ELECTRIC VEHICLES IN EDMONTON

More and more Edmontonians are going electric.
Get to know the options and advantages.

CHANGE FOR CLIMATE

Edmonton

WHAT IS AN ELECTRIC VEHICLE?

EVs are vehicles that are **fully or partially** powered by electricity. There are two types of EVs available in Canada that are **charged by plugging in**:

BATTERY ELECTRIC VEHICLES (BEVS)

Powered exclusively by an electric battery, BEVs are charged by plugging them into an EV charger or a typical wall outlet. The larger the battery the longer the range, however, it was estimated in 2021, that the average BEVs can travel 349 km and maxes out as 837 km on a single charge.

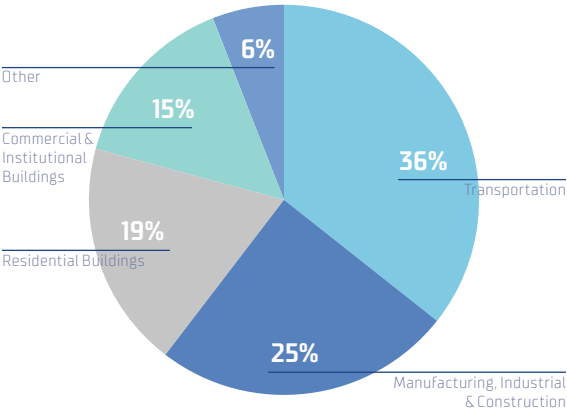
PLUG-IN HYBRID ELECTRIC VEHICLES (PHEVS)

PHEVs are powered by an electric battery and, when needed, by a gasoline internal combustion engine (ICE). PHEVs can travel between 20 to 80 km on all-electric power. The gasoline engine takes over for driving longer distances.

From sedans to trucks, almost every vehicle manufacturer has an EV on the market today. When choosing one, it is important to consider your daily travel needs and vehicle travel ranges. Keep in mind that the travel range of EVs is greater than the average car trip in Edmonton and the average round trip commute, even in winter!

WHY CHOOSE AN ELECTRIC VEHICLE?

Edmonton's Community Greenhouse Gas Emissions



Walking, biking and taking public transit are the best ways to reduce the environmental impacts from transportation and traffic congestion.

When we need to drive, replacing gasoline and diesel vehicles with electric vehicles is better for the environment, and it also saves on fuel and maintenance costs over the lifetime of the vehicle.

CHARGING AN EV

EV drivers can charge their vehicles at home, work or at publicly accessible EV charging stations. As of 2025 there are more than 130 publicly accessible EV charging locations throughout Edmonton, and more are added regularly!

To facilitate EV adoption, the City is actively working to expand the presence of EV charging across City-owned properties, with stations already established at some libraries and recreation centers.

To find out the closest publicly accessible EV charger, visit:

- ***plugshare.com***
- ***chargehub.com***
- *Natural Resources Canada Electric Charging and Alternative Fuelling Stations Locator* ***natural-resources.canada.ca***
- ***ev.plugndrive.ca/charging-stations***

TYPES OF EV CHARGING

Level 1: (1–2 kW)

- Level 1 is the simplest form of charging since it uses a typical 120V outlet
- Generally only used in a residential setting
- Up to 70h to full charge an SUV

Level 2: 3–20 kW

- Requires a 208V or 240V outlet
- Most common form of residential charging; also popular for fleets and public charging where dwell times are long (several hours)
- About 13h to fully charge an SUV

Level 3 Direct Current Fast Charger (DCFC): 25–350+ kW

- Provides a faster charge but much more expensive to install and operate
- Mostly used for public charging; best suited for short trips like along highways or high turnover parking
- 15 min to 1.75h to fully charge an SUV depending on the charge power

To find out how to install a charger in your home or business, visit:

- edmonton.ca/ResidentialElectrical
- edmonton.ca/CommercialElectricial

BENEFITS

BETTER FOR THE ENVIRONMENT:

- On average, EVs release 41% less greenhouse gases (GHG) than gasoline or diesel vehicles in Alberta. GHGs will be reduced even more as our electric grid gets greener.
- Over the lifetime of their use, EVs produce less GHGs than gasoline or diesel internal combustion engine (ICE) vehicles. Battery EVs typically offset their excess manufacturing emissions within the first 6-16 months of operation because they do not produce tailpipe emissions.

IMPROVED LOCAL AIR QUALITY:

- Gasoline and diesel vehicles release pollutants that negatively impact local air quality and health.
- As more people switch from gasoline and diesel to EVs, this will reduce air pollution and improve air quality for everyone.

NOISE:

- EVs have quieter running operation, which helps to reduce noise pollution in urban and residential areas.

OVERNIGHT CHARGING:

- At home charging means that an EV is charging overnight and ready to go in the morning, reducing time spent at refueling stations!

LOWER MAINTENANCE AND OPERATING COSTS:

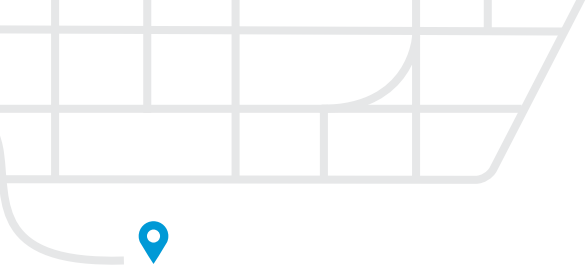
- EVs cost less to maintain and operate due to fewer moving parts and lower fuel costs. The average annual savings on fuel and maintenance for an EV in Alberta, compared to a gasoline vehicle, is about $3,000.
- Over time the reduced operating and maintenance costs can offset the higher purchase price of EVs.
- The estimated life repair and maintenance costs for each vehicle type and the average cost per mile are as follows:
    - Battery Electric Vehicle (BEV): $0.031 per mile [$0.0193 per km]
    - Plug-in Hybrid Electric Vehicle (PHEV): $0.030 per mile [$0.0186 per km]
    - Gas powered: $0.061 per mile [$0.0379 per km]

WINTER PERFORMANCE:

- EVs are safe and effective in Edmonton winters. Battery range can be reduced in cold weather but is still well within the average Edmonton trip distances. Electric vehicles will also start instantly in the cold and heat up quickly.

FUN TO DRIVE!

- Ask EV drivers about their experience, and you might become an EV fan yourself!



FOR MORE INFORMATION...

- Learn more about EVs and what the City of Edmonton is doing to encourage EV adoption. Visit ***edmonton.ca/electricvehicles***
- Stay informed and find other ways to take action on climate change. Visit ***changeforclimate.ca***
- Sign up for the Change for Climate newsletter at ***edmonton.ca/ChangeForClimateNews***

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