a building permit for a separate meter/sub-meter in addition to any additional infrastructure required by SMUD such as a conduit or a service box.

For more information about Electric Vehicles and Rebates, visit SMUD's website at: <http://www.smud.org/en/community-environment/evs/Pages/index.aspx>



### Do I need a building permit?

Depending on the current configuration of your home electrical service, and if a new electrical panel, sub-meter or outlet are needed to accommodate your vehicles charging needs, a building permit may be required. If your home already has the appropriate outlet (either 120VAC or 240VAC) and you already have or do not need a separate SMUD meter/sub-meter, a building permit is not required.

A building permit is required for all new installations and modifications of electrical panels, meters and electrical outlets. Before a permit can be issued, an electrical plan review, and sometimes a mechanical plan review (depending if a manufacturer's installation guidelines require mechanical ventilation), must be approved. Permits may be obtained over-the-counter for EV charging system installations.

### Permit fees

The City of Elk Grove charges a flat fee for the residential EVSE permit. The flat fee is \$86. For more information on City fees, please reference the 2012 Development Related Fee Booklet on the city's website at [www.elkgrovecity.org](http://www.elkgrovecity.org) or call the Building Counter at 916-478-2235 between the hours of 8 am – 5 pm, Monday through Friday.

### Steps to Getting an EVSE Permit:

	<b>Once you decide to purchase an Electric Vehicle...</b>
<b>Sign up for RTEV Rate and System Design</b>	1. Confirm with your auto dealership what charging equipment your vehicle needs (Level 1 or 2 charging) and the installation requirements.
	2. Have a qualified electrical contractor (QEC) do an electricity panel capacity and load check. This information will need to be submitted to the City to obtain a building permit.
	<b>*Please check with SMUD for any additional requirements.</b>
	3. Contact SMUD at <a href="mailto:pev@smud.org">pev@smud.org</a> or <b>1-888-742-SMUD (7683)</b> to gain pre-approval for special Residential Time-of-Use Electrical Vehicle (RTEV) rates,* which requires the installation of a new sub-meter, and to see if a site assessment of transformer and service capacity to the home is needed.
	<b>*To qualify, you must use a QEC and have SMUD install a meter/submeter.</b>
<b>Submit for City Building Permit</b>	<b>Obtaining a Building Permit – City Review</b>
	4. If the scope of work requires a building permit, submit a complete building application including fees, electrical plans, and mechanical plan if needed, for all new charging equipment to be installed. Applications can be submitted to the <i>City of Elk Grove</i> at the public building counter at 8401 Laguna Palms Way.
	5. Obtain a city issued permit and complete installation work.
	6. Schedule and complete a building inspection.
<b>Interconnection &amp; Preferred Rates</b>	<b>Once you have finished the building permit...</b>
	7. If needed, contact SMUD for electrical service upgrades and to install a meter/sub-meter for the Residential Time-of-Use Electrical Vehicle (RTEV) rate.
	8. SMUD installs sub-meter and establishes a separate billing account for the charging station.
	9. Plug-in your vehicle and charge.