

# Do You Wonder about Switching to an Electric Vehicle?

## What are the best electric bikes?

There is a wide range of e-bikes on the market at prices ranging from \$1,250 to \$2,500. The best place to find one is your local bike shop, where you can try them out. There's good information on electric bikes [here](#) and [here](#).

## Why is an EV better than a conventional vehicle?

The CleanTechnica website lists 30 reasons, including great acceleration, smoother quieter driving, reduced neighbourhood noise, lower operating costs, zero air pollution, far lower climate pollution, highest safety ratings, no visits to gas stations, no oil changes or transmission problems, and in general, a contribution to the planetary wellbeing of future generations. [Thirty reasons to buy an electric car](#). The Salt Spring EV Group has done a [30' video](#) as an Introduction to Electric Vehicles.



## How many EV models can I choose from?

There are 26 electric vehicles on the market in 2021, ranging in price from the Volkswagen e-Golf (\$38,000) to the Tesla Model X (\$137,000). You can see the full range [here](#), with details on each. There are also 26 plug-in hybrid electrics, which do the first 30-50 km on electric and then switch to gasoline. The website [www.emotivebc.ca](http://www.emotivebc.ca) lists all the available EVs in BC.

## Can I buy a second-hand electric car?

Motorize specializes in 2<sup>nd</sup> hand EVs, with showrooms in Sidney and View Royal. You can compare models on their website. In January 2021 they had 28 cars for sale, from a 2014 Nissan Leaf (\$14,365) to the Tesla Model 3 (2019) (\$48,777). [www.motorize.ca](http://www.motorize.ca)

## What range do the new models have?

They vary from 177km (Mini-Cooper) to 647 km (Tesla Model S Long Range). Most new EVs have a range of around 400 km, more in summer, less in winter.

## What EV rebates are available in BC?

- There's a \$5,000 federal rebate for an EV costing less than \$55,000, and \$2,500 to \$5,000 for a plug-in hybrid EV. Full details [here](#)
- There's also a \$3,000 BC Provincial rebate for an EV with a range above 85km, and \$1,500 for a plug-in EV with a range of less than 85km.
- In addition, if you scrap an old car dated 2001 or earlier, or a gas-guzzler that consumes 7.2 litres/100km or more, you can get up to \$6,000 towards the purchase of a new EV (except a Tesla), or \$3,000 towards the purchase of a 2<sup>nd</sup> hand EV. There is a limit on how many scrap-it certificates are issued each year. For the details, see [here](#) and [here](#).
- BC Hydro has very comprehensive information on all this: [www.electricvehicles.bchydro.com](http://www.electricvehicles.bchydro.com)

## How do I charge my EV?

- **Level 1:** Homes. 8 km of range per hour. 12 to 20 hours to fully charge. 120-volt outlet.
- **Level 2:** Municipal and parking garage EV charging spots. 30 km of range per hour. 240-volt outlet.
- **Level 3:** Fast-charging. Some municipal and business EV charging spots. 100 km per 30 minutes.
- **Tesla:** Teslas have unique charging spots, and can also plug into many local charging spots.
- The Salt Spring EV Group recommends that home-owners install a Level 2 240 volt charger. [Here is a review](#) of the best Level 2 chargers.

## How do I find an EV charging spot?

You will need to sign up with these charging companies at no cost to get a card:

- [www.greenlots.com](http://www.greenlots.com)

- [www.flo.com](http://www.flo.com)
- [www.chargepoint.com](http://www.chargepoint.com)
- There's a map of all EV charging spots at [www.plugshare.com](http://www.plugshare.com)
- Your car's display will show you the nearest charging spots.

### How do I install a home-charger?

Your new EV or Scrap-it certificate may come with a certificate for a free charging machine. You will then need to install it yourself, or call an electrician, who may charge up to \$1,000, depending on the distance to your electric panel. BC Hydro has a list of rebate-eligible chargers: [www.tinyurl.com/EV-BC-chargers](http://www.tinyurl.com/EV-BC-chargers)



### What does it cost to charge an EV?

An EV's energy use is measured in kWh per 100 km. With steady careful driving, 10 kWh per 100 km is common. At BC Hydro Tier 1 (10 cents/kWh), that's \$1 per 100 km, \$10 per 1000 km, or \$200 for a year's driving at 20,000 km.

### What does it cost to service an EV?

An EV engine and drive system has far fewer moving parts, so over its life, repair and maintenance will cost \$4,600 less than a gasoline-powered car. ([Consumer Reports](#))

### Will an EV save me money?

If you drive 20,000 km a year you will save between \$1,000 and \$2000 a year in fuel, and more in servicing costs. CleanTechnica has cost-saving comparisons, which show that including purchase price, in some scenarios (expensive gas, cheap electricity) over 15 years a Tesla Model 3 costs less than a Honda Civic. See [www.tinyurl.com/EV-cost-saving](http://www.tinyurl.com/EV-cost-saving). The 2 Degrees Institute, in its 2018 report [Comparing Fuel and Maintenance Costs of Electric and Gas Powered Vehicles in Canada](#), found that over ten years driving an EV in BC costs 74% less than driving a similar conventional vehicle.

### Does it make sense to borrow to buy an EV?

Car companies offer 7-year credit at 2.5%. For home-owners, a line of credit is 3%. If a new EV after taxes is \$50k, that's \$42k after \$8k rebates, or \$36k if you scrap old car. If you sell an existing car for \$20k, your new cost is \$22k. At 2.5%, the annual interest will be \$550, much less than you will save. There's still the actual \$22k to buy the new EV, of course.

### Will driving an EV contribute to tackling the climate emergency?

Absolutely. Electricity in most of BC is 100% renewable, and [Carbon Counter's interactive model](#), which includes the energy needed to make an EV and its battery, shows that EVs have far lower carbon emissions, and that some models are also all-round cheaper to buy and operate than a conventional car. [www.tinyurl.com/EV-in-BC](http://www.tinyurl.com/EV-in-BC)

### How soon will it become normal for everyone to drive an EV?

In 2020, global EV sales rose by 43%. Faster growth will happen as falling battery prices sends the price of EVs below conventional cars, even without subsidies, which is expected between 2023 and 2025. In Norway, in 2020 EVs were 54% of all vehicles, compared to 5% in most European countries. In 2021 factory production began in China of batteries capable of taking a 320 km charge in five minutes. [Link](#).

### Are there EV Clubs I can join?

Yes, there are [EV clubs all across BC](#), where you can ask EV drivers questions and learn from their experience.

*Written by Guy Dauncey, January 2021. Updated April 2021*