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The Electrical Distributor of Choice!

EV Charging Guide

Renewable Energy

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A ZERO-EMISSIONS ROADMAP WITH CHARGE FORWARD

The Canadian government is determined to achieve net-zero greenhouse gas emissions by 2050. To reach this goal, they aim to make all new light-duty vehicles emissions-free by 2035. As part of this effort, the government has already invested over \$1 billion to establish a coast-to-coast network of charging stations in local communities.

Currently, there are more than 7,000 public charging stations with over 20,000 charging ports available throughout Canada.

Canada is expected to deploy more than 80,000 new EV charging stations by 2027.

This number is expected to grow in the future due to the government's continued investment in charging infrastructure, incentives and tax credits to encourage consumers to purchase zero-emission vehicles, and investing in research and development.

For more information visit nrcan.gc.ca



DID YOU KNOW?

There are over 2,000 public charging stations with over 470 fast-charging stations in British Columbia.



EV Charging Explained

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TYPES OF CHARGING STATIONS

Level 1 - Slow Charging

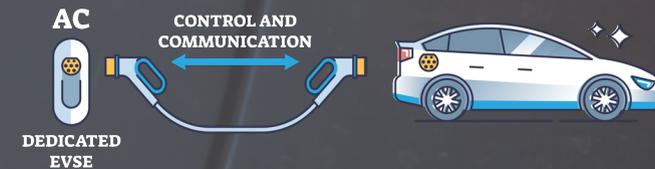
Level 1 EV chargers are the slowest and most basic type. They use a standard 120-volt household outlet, a J1772 standard connector, and can charge an EV at a rate of about 5 km of range per hour. It can take up to 24 hours to fully charge an EV, depending on battery size.

This level is ideal for drivers who have a low daily driving range, or who don't have access to Level 2 or 3 chargers. It's typically used for overnight charging at home or in a workplace.



Level 2 - AC Fast Charging

The most common type of EV charger is Level 2, which provides a faster charging rate than Level 1. Level 2 chargers—known for their convenience and speed—use a 240-volt AC power supply, which can charge an EV at a rate of about 40 km of range per hour, and a J1772 standard connector on the other end. They take around four to eight hours to fully charge an electric car, depending on battery size. These chargers are often found in workplaces, public parking garages, and some residential settings. They're for drivers who need a faster charging rate, or who don't have access to a Level 3 charger.



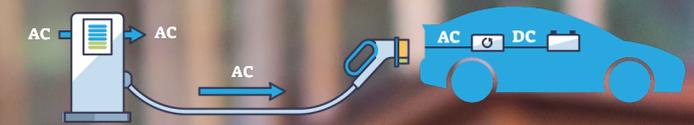
Level 3 - DC Fast Charging

Also known as DC fast chargers, Level 3 EV chargers are the fastest and most expensive option. They use a 480-volt DC plug, which can charge an EV at a rate of up to 200 km of range per hour, and a CCS or CHAdeMO connector. These chargers are typically found along highways, at rest stops, and in urban areas where quick charging is needed. Depending on battery size and the station's capacity, they can charge an EV in just 30 minutes. Level 3 charging stations often require payment or membership to use.



Level 2 vs. Level 3 EV charging

Level 2 chargers provide AC power to the vehicle which is converted to DC power by the onboard charger and stored in the battery.



Level 3 chargers convert AC to DC within the charger itself, supplying DC power directly to the battery.



LEVEL 2 - RESIDENTIAL CHARGERS



✓ In stock

Leviton EV Series

- 32A, 48A, and 80A Models
- Output Power: 7.6kW, 11.6kW, and 19.2kW
- SAE J1772 Connector
- 18' Cable
- NEMA Type 3R Rating
- Operating Temperature: -30°C to 50°C
- My Leviton Mobile App
- 2-Year Limited Warranty



✓ In stock

Siemens Versicharge

- 40A and 48A Models
- Output Power: 9.6kW, 11.5kW
- SAE J1772 Connector
- 20' Cable
- Integrated Cable Management
- NEMA Type 4, IK10 Rating
- Operating Temperature: -35°C to 50°C
- Siemens Versicharge App
- 3-Year Limited Warranty



✓ In stock

Electric Avenue Watti Home

- 6-48A Selectable
- 6-40A via NEMA 14-50P Plug and 48A Hardwired
- Output Power: Up to 11.5kW
- SAE J1772 Connector
- 24' Cable
- Integrated Cable Management
- NEMA Type 4 Rating
- Operating Temperature: -30°C to 50°C
- Emporia Energy App
- 3-Year Limited Warranty



