

VISOA Webinar: Choosing a Contractor for EV Charging Installations in Stratas

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Disclaimer: The answers below have been provided by a professional from the Electrical Joint Training Committee, and a VISOA volunteer who is familiar with the Strata Property Act and strata issues. The comments provided by them are information only and should not be considered either as legal or technical advice. Professional advice should be sought as appropriate. No person is permitted to use a reference to VISOA, and its members who are acting on behalf of VISOA, in a manner which claims, implies or suggests that VISOA, or such members, have given a legal or technical opinion, ruling or determination on a particular issue. www.visoa.bc.ca

Question	Answer
Will a copy of this webinar available for later?	Yes. You can watch the video here: https://youtu.be/DTZ-zeeNSHQ Slides and other resources are available on VISOA's website: https://www.visoa.bc.ca/?page_id=3405
What does EVSE stand for?	EVSE is an acronym for "Electric Vehicle Supply Equipment", commonly called a charging station or charging dock.
What is the difference between Level 1, 2 and 3 charging?	Learn about Level 1, Level 2 and Level 3 charging systems at: https://electricvehicles.bchydro.com/charge/choosing-a-home-EV-charger In short, a level 1 charger connects to a standard 120-volt outlet; a level 2 charger uses a connection to a 240-volt outlet, like those used by ovens; level 3 chargers are fast chargers often accessible near highways.
Where can I get information about rebates for strata corporations who want to install charging stations / infrastructure?	Learn about the BC "Go Electric EV Charger Rebate Program" at: https://electricvehicles.bchydro.com/incentives/charger-rebates/apartment The full details are in the program guide: https://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/power-smart/electric-vehicles/EV-incentive-program-guide.pdf?_ga=2.223124123.1054022735.1621577156-778759468.1606504256
Is there a special certification for electricians that customers can ask for that indicates they are qualified to deal with the whole EV technology?	While it is not mandatory, the rebate program encourages charging stations to be installed by electricians who have completed the Electric Vehicle Infrastructure Training Program (EVITP).

Question	Answer
<p>Which department at BC Hydro do we contact to have a load capacity assessment done?</p>	<p>BC Hydro will not do the load assessment for you, however you may request consumption data for multi-unit buildings of 10 or more units. Request 12 months of hourly consumption data for the entire building by submitting a "Request for customer load data" form, then email it to bassupport@bchydro.com Get the form here: https://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/power-smart/electric-vehicles/EV-MURB-load-data-request.pdf?_ga=2.219020185.1054022735.1621577156-778759468.1606504256</p>
<p>Is an electrical permit always required? What if I'm just connecting a station to an EV reday spot?</p>	<p>According to Technical Safety BC, a homeowner permit is required anytime you do regulated electrical work. This includes, but is not limited to:</p> <ol style="list-style-type: none"> 1- Replacing light fixtures or ceiling fans. 2- Installing or moving light switches or electrical outlets. 3- Installing electrical wiring for renovations, including solar installations. 4- Connecting permanently-installed electrical equipment such as a dishwasher, over-range microwave or hood, security camera, or heat pump. <p>EVSE's are classified as "permanently-installed electrical equipment" a permit is needed even if it's to an existing EV ready spot.</p>
<p>What type of annual maintenace should be done for the EV charging stations?</p>	<p>EVSE's used for commercial and/or fleet charging, there may be a requirement determined by the manufacturer (warranty and/or user contract) to periodically maintain the EVSE. Companies that rely on the EVSE to keep their fleets moving would benefit to have a maintenance program in place to avoid and minimize downtime. EVSE maintenance will vary by manufacturer, but the standards are as such:</p> <ul style="list-style-type: none"> - Condition of connector - Condition of connector cord - Testing of charge cycle (specialized equipment required) - Testing of proximity signal (specialized equipment required) - Testing of pilot signal (specialized equipment required) - Load test (specialized equipment required)
<p>Are level one chargers being phased out?</p>	<p>No, there are no indications that the industry will phase out Level 1 EVSE's. Level 1 EVSE's are still required as a "backup" through a 120V standard outlet where no access to a Level 2 EVSE is available.</p>

Question	Answer
<p>Do you think the charging systems will change in the future?</p>	<p>Like all equipment, changes are inevitable. Technology always evolves. The connector standards in North America are likely not going to change as these are the standards followed by the auto industry and EVSE manufacturers. The biggest changes will be with the technology:</p> <ul style="list-style-type: none"> - Energy management - Wireless charging - Standards for revenue generation
<p>What direction is the auto industry going?</p>	<p>Great questions, and it's multi-factorial. The biggest influences are going to be:</p> <ul style="list-style-type: none"> - Politics - Global influences - Environmental influences - Consumer demand
<p>Our strata council wants to know how to charge owners for the cost of electricity. Can each user be individually metered? Is that equipment cost prohibitive?</p>	<p>VISOA will be presenting a webinar solely about the methods that a strata can legally use to charge owners for the use of common electricity. For the purposes of EV charging, changes were made to the Strata Property Act in 2018 and the BC Utilities Commission also made changes in 2019 which allow stratas to charge for consumption based on kWh. However, Measurement Canada has not yet approved the measuring devices that are part of the charging stations or the load management systems. That means that, for now, unless the strata has installed individual revenue grade meters (likely cost-prohibitive), stratas are permitted to charge a flat fee (such as per use, per month or per year), a fee based on duration (such as hourly), or a fee based on the number of users (such as splitting a hydro bill equally).</p>
<p>I live in a townhouse and I have my own panel. Can an electrician set up load sharing so that my dryer and the EVSE can alternate using the same circuit?</p>	<p>Yes, but with conditions.</p> <ul style="list-style-type: none"> - If you live in a townhouse complex with a shared parking garage, it may be very difficult to access your townhouse's panelboard to access the circuitry. - If your townhouse is directly connected to a private parking space, your options open up as there are multiple systems that will allow you to load share with another circuit. Here are some of the available devices and manufacturers that can provide this option: <ul style="list-style-type: none"> - https://www.acdandy.com/motor-control/d-lm - https://evdutystore.elmec.ca/products/smart-current-sensor-evccs200 - https://dccelectric.com/

Question	Answer
Are you aware of any unique requirements by City of Victoria?	<p>The city of Victoria has implemented bylaws that relate to the construction of new homes, and any changes to existing infrastructure. I would recommend visiting their website for further information.</p> <p>https://www.victoria.ca/EN/main/residents/planning-development/development-services/electric-vehicle-readiness-in-new-construction.html</p>
How do I calculate the ampacity of my breaker panel. Most of the breaker panels in our townhouse strata are 125 amp. How can I calculate the maximum sized 240 volt charger that can be installed on these panels?	<p>A qualified electrical contractor would be able to sum up the load requirements for your household, and gauge the size of the EVSE based on the available supply to your panelboard.</p>