

ELECTRIC CARS 101: WHAT YOU NEED TO KNOW ABOUT EVs ON PEI



There are environmental and economic benefits to driving an EV. Burning fossil fuels (like gas or diesel) produces GHG emissions and impacts our air quality. Driving an EV is one way to reduce GHG emissions from transportation and, at the same time, improve our air quality.

ELECTRIC VEHICLE TYPES: EV, BEV, PHEV, HEV

An introduction to electric cars begins with an explanation of the abbreviations used to describe different types of electric vehicles.

EV - EV is the general catch-all term for an electric vehicle. Fully electric cars get all of their power from motors that use batteries charged with electricity.

BEV - A BEV, or battery-powered electric vehicle, uses only its electric motor or motors for propulsion. Because they lack a traditional internal combustion engine and use no gasoline, BEVs produce no tailpipe emissions. A BEV is the same thing as a fully electric vehicle (EV). In general, the term BEV isn't used nearly as often as EV.

PHEV- PHEVs strike a balance between eco-friendly motoring and go-anywhere flexibility. PHEV is a Plug-in Hybrid Electric Vehicle. Most commuters can drive to and from work on electric power alone, while the gas engine stands in reserve waiting for longer road trips. When charged, a PHEV's battery pack powers an electric motor. Once that battery pack depletes, a gas engine kicks on seamlessly. Then the car alternates between gasoline and electric power depending on how much is needed. The car's regenerative braking system captures otherwise lost energy when coasting or slowing down and feeds it to the battery, further reducing its reliance on its gas engine.

HEV - An HEV, Hybrid Electric Vehicle, uses gasoline engine and battery powered motor that stores energy, does not plug in and typically lower emissions than conventional vehicles.

RANGE ANXIETY MYTH-BUSTING

Many EVs can travel more than 300 kilometers on a full battery charge, and the most advanced models can reach about 600 kilometers between charges.

Both long-range and short-range EVs can perform well in start-and-stop driving during rush hour.

EVs consume significantly more of their battery at steady speeds on highways when used for more extended getaways.

One perk of an electric vehicle is that you can plug in and recharge at home or use EV charging stations when you're out and about.



There are Three Types of Chargers for Electric Cars

Level 1 - This level refers to household three-prong outlets like those your computer or a desk lamp will use. Few electric car users charge their vehicles this way simply because of how long it takes.

Level 2 - Most people prefer Level 2 charging capability, whether at home or at a public charging station. These chargers provide 240 volts of power and require an external device that plugs into a receptacle like that of an electric clothes dryer. For example, according to the car manufacturer, Level 2 charging can add 25 miles of range per hour to a Chevy Bolt EV.

Level 3 - Also called a fast charger, the fastest-charging option is Level 3. These quick chargers can add 100 miles of range to an EV in 30 minutes. But you will only find Level 3 options in public charging stations that typically cost money to use.

Where can I charge an EV on PEI?

If you need to charge your vehicle elsewhere, there are charging stations located across PEI. Some of these stations are located at public spaces while others are at businesses.

Through the Natural Resource Canada's Electric Vehicle and Alternative Fuel Infrastructure Deployment Initiative, six level 3 (fast charging) stations were installed across PEI.

These stations are located in O'Leary, Summerside, Borden-Carlton, Wood Islands, Charlottetown and Souris.

ARE EVs EXPENSIVE?

There are many EV models and options available at a wide price range. The cost to run and maintain an EV over time is significantly lower than a gas-powered counterpart.

In terms of maintenance, EVs have far fewer mechanical parts, so they also require a lot less maintenance. For example, the brakes in an EV could last over 300,000 km, as most EV braking is regenerative. There's also the biggest potential replacement item on an EV: the battery pack. The cost of a new battery varies by model and manufacturer, but most EVs come with between 5 and 8 years' or a 160,000 km powertrain warranty as standard. A replacement battery can be expensive, but unlike the frequent costs of maintaining a gas-powered vehicle, there's every possibility your battery could require no maintenance during your ownership period.

There could also be significant resale value, not to mention saving on purchasing gas. It is also free to register an EV in Prince Edward Island, a cost savings of \$100 annually, and the province offers half-price registration for hybrid vehicles.

The best way to view this is to look at the Total Cost of Ownership. Explore your options and calculate your future savings to find an EV that fits your lifestyle and your budget.

Universal Electric Vehicle Incentive

Government of Prince Edward Island is offering the most generous electric vehicle (EV) incentive in Canada by providing \$5,750 to Islanders who purchase a new or used EV. Government is also offering \$3,250 to those who buy a plug-in hybrid.

Islanders who buy a new, fully electric vehicle may be eligible for up to \$10,750 off the purchase price with the federal government incentive of \$5,000 and the PEI universal EV incentive of \$5,750 combined.