Flo Home X5

- 6-30A Selectable
- Output Power: Up to 7.2kW
- SAE J1772 Connector
- 25' Cable
- Integrated Cable Management
- NEMA Type 4X, IK10 Rating
- Operating Temperature: -40°C to 50°C
- FLO EV Charging App
- 3-Year Limited Warranty



LEVEL 2 - COMMERCIAL CHARGERS



Leviton Evr-Green 4000

- Single and Dual Port 30A Models
- Output Power: Up to 7.2kW
- SAE J1772 Connector
- 18' Cable
- Self-retracting Cable Management System
- OCPP 1.6
- NEMA Type 3R Rating
- Operating Temperature: -40°C to 50°C
- Features ChargePoint Network Services
- WiFi/Cellular Connectivity
- 1-Year Warranty



Siemens Versicharge

- 40A, 48A, and 80A Models
- Output Power: 9.6kW, 11.5kW, and 19.2kW
- SAE J1772 Connector
- 20' Cable
- Integrated Cable Management
- OCPP 1.6 (upgradable to 2.0.1)
- NEMA Type 4, IK10 Rating
- Operating Temperature: -35°C to 50°C
- Siemens Care+, Charge and Control Software Options
- Same as Residential Versions but adds Serial and WiFi/Ethernet Cellular OCPP Communications
- 3-Year Warranty



In stock

Electric Avenue Watti Pro

- 6A-48A Selectable, and 80A Models
- Output Power: 11.5kW, and 19.kW
- SAE J1772 Connector
- 16' and 23' Cables Available
- OCPP 1.6 (upgradable to 2.0)
- NEMA Type 4, IK10 Rating
- Operating Temperature: -30°C to 50°C
- Enterprise Software subscription
- WiFi/LAN Connectivity, and Cellular option available
- 3-Year Warranty



Electric Avenue Watti ProLite

- 6A-48A Selectable
- Output Power: Up to 11.5kW
- SAE J1772 Connector
- 18' and 25' Cables Available
- OCPP 1.6
- NEMA Type 4, IK10 Rating
- Operating Temperature: -30°C to 50°C
- Enterprise Software subscription
- WiFi/LAN/Bluetooth Connectivity
- 3-Year Warranty



FLO CoRe+ Series

- 6A-30A and 6A-80A Selectable Models
- Output Power: 7.2kW and 19.2kW
- SAE J1772 Connector
- 21' Cable
- ZigBee Interface
- Aluminum Type 4X and 3R enclosures
- Operating Temperature: -40°C to 50°C
- FLO EV Charging App
- Cellular-LTE Connectivity
- 1-Year Warranty



LEVEL 3 - DC FAST CHARGERS



Leviton Evr-Green DC

- Output Power: 62.5kW
- CCS1 and CHAdeMO Connectors
- 14' Cable
- Integrated Cable Management
- OCPP 1.6
- WiFi/4G Connectivity
- 10" LCD Screen
- NEMA 3R, IK10 Rating
- Operating Temperature: -40°C to 50°C
- ChargePoint Mobile App and Vehicle In-Dash Systems
- Holds 2 Power Modules
- Dynamic Power Management
- 1-Year Limited Warranty



Siemens Versicharge Ultra

- Output Power: Up to 178kW
- CCS1 and CHAdeMO Connectors
- 13'5" Cable
- Integrated Cable Management
- OCPP 1.5 and 1.6
- Ethernet/3G/4G Cellular Connectivity
- 10" Screen
- NEMA 3R, IK10 Rating
- Operating Temperature: -30°C to 50°C
- Comes with external isolated power control cabinet
- 3-Year Warranty



Electric Avenue Watt Direct

- 30kW, 60kW, 120kW, 180kW, and 360kW
- CCS1 and CHAdeMO Connectors
- 15' and 23' Cables Available
- Integrated Cable Management
- OCPP 2.0
- LAN/WiFi/4G Connectivity
- 7" LCD Screen
- NEMA 3R, IK10 Rating
- Operating Temperature: -30°C to 50°C
- Enterprise Software+ Subscription
- Dynamic Load Management
- 2-Year Limited Warranty



Electric Avenue Watt Direct 30kW Portable

- Output Power: DC 30 kW
- CCS1 and CHAdeMO connectors
- 13' and 23' Cables Available
- 30' Pin and Sleeve Cable Included
- Integrated Cable Management
- OCPP 1.6 JSON and OCPP 2.0
- LAN/WiFi/4G Connectivity
- 7" LCD Screen
- NEMA 3R, IK10 Rating
- Operating Temperature: -30°C to 50°C
- Enterprise Software+ Subscription
- Stainless Steel/Black and White Models
- 2-Year Limited Warranty



