

CHARGE UP!

Electric Vehicle Charging 101

There are more than a half million EV on California's roads today but despite their rapidly growing popularity, most people still have lots of questions about the best way to plug-in and recharge an electric vehicle's battery.

Get answers to some of the most frequently asked questions about plug-in electric vehicle (EV) charging, so you can find the best charging options and drive on clean electricity with confidence.



Have more questions? Contact Us!

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Why Drive An EV?

After incentives, EVs are similarly priced to gasoline or diesel vehicles and provide extra benefits, including:

FUEL SAVINGS: electricity can be half the cost of gasoline.

CLEANER AIR: EVs have zero tailpipe emissions and reduce carbon emissions by 75%. Solar charging is true zero emission driving.

EFFICIENCY: most EVs have fuel economy ratings of more than 100 miles-per-gallon equivalent.

POWER & PERFORMANCE: EVs have instant torque and incredibly fast, quiet acceleration.

ENERGY INDEPENDENCE: less reliance on imported oil with California's clean electricity as fuel.



Electric Vehicle Charging
FAQs

Where do I charge?

Most EV drivers charge their vehicles at home overnight, as this is the most convenient and affordable option. Plugging in at night provides enough charge to meet most or all of a person's charging needs. There are also nearly 400 publicly-accessible charging stations available across the 805 region that drivers can use when they are on the go or when they don't have access to home charging.

More charging stations are being installed every week and many of the newest EVs travel more than 200 miles on a full battery. Electric Drive 805 is also working with property managers to bring more charging stations to multi-family housing residents.

If you'd like to bring charging to your workplace, multi-family property, or a public destination, contact us! **ElectricDrive805.org/Contact-Us**

How do I get the most affordable charging at home?

A Time-of-Use (TOU) electricity rate plan will allow you to charge your EV with the most affordable electricity during "off-peak" hours later at night (after 9:00 PM) and early in the day (8:00 AM to 4:00 PM). Off-peak electricity costs as little as \$0.13 per kilowatt hour (kWh). Compared to gasoline, \$0.13 per kWh equates to about \$1.30 per gallon of fuel and \$0.28 per kWh equates to about \$2.80 per gallon.

How much does it cost to charge at public locations?

The cost of public charging varies and can range from less than \$0.10 per kWh to more than \$0.60 per kWh. Some locations offer free public charging. You can get information for most of the public charging stations operating today at **PlugShare.com**.

What kind of charging technologies are available today?

There are 3 "levels" of charging for EV drivers:

- **Level 1:** uses a standard household 120V outlet and the portable charger that comes with all plug-in vehicles. This is the most affordable option and provides 3-5 miles of range per hour of charging. Many drivers already have a suitable 120V outlet in their garage or driveway, and condo or apartment residents may find Level 1 charging at their parking space or in their complex. If the outlet is older, the driver should have an electrician make sure it is suitable for EV charging.
- **Level 2:** uses a 240V outlet for home or public charging, which provides 10-30 miles of range per hour. Some garages have existing 240V outlets for dryers, and some EVs come with a Level 2 charger. If an EV doesn't come with a Level 2 charger, drivers can purchase one for \$200 to \$600. You'll need to hire a licensed electrician to install the charging station. Local solar companies can be good places to start.
- **Level 3 Direct Current (DC) Fast Charging:** can provide up to 200 miles of range in as little as 20 minutes, and even faster charging technologies are being developed. Level 3 is useful for long trips or for those unable to charge at home or work, but will cost more than Level 1 and 2 charging.



What are the right EV charging options for me?

If you have a plug-in hybrid EV, Level 1 charging will be the simplest and most affordable option for recharging at home. Level 1 charging is also a viable option for drivers who travel less than 50 miles per day in an all-electric vehicle.

If you drive more than 50 miles a day, a Level 2 charger may be the most convenient option for charging at home. If you can't charge at home, the next best option is to charge at work or a public Level 2 or Level 3 station. For long-distance road trips, Level 3 fast chargers can get you back on the road quickly. Increasing numbers of hotels and destinations also have public chargers.

For more information about the different types of EVs available today, visit **ElectricDrive805.org/ev-options/**

Are there incentives for EV chargers?

Yes! Southern California Edison's Charge Ready Home Installation Rebate pays \$500-\$1,500 toward the cost of installing a Level 2 charger: **evrebates.sce.com/homeinstallation**

Condo or apartment residents should ask their property manager and workplace to apply for utility incentive programs, which pay for most or all of the cost to install new charging stations:

- Southern California Edison's Charge Ready program: **sce.com/business/electric-cars/Charge-Ready**
- PG&E's EV Charge Network program: **pge.com/en_US/large-business/solar-and-vehicles/clean-vehicles/ev-charge-network.page**