

Electric Vehicle Council of Ottawa



Electric Vehicle Society

August 14, 2019
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President, EVCO

EVS Kingston Chapter

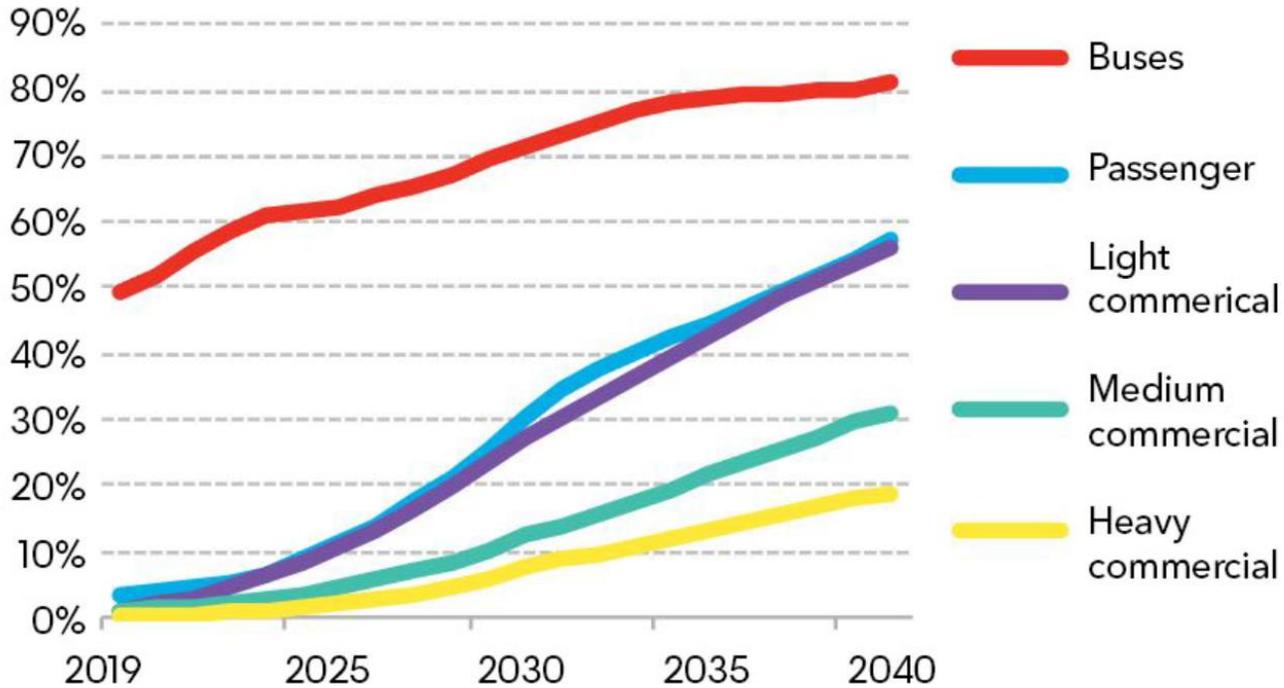
Agenda

- ▶ - EV Market Share
- ▶ - Federal Incentive
- ▶ - Plug'nDrive Rebate
- ▶ - Charging infrastructure for condos

Bloomberg NEF (New Energy Finance)

EV share of annual vehicle sales by segment

EV share of sales



Source: BloombergNEF. Note: Passenger car and bus figures are global. Commercial vehicle segment adoption figures in both charts cover the main markets of China, Europe and the U.S.

