

**ELECTRIC  
VEHICLE  
HOME  
CHARGING**



[vehiculeselectriques.gouv.qc.ca/english](http://vehiculeselectriques.gouv.qc.ca/english)



## THINKING OF GETTING **AN ELECTRIC VEHICLE?**

You may well already know that, in Québec, it costs 7 to 10 times less to drive an electric vehicle (EV) than a gas-powered vehicle. That means that if you drive 20,000 km per year, the energy bill for your EV could be as low as \$300.

But before driving your EV off the lot, make sure you are properly equipped for home charging. As a rule, the main charging site for EVs is at home because that's where vehicles spend most of their time. Do you have a garage? An outdoor parking spot with an electrical outlet? That will be "home base" for charging your EV.

CAA-Québec, Hydro-Québec, and ministère des Ressources naturelles have teamed up to produce this guide. It is designed to answer the main questions you may have about EV home charging.

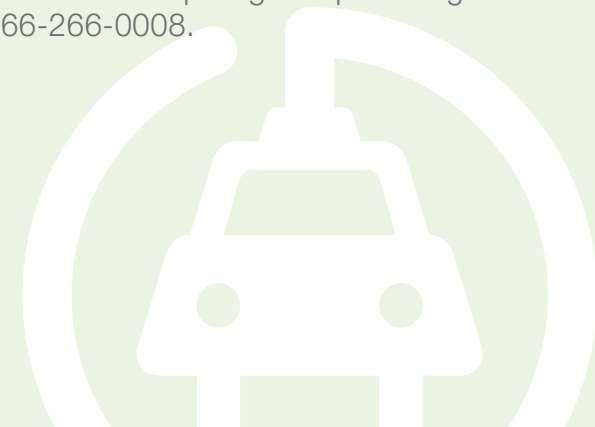
## HOW MUCH DOES IT COST **TO PURCHASE AND INSTALL A HOME CHARGING STATION?**

Prices for 240 volt home charging stations range from \$600 to \$1,300, and installation typically costs \$400 to \$1,100 (before taxes). The average cost of a station plus installation is \$1,500.

If you need to replace your service panel or run underground cable, however, your costs may be higher.

## IS THERE FINANCIAL **ASSISTANCE AVAILABLE?**

Yes there is: Québec's ministère des Ressources naturelles (MRN) offers financial assistance to help owners or long-term lessees of EVs purchase a 240 volt home charging station and have it installed by a master electrician. The maximum rebate for 2012–2013 is \$1,000. For full details, visit [vehiculeselectriques.gouv.qc.ca/english](http://vehiculeselectriques.gouv.qc.ca/english) or call 1-866-266-0008.





## CAN EVS BE CHARGED ANYWHERE?

Since 2010, all mass-market EVs in North America have used the same outlet and a standard connector (SAE-J1772). This means you can plug your EV into any 120 volt household outlet or 240 volt charging station in North America.

Level 2 public charging stations use the same connector, allowing you to take longer trips with your EV.

## WHAT KIND OF CHARGING STATION IS RIGHT FOR ME?



It depends. If you have a plug-in hybrid with electric autonomy in the 20–60 km range, a 120 volt charging station may be adequate.

If you drive an all-electric vehicle, on the other hand, you might want to consider a 240 volt charging station to minimize charging times and maximize the use you get from your EV.

It's your decision. You should consider a number of factors:

- Your EV's autonomy
- The amount of driving you normally do
- The number of hours your EV will spend parked at your home

## HOW LONG WILL IT TAKE FOR MY BATTERY TO FULLY RECHARGE?

The table below lists sample charging times at various voltages (actual times may differ). Note that the charger's capacity determines total charging time.

Check with your dealer for exact EV charging times with specific voltages.

	SAMPLE TIMES FOR FULL RECHARGE		
	120 VOLT OUTLET	240 VOLT CHARGING STATION 3.6 KW	240 VOLT CHARGING STATION 7.2 KW
PLUG-IN HYBRID (8 KWH BATTERY)	6–8 HOURS	3 HOURS	1.5 HOURS*
ALL-ELECTRIC VEHICLE (24 KWH BATTERY)	16–24 HOURS	8–9 HOURS	3–4 HOURS

\* 3.6 kW is the maximum wattage for most hybrid EVs. This means they will not charge any faster using a 7.2 kW charging station.



## HOW DOES 120 VOLT CHARGING WORK?

EVs have portable charging cables that can be plugged into a standard household 120 volt (15 A) outlet.

Make sure the circuit charging your EV is not used by other electrical appliances during charging.

If you choose to install a dedicated 120 volt circuit for charging your vehicle, it must be a 20 A circuit.

## WHAT DOES A 240 VOLT CHARGING STATION LOOK LIKE?



A 240 volt charging station is a box connected to a cable that is 5 to 8 meters in length, depending on the model. The cable is fitted with a standard SAE-J1772 connector. The 240 volt power supply comes from your home's service panel.

Charging stations are designed to be installed in a garage or on an exterior wall of your residence. Some stations are pedestal mounted, which is practical if your parking spot is distant from your home. Most charging stations can operate in temperatures ranging from -30 to 50°C.

## WHO IS QUALIFIED TO INSTALL A 240 VOLT CHARGING STATION?

Québec's Construction Code requires that a master electrician carry out all work involved in installing a home charging station.

An electrician can make an initial inspection and check whether your service panel has enough capacity to add a new 240 volt circuit, and prepare an estimate.

The charging station will be on a dedicated circuit rated at 20 A for a 3.6 kW charging station, or 40 A for a 7.2 kW charging station.

We recommend installing your charging station before you pick up your EV.

## WHERE CAN I PURCHASE A 240 VOLT CHARGING STATION?

Your EV dealer can provide the information you need on purchasing a charging station and recommend an electrician. Some EV manufacturers also offer a turnkey charging station package.

You can also shop around for a charging station by contacting a master electrician, electrical product distributor, auto parts supplier, or online retailer.

Remember that your charging station must bear the seal of a certification body recognized by Québec's Régie du bâtiment (e.g., CSA, cUL, cETL).

## GET IN TOUCH!

To find out more about the program go to [vehiculeselectriques.gouv.qc.ca/english](http://vehiculeselectriques.gouv.qc.ca/english) or call 1-866-266-0008.

