

Going from Zero to Net Zero

- A Condo's Guide to Electric Vehicle Infrastructure

By Mark MacDonald, Principal, Catalyst Sales and Marketing



Interest in owning an Electric Vehicle (EV) may vary from condo to condo but one thing is for sure, they're coming. We don't have to look further than the available stats. In 2019 (the last full year of vehicle sales not affected by global supply chain constraints) [Stats Canada reported](#) Nova Scotia sold 51,201 new light-duty vehicles. If Nova Scotia hits British Columbia's adoption rate from 2021 of [12% of cars sold](#) being electric, that means there will be 6,144 new electric vehicles on the road each year. This rate is expected to increase every year until we hit the federally mandated goal of 100% electric by 2035. So, every Condo owner who is currently shopping for a new vehicle has a 1 in 10 chance of it being electric. Based on [a recent poll by KPMG](#), that rate jumps up to 7 out of 10 in the next 5 years, or a 68% chance of a consumer's next car being fully electric. So, with all this adoption on the horizon, what can we do?

Let's tackle a few of the main questions condominium boards and owners may be asking.

Should we form a committee to tackle the installation of EV chargers?

The short answer is yes. To start, determine how many condo owners are interested in making the building EV-ready. Would they be more likely to purchase an electric vehicle if there was charging infrastructure at their building? Gather information from these interested persons so that you have a clear scope of the interest. Based on the number of owners interested in EV infrastructure, you can start to determine your budget for EV readiness, and what kind of timeline you're looking at. Once your committee is in place and your condo owner

survey research is complete, you'll be able to answer some commonly shared questions as they arise, like:

"I'm interested in purchasing an EV... but we don't have chargers in our building... Do you know what I can do?"

"I wonder if our property will go down in value if we don't start thinking about a charging solution?"

"I'm looking at buying a condo in your building and I already have an electric vehicle. Does your building have chargers or a policy in place?"

"What type of electrical equipment or upgrades will be required?"

This can vary extensively from condo to condo, but a great first step is to start identifying things like how many electrical rooms there are in the building, where the electrical meters for the condos are located, (i.e., Are they in the parking garage, on each floor, in a single service shared between the owners, etc.), and if there is space on the walls and ceiling inside or outside the electrical room for components like panels and transformers to supply electricity to the chargers. Once you have a basic understanding of the building's electrical system and layouts, you can start to consider your infrastructure.

In scenario one, the condo owners' electrical meters are accessible from the parking spaces, offering you the most cost-effective deployment. With the owner's meter accessible from the parking space, you'll be able to install an electric vehicle energy management system,

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allowing the owners charge to be tied directly to their electrical meter. It involves the installation of a stove outlet, and the owner can use whatever EV charger they prefer. No additional equipment or billing system would be needed.

In scenario two, electric vehicle chargers are unable to be connected to the owner's electrical service and are required to be connected to the building's power. In this scenario, an energy capacity study should be carried out by a certified electrical engineer. Some basic insights on how much power could be required are as follows.

For simplicity, every charger runs off a 240V 40A circuit, the same as a kitchen stove. The average Canadian drives 67 km per day and 87% of the time an EV owner charges at their destination, which in this case would be when they're at home in their condo. This means they would only require 1-2 hours of charging at home per day to top up their EV. If Condo owners arrive home every day with a span of 8 to 12 hours before they depart again, it means the building could charge 6 cars per day on one 40A circuit that would share its power. What we're seeing in most deployments is one 40A circuit per 4-6 chargers. Since these chargers are tied to the building's power, they would be deployed with commercial chargers so the condo board could bill for the energy used by the owner of the vehicle. As vehicle charging hardware is maturing, selecting the right charger is becoming clearer. It's safe to say if you choose hardware and control software that meets the Open Charge Point Protocol (OCPP) standard, you will be future proofed for all scenarios including utility rebate programs for chargers that can be networked and controlled.

Is there any funding to support our installation?

The good news is there is currently funding available to purchase electric vehicles, and for those looking to install charging infrastructure to support EV adoption. In Nova Scotia, up to \$8,000 in [provincial](#) and [federal](#) rebates is available to purchase a vehicle that meets the criteria, and furthermore, there is funding that will cover up to 50% of the cost to install a minimum of 20 chargers through [Natural Resources Canada's \(NRCan\) Zero Emission Vehicle Infrastructure Program \(ZEVIPI\)](#). The application process for infrastructure funding opens once per year and can be a complicated process. It's recommended, if you want to pursue this route, to work with a manufacturer or consulting firm that can guide you through the process and assist you with your application.

In that, I wish you the best in achieving your condos' electrified future.

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As a certified electronics engineering technologist (CET), Mark keeps a pulse on the latest sustainable technology and developments and has extensive knowledge in electric vehicle charging infrastructure and equipment. Mark is a board member for the Atlantic Canadian chapter of the Entrepreneur's Organization and serves as a sustainable energy advisor on the community council for VIDA Living. ■

Check Your Liability Insurance Coverage for Water Damage

By Dan Campbell, CCI-NS board member, and recently retired lawyer from Cox & Palmer

All condominium owners should check their personal insurance policies to ensure they are not exposed to claims by their condominium corporation that will not be paid by insurance.

The corporation must repair damage to the common elements and must insure against that loss. However, the insurance is subject to a deductible and the *Condominium Act* provides¹ that the corporation can recover from an owner who is responsible for the loss, the cost of repairs to the common elements up to the amount of the insurance deductible. This situation arises most frequently with a water loss from a unit – typically a failed hot water tank – that causes damage to the common elements and another unit or units. In that situation, the owner will probably also be subject to a claim by the insurer of the damaged unit(s).

Two things have happened recently in condominium insurance: First, insurers of corporations have been raising their deductibles (particularly for water damage) and a deductible of \$50,000 is not uncommon. Second, insurers of units have been setting special caps on coverage, specifically for payment of deductibles under corporation policies, and a cap of \$25,000 is not uncommon. In that situation, the owner whose unit caused the loss would be on the hook personally for up to \$25,000. Make sure you do not have a gap in coverage like this!

What to do:

1. Ask your Board or Manager what the deductible is under the corporation's insurance policy, including any special deductible for water damage.



2. Contact your own insurance broker or agent to ensure that you have enough liability coverage to look after that deductible if you are unfortunate enough to have such a loss. (There may be an additional premium to increase that limit.)

But, most importantly:

3. Check your unit carefully for possible sources of loss. The most likely is a hot water heater that is beyond its expected service life. Most units have a service life of 10 years, and most plumbers will mark the date of installation right on the unit. The corrosion damage occurs on the inside and the first sign is usually a leak – sometimes a catastrophic one.

An ounce of prevention is worth a pound of insurance!

¹ 35 (9) The corporation may recover any insurance deductible in respect to damage to any unit or common elements from an owner if that owner is responsible for the damage. ■