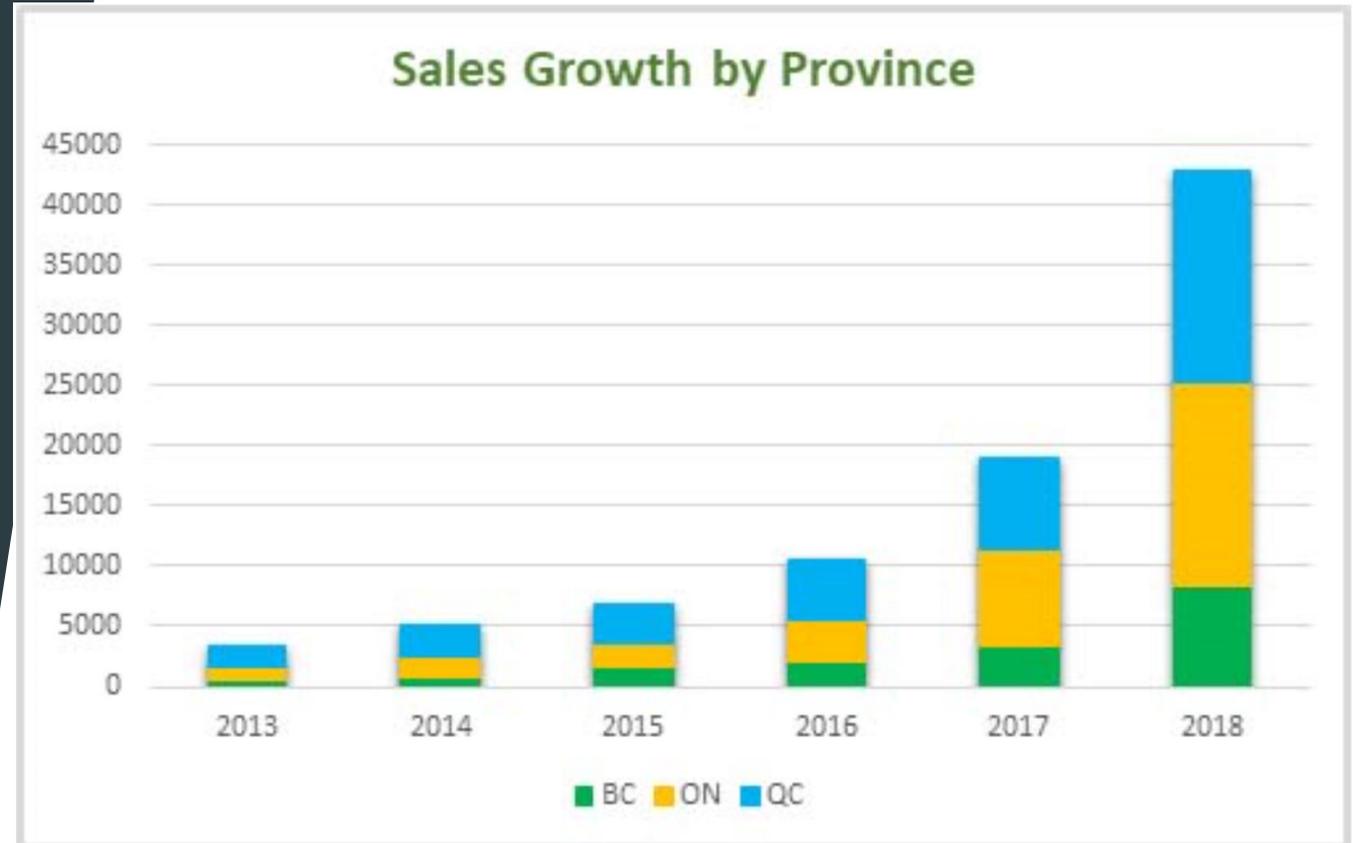
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<https://about.bnef.com/blog/electric-transport-revolution-set-spread-rapidly-light-medium-commercial-vehicle-market/>

Federal EV Incentive

- ▶ Targets
 - ▶ 10% by 2025
 - ▶ 30% by 2030
 - ▶ 100% by 2040
- ▶ 2.2% in 2018 - ~42,000



Federal ZEV Incentive

- ▶ **Up to \$5,000 for electric battery or hydrogen fuel cell vehicles with a manufacturer's suggested retail price of less than \$45,000**