FLO SmartDC Series

- 50kW and 100kW
- CCS1 and CHAdeMO Connectors
- 20' and 12' Twisted Steel Cables
- Integrated Cable Management Available in the 50kW Version
- OCPP 1.6
- Cellular/HSPA+ Connectivity
- NFC: Google Pay and Apple Pay
- Aluminum Type 3R Enclosure
- Operating Temperature: -40°C to 50°C
- FLO EV Charging App
- 1-Year Limited Warranty



LOAD MANAGEMENT DEVICES

Load management devices are systems or technologies designed to control and optimize the charging of multiple electric vehicles at a location with limited power capacity. These devices are particularly useful in scenarios where multiple EVs are charging simultaneously, such as public charging stations, commercial parking lots, or residential complexes with a high number of EV owners.

Code Load Saver

The Load Saver is a safe and reliable load management device that can help offset loads on your fully loaded electrical panel and create space for new appliances to be connected, without having to upgrade the electrical service.



Load Saver Enclosure

- 30A, 40A, 50A, 60A Models
- Steel CSA 4/12 Enclosure
- 1/4 Turn Locking
- Powder Coated ASA61 Grey
- Outdoor and Indoor Applications
- Certified Assembly
- Backpan
- Amperage Appropriate Contactor
- Field Adjustable Trip Point
- Labeled Connection Points and Terminal Blocks
- Automatic Switching between Essential/Nonessential Loads



Originally developed for residential EV charging, the DIVVEE gives you access to the power needed for level 2 EV charging, without having to upgrade your home's electrical panel. Not only is DIVVEE great for home EV charging, it is also rated for other load-sharing purposes, such as hot tubs, heating, AC, workshops, and more.

Loadshare DIVVEE

The DIVVEE is a device that intercepts a circuit that is already included in your electrical breaker panel (usually the range breaker) and splits the power supply between that and the EV charger. When the range turns on, DIVVEE automatically shuts off the EV charger until the range stops operating, then turns the charger on again.



Loadshare DIVVEE 40A & 60A

- 208/240 AC Volts Single Phase
- Frequency 50-60Hz Phase
- NEMA 1 Rating
- Relay Sensitivity: 1
- Relay Response Time 200ms Phase
- CQAIUS Listed
- No Panel Upgrade
- Suitable for Hot Tubs, Heating and Air Conditioning



FEDERAL AND PROVINCIAL REBATE PROGRAMS

BRITISH COLUMBIA



Fortis BC and BC Hydro: CleanBC Go Electric

Funded by the Government of B.C.'s Ministry of Energy, Mines and Low Carbon Innovation, and with financial support from the Government of Canada, Fortis BC and BC Hydro administers the CleanBC Go Electric electric vehicle (EV) charger rebate program. The program provides rebates for the purchase and installation of electric vehicle (EV) chargers and infrastructure to get homes and workplaces across B.C. ready for EVs.

This program is part of the province's CleanBC plan to make clean transportation more affordable and accessible for British Columbians. Visit Go Electric to learn more about the plan and read the full strategy.

Single family homes

Single-family homes, row homes, duplexes or townhouses can get a rebate of up to 50% of the purchase and installation costs of an eligible Level 2 EV charger, to a maximum of \$350. For a limited time Fortis BC and BC

E.B. Horsman & Son Disclaimer

The information provided in this document on available federal and provincial rebate programs is shared directly from the Fortis BC, BC Hydro and the Government of Canada website on July 27th, 2023. E.B. Horsman & Son is not liable for any outdated, mis-interpreted, false, or mis-information regarding the rebate programs, its eligibility, qualified products, or the rebate amounts. For the most up-to-date information, please visit fortisbc.com and electricvehicles.bchydro.com

Hydro is offering additional funding of up to \$250 for single family home customers who install an eligible smart EV charger. Visit the single family home page to learn more.

Apartment and condo buildings

1. EV Ready Rebates

You could apply for these rebates together to streamline the EV-related upgrades to your building, or you could apply for them one at a time as your project progresses.

