



Guide to EV Charging

Are members in your co-op thinking about making the switch to an Electric Vehicle (EV)? Is your housing co-op considering installing EV chargers? This guide will provide you with enough information to make an informed decision on the right EV charging infrastructure for your co-op’s needs.

Why consider EV charging?

- Canada has set aggressive targets to achieve net-zero emissions by 2050.
- Net-zero means Canada will no longer produce greenhouse gas (GHG) emissions or offset any of its emissions.
- Policies and mandates are being set to achieve these goals:
 - Canada will require 60% of new vehicle sales to be zero-emission by 2030, and
 - all new vehicle sales must be zero-emission by 2035.

Charging infrastructure will be important if Canada is to achieve these goals. As more and more electric vehicles are on our roads, they will need charging available where they park.

Types of chargers

Currently, there are 3 types of chargers available on the market:

Level 1 Charger (120V/15 Amps)

A Level 1 charger uses a basic wall socket. This charger, typically provided when you purchase an electric vehicle, lets the owner charge anywhere, anytime.

- Operates on a 120 volt circuit
- Provides 8-10 KM of driving/hour of charge

Table 1: Charger Speeds

Charger Type	Charge Speed (Estimates)
Level 1	100 KM – 10 hours
Level 2	100 KM – 2 hours
Level 3	100 KM – 15-17 minutes

Level 2 Charger (240V/30 Amps)

A Level 2 charger requires a 240 volt socket. This allows the vehicle to charge much faster.

- Operates on a 240 volt circuit
- Can charge five times faster than Level 1 Charger (40-50 KM driving/hour of charge)

Level 3 Charger – DC Fast Charge (400V/100 Amps)

A Level 3 charger is the fastest on the market.

- Operates on a 400 volt circuit
- Can charge eight times faster than Level 2 Charger (320-400 KM driving/hour of charge)

Installation and cost considerations

Charger Arrangements

A co-op has options about how an EV charger is installed and used.

- A member can pay for their own charging infrastructure;
- a co-op can pay for a communal charger where a member pays per-use, or
- a co-op can pay for a communal pay-per-use charger that is also open to the public.

If your co-op opts for a pay-per-use system, you will likely need to use third-party charging infrastructure. Costs will vary.

Per unit installations - houses/townhomes

Charging infrastructure is required when considering a Level 2 or 3 Charger. You will need a licensed electrician to complete the installation. If you are installing a Level 2 Charger (most common) in your unit, you should consider the following:

- Level 2 Charger \$400-\$1,000
- Electrical Safety Permit \$150 in most provinces
- Licensed electrician labour \$1,000

This is approximate for a housing co-op home. Cost depends on panel access, distance from the charger/ amount of cable to be run. Cost will vary depending on the complexity of the work required by the contractor.

Service upgrade

Factor in further costs if your electrical panel has a 100 Amp service. Multiple appliances running alongside the charger could cause your panel to short circuit. You may need to pay through your utility to upgrade your service to safely install a Level 2 or Level 3 charger.

Communal charging installations - apartments

The installation of a communal charger in a residence tower requires much more equipment and labour.

- Level 2 charger \$5,000 to \$10,000 (includes permit and labour)
 - Level 3 charger \$20,000 to \$70,000 (includes permit and labour)
- They are not very common in co-ops, as Level 2 chargers produce a greater value.



Incentives

- Incentives currently available through Canada's [Zero Emission Vehicle Infrastructure Program](#) *
- Most contractors will have applied directly to this program. They will be able to offer your co-op up to 50% off the total project costs.
- Depending on your province and municipality, other incentives may be available as well.

* <https://www.nrcan.gc.ca/energy-efficiency/transportation-alternative-fuels/zero-emission-vehicle-infrastructure-program/21876>