Federal EV Incentive - BEV - \$5,000

Vehicle Name	Sug. Retail Price	Battery	Range
smart fortwo Electric	\$29,050	17.6kWh	93km
Ford Focus Electric	\$34,998	33.5kWh	185km
Kia Soul Electric	\$35,895	27kWh	150km
Volkswagen e-Golf	\$36,720	36kWh	201km
Hyundai IONIQ Electric	\$37,889	28kWh	200km
Nissan LEAF/Plus	\$40,698	40kWh	241km
Chevrolet BOLT	\$44,800	60kWh	383km
Hyundai KONA Electric	\$44,999	64kWh	415km
Kia Niro Electric	\$44,995	64kWh	385km

Federal EV Incentive - PHEV - \$5,000

Vehicle Name	Suggested Retail Price	Battery	Range
Chevrolet Volt	\$39,095	18.4kWh	85km
Chrysler Pacifica Hybrid	\$51,445	16kWh	53km
Honda Clarity PHEV	\$40,100	17kWh	77km

Federal EV Incentive - PHEV - \$2,500

Vehicle Name	Sug. Retail Price	Battery	Range
Audi A3 Sportback e-tron	\$40,900	8.8kWh	26km
Ford Fusion Energi	\$34,950	7.6kWh	35km
Hyundai Ioniq PHEV	\$32,299	8.9kWh	47km
Hyundai Sonata PHEV	\$44,799	10kWh	43km
Kia Niro PHEV	\$33,965	32kWh	42km
Kia Optima PHEV	\$42,995	10kWh	47km
Mini Countryman Cooper SE	\$43,490	8kWh	19km
Mitsubishi Outlander PHEV	\$42,998	12kWh	35km
Toyota Prius Prime	\$32,990	9kWh	40km

What if I can't afford a new car?

- ▶ Buy a used EV
- ▶ Plug'nDrive offers a \$1,000 rebate on used cars
- ▶ 100,000 EVs on Canadian roads
- ▶ Many cars available at \$8,000 and up
- ▶ 1,318 available throughout Canada at [autotrader.ca](https://www.autotrader.ca)

Charging Infrastructure - Condos

- ▶ Initial cost can be high
- ▶ Limited by existing service to the condo property
 - ▶ Upgrading is typically expensive and sometimes impossible
- ▶ Individual meters with close parking would be ideal
 - ▶ i.e. garage/carport
- ▶ Underground garage fairly easy to set up
- ▶ Large outdoor common parking is likely expensive to set up
 - ▶ Need to dig to install conduit

Charging Infrastructure - Ontario Condos

▶ Condo unit owners

- ▶ If you are submitting an application to install an electric vehicle charging system on **common elements of a condo property**, the condo corporation **must provide you with the information and/or permissions you reasonably need** to complete the application, such as schematics or electrical room access.
- ▶ The condo corporation must **respond to your application within 60 days**, unless another time period is agreed upon in writing with you.
- ▶ Condo corporation boards are **not allowed to reject** your application unless the installation is assessed as:
 - ▶ not meeting some legal requirements (for example, it violates the *Electrical Safety Code*)
 - ▶ posing a serious risk of damaging or adversely affecting the structural integrity of the condo property or any assets of the condo corporation
 - ▶ posing a serious health and safety risk to an individual

Charging Infrastructure - Ontario Condos

- ▶ The condo board's assessment must be based on the opinion or report of a **qualified professional obtained by the corporation**. The condo board must provide this opinion or report to you when they respond.
- ▶ The condo corporation **can require** that the installation **be carried out in another** manner or location, **only if it:**
 - ▶ would not cause you unreasonable additional costs
 - ▶ is necessary to meet other criteria