- **EV Ready plan rebate:** A rebate of up to \$3,000 for the creation of an EV Ready plan – a professional strategy for your building to make at least one parking space per residential unit EV Ready.
- **EV Ready infrastructure rebate:** A rebate of up to 50% of costs to install the electrical infrastructure required to implement your EV Ready plan, to a maximum of \$600 per parking space, and a project maximum of \$120,000.
- **EV charger rebate:** A rebate of up to \$1,400 per to purchase and install Level 2 networked EV chargers to implement your building's EV Ready plan, to a maximum of \$14,000.

2. Standalone EV charger rebate

EV charger rebate: For a limited, get up to \$5,000 in rebates (regularly \$2,000), up to 50% of costs, per charger to purchase and install Level 2 networked EV chargers at your building's residential parking spaces, to a maximum of \$25,000 (regularly \$14,000).

Workplaces

For a limited time, workplaces can get a rebate of up to \$5,000 (regularly \$2,000) per charger to purchase and install eligible Level 2 networked EV chargers for employee use, to a maximum of \$25,000 (regularly \$14,000). To be eligible, pre-approval from BC Hydro is required prior to purchasing and/or installing chargers.

Eligible workplace organizations can have separate applications for different locations, up to a maximum of four.

FEDERAL AND PROVINCIAL REBATE PROGRAMS

ZEVIP

The Zero Emission Vehicle Infrastructure Program (ZEVIP) provides funding towards the deployment of electric vehicle (EV) chargers and hydrogen refuelling stations across Canada.

This \$680 million initiative addresses a key barrier to the adoption of zero-emission vehicles (ZEV)—the lack of charging and refuelling stations in Canada—by increasing the availability of localized charging and hydrogen refuelling opportunities where Canadians live, work, and play. This is administered through three key funding streams and is available until 2027.

For owners/operators of ZEV infrastructure

Providing funding towards projects focusing on EV charger deployment in public places, on-street, in multi-unit residential buildings, at workplaces, and for vehicle fleets.

Projects are selected through a competitive process.

NRCan's contribution will be limited to fifty percent (50%) of Total Project Costs up to a maximum of 10 million dollars per project.

For delivery organizations

Providing funding for smaller EV charging projects through organizations authorized to redistribute a component of the ZEVIP funding.

NRCan's contribution will be limited to fifty percent (50%) of Total Project Costs up to a maximum of 5 million dollars per project for delivery organizations.

For Indigenous organizations

Providing funding to Indigenous organizations and communities for projects focusing on EV charger deployment in public places, on-street, in multi-unit residential buildings, at workplaces, and for vehicle fleets.

NRCan's contribution will be limited to seventy-five percent (75%) of Total Project Costs up to a maximum of 2 million dollars per project for Indigenous organizations.



NEED MORE INFORMATION ON EV CHARGING AND CHARGING TECHNOLOGY?

Elevate your electric vehicle charging experience with Albrite Lighting as your trusted partner. Albrite's team of experts are here to help you, and your EV, on the right path forward. Contact us today and let us illuminate your path to the ideal EV charging solution: ebhorsman.com/albrite

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YEARS IN BUSINESS

20,000+

Lighting & Electrical Products in Stock

22

Locations Across Western Canada

3,500+

Lighting Projects Designed & Delivered

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GENERAL QUESTIONS TO HELP QUALIFY YOUR CUSTOMER'S APPLICATION:

- Is the application commercial, public, or residential?
- If Commercial/Public: Networked or Non-Networked? Networked units offer Payment Processing, Online Monitoring and Energy Metering. They require a subscription to an EV network.
- If Residential: What amperage? (30A is most popular as it offers an optimum charge for most vehicles but this varies depending on the EV model and short-term vs future needs)
- Software connectivity via cellular, Wi-Fi, or Ethernet/LAN?
- Mounting Type: Bollard (Free Standing) or Wall Mount?

DID YOU KNOW?

British Columbia was the first jurisdiction to implement a law mandating 100% zero-emission vehicles in the world.

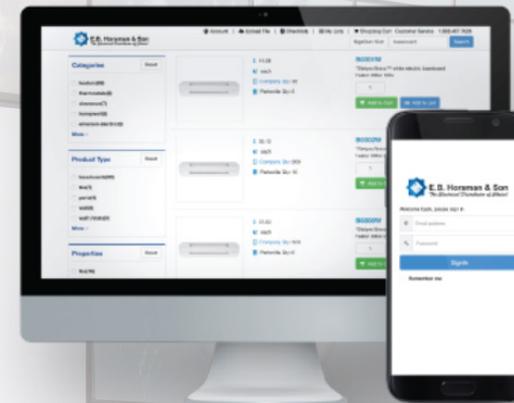


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