



# EV STATIONS

## QUICK FIX

### Electric-Car Power Outlet Installation

**T**here is much to consider when wiring is needed in a three-vehicle carport for lighting purposes and to add garage doors (with automatic openers) to close off the carport.

This can even be the right time to prepare the carport/garage for future and potential electric-car use. For that, it's time to think about voltage/amps, location of outlet (driver/passenger side; front or rear of car; distance) and charging cord extensions.

Following are key considerations:

The outlet station should be no more than 25 feet from the vehicle. This is heavy-duty electrical work and a qualified electrician who understands what is needed is recommended.

A station using 110/120-volt is known as a Level 1 EVSE Charging Station. A Level 1 station is the minimum needed to recharge an electric vehicle and may take anywhere from 10 to 24 hours to fully charge a vehicle depending on battery capacity.

A 220/240-volt station is known as a Level 2 EVSE Charging Station. A Level 2 station will require a 220/240 outlet to operate. The Level 2 station can charge a typical electric vehicle in six to eight hours.

Greater or faster charging power will require a larger electrical service not typically found in residential buildings.

Electric cars are a relatively new and emerging technology and jumping on the bandwagon too early may be costly. The decision to install an actual charging station should be made

### Commuting Common Sense

Electric cars make a lot of sense for those commuting 30 to 40 miles per day. Many of the new electric cars allow charging from a 110-volt/15amp outlet, but that level is marginal at best. Installing, at minimum, a dedicated 240-volt/40 amp outlet in each stall or garage is recommended. If you are going through the expense of running 240 volts, back it up with at least an 80 to 100 amp service. —*B.M.*



on a wait-and-see basis.

Level 1 & 2 charging stations range in cost from \$1,000 to \$2,500 (or higher), not including the cost of installation.

The best location for a charging station is based on the type of electric vehicle. At this time, most vehicles seem to use the old gas tank port as an electrical receptacle and that port could be on either side of the vehicle.

A front or rear port is also possible. For ease of installation and standardization, we recommend a front-of-vehicle install of the charging station. These charging stations come with an adequate cord length for most vehicle applications.

EV chargers will charge any car with the SAE J1772 standardized plug, which all new cars in the U.S. are using.

If you have a Nissan Leaf, Mitsubishi i-Miev or Chevy Volt, all you need is a 240V 15A device, as these cars only have a 3.3kW/h inverter built in.

Visit [www.pluginrecharge.com/2011/08/residential-evse-roundup.html](http://www.pluginrecharge.com/2011/08/residential-evse-roundup.html) for useful information. —*B.M.*