Charging Infrastructure - Ontario Condos

- ▶ Condo corporations looking to install an electric vehicle charging system are **exempt from some approval requirements** under the *Condominium Act*, if the following conditions are met:
 - ▶ the estimated total cost of the installation is **10% or less of the annual budget for common expenses** in the current fiscal year
 - ▶ the condo corporation board agrees that owners would not see the installation as having a significant reduction in the use or enjoyment of their units, the common areas or assets of the condo corporation
 - ▶ at least 60 days have passed since owners were given written notice of the proposed installation

Charging Infrastructure - Options

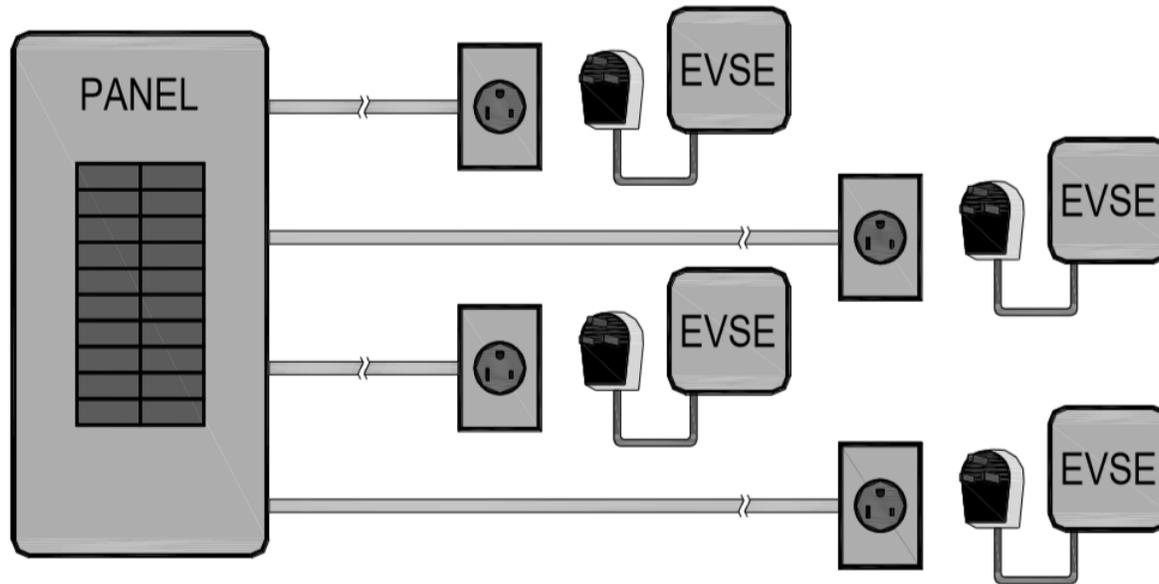


Figure 1: Dedicated Circuit

Charging Infrastructure - Options

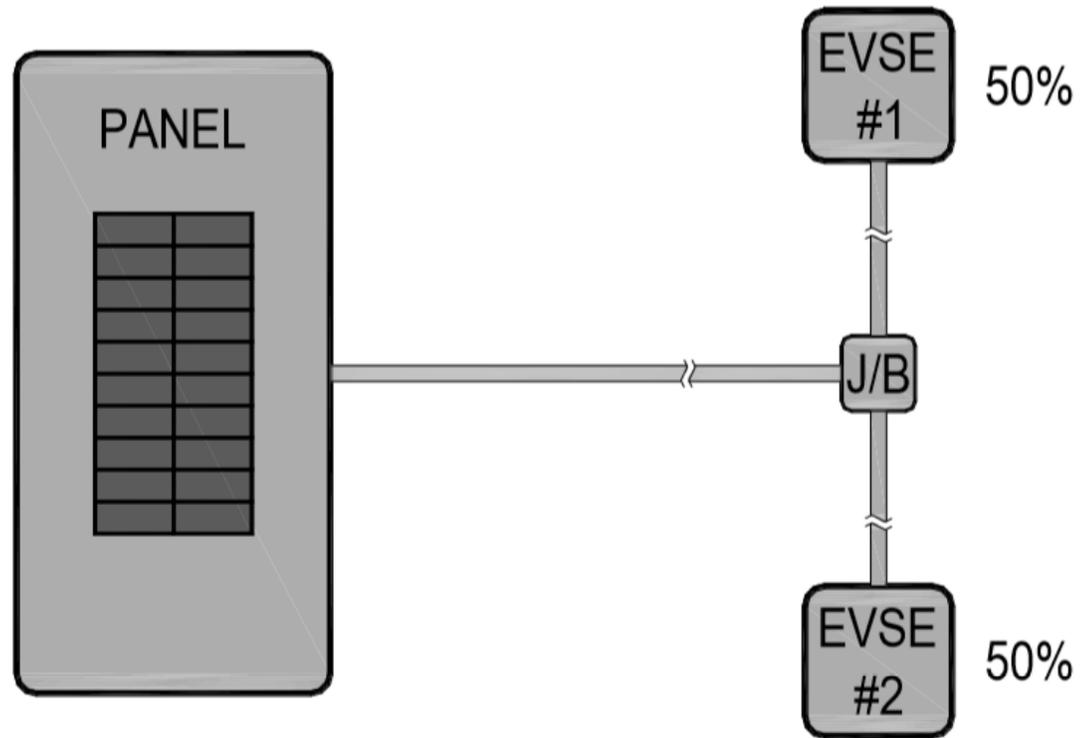


Figure 2: Static Circuit Sharing

Charging Infrastructure - Options

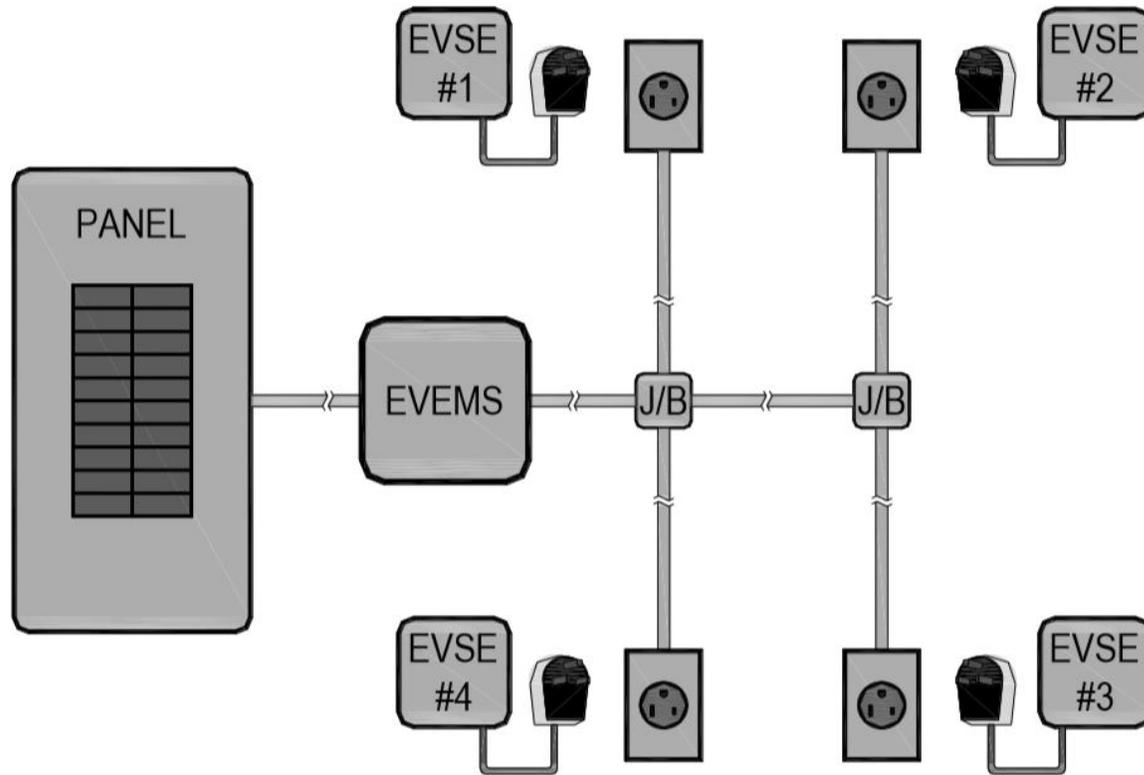


Figure 3: Rotational Load Management

Charging Infrastructure - Options

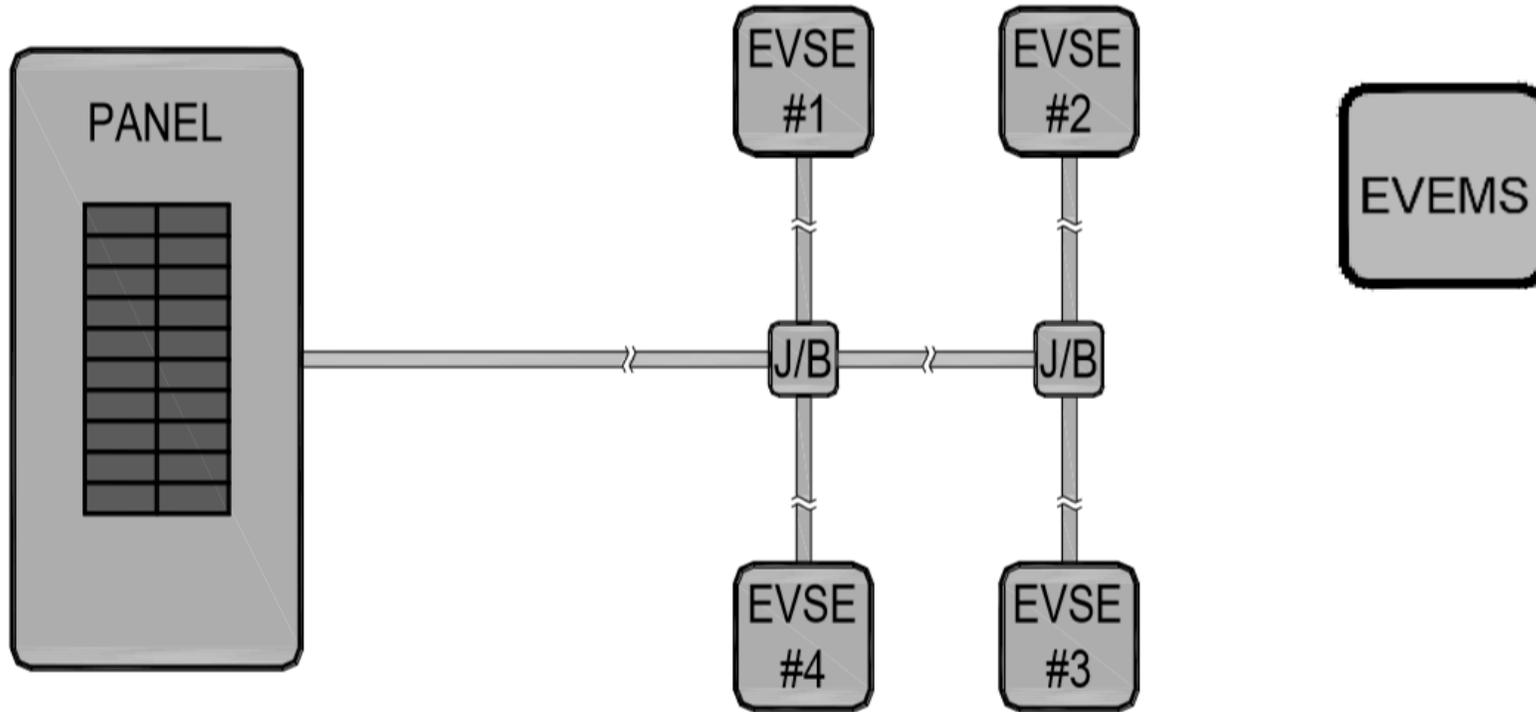


Figure 4: Dynamic Load Management

Charging Infrastructure - Options

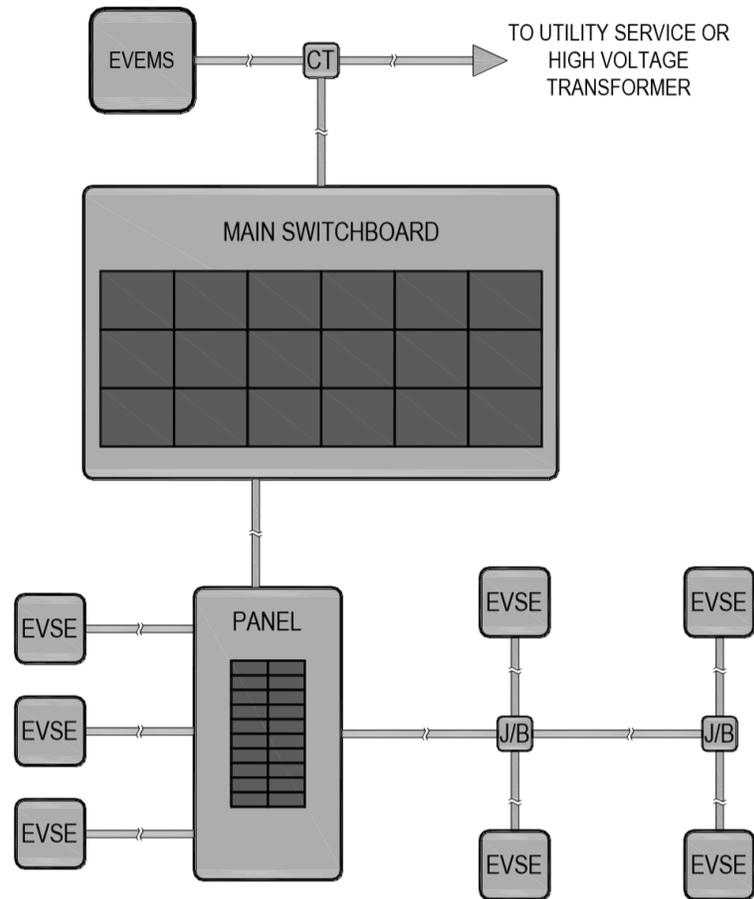


Figure 7: Building Demand Load Management

Opportunities

▶ NRCan ZEVIP

- ▶ Provides funding to assist with infrastructure cost
- ▶ Application deadline is September 18th

NRCan ZEVIP

- ▶ **Multi-Unit Residential Buildings**
- ▶ The program will support electric vehicle charging infrastructure deployment in **multi-unit residential buildings (MURBs)**. For the purpose of the program, MURBs are defined as buildings comprised of **dwelling units**. It must be greater than 3 storeys in building height (i.e. **4 storeys or more**) or have a building area (footprint) that is greater than 600 m² and have a **common entrance**.

NRCan ZEVIP

How much can you receive?

NRCan's contribution through this Program will be limited to fifty percent (50%) of Total Project Costs up to a maximum of five million dollars (\$5,000,000) per Project.

The maximum funding per type of charging station is as follows:

Type of Charging Station	Maximum Funding
Level 2 (208 / 240 V) charging station	\$5,000 per connector*
Fast-charging station (from 20 kW to < 50 kW)	\$15,000 per station
Fast-charging station (from 50 kW and above)	\$50,000 per station

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