

Watt's Happening? #264

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BC's Electric Highway Chargers, chargers everywhere!

Three of these fast-charging stations have just been installed and commissioned by BC Hydro on the Alaska Avenue near the Dawson Creek traffic circle. Each of the three will fast charge two EVs at the same time.



British Columbia's "Electric Highway" is now complete! A comprehensive network of public electric vehicle (EV) fast-charging stations is now in place along all highways and major roadways, each station about 150 kilometers apart.

The Electric Highway now allows EV drivers to go from one end of Vancouver Island to the other, from the Sunshine Coast to the Alberta border and from the southern part of the province to the Yukon border with access to reliable charging all the way. This network includes 155 multiple-charger sites and more than 310 fast chargers, with some sites having slower Level 2 chargers as well.

BC now has more than 5,300 public charging stations, an increase of 350% since 2018. The Province has an overall target of building 10,000 public charging stations by 2030.

BC is already leading in EV adoption in Canada, and the Electric Highway will accelerate this even more. In 2023 about 23% of light-duty vehicle sales in BC were EVs, an increase from 18% in 2022.

HOW FAST IS FAST?

Fast chargers will charge up your EV to about 80% in 20 to 40 minutes, depending on how much charge you start with and the battery make and model. Next come the "really fast" chargers that will give you up to 100 km of range in just two or three minutes! Starting next year, BC Hydro will place these chargers along major highways where quick charging is most needed.

This network should greatly reduce the "range anxiety" often reported by EV owners: can I

make it to the next charger? Now, there is no part of the province that is out of reach for EVs. And year over year the distance between chargers will continue to decrease, the speed of charging will increase with new battery tech increasing range and battery life.

In addition to completing the Electric Highway, the Province has also announced more funding for the GoElectric Home and Workplace Charger Program. This funding supports individuals and businesses to install EV chargers at their homes and workplaces. BC Hydro and FortisBC are already accepting applications for these charger subsidies.

SAVE MONEY, REDUCE POLLUTION

EVs have higher purchase costs, but much lower operating and maintenance costs. (There are only a handful of moving parts in an EV, while the average gasoline car has more than one thousand). As an average EV driver you can expect to save about \$1,800 a year on fuel costs alone.

Every EV on the road means a reduction in pollution, giving us all cleaner air, cleaner water, quieter streets, and is a critical step to deal with the climate crisis.

We are all feeling the effects of drastic climate change now, from unprecedented fires, heat and drought to floods and fiercer storms of all kinds. We are now in a new, more severe climate era of our own making that promises to get nothing but worse as we dump more and more carbon dioxide pollutant into our atmosphere. Something has to change, and

EVs are part of the solution.

Of course the true environmental benefits of EVs depends on where all that electricity comes from. In BC we are one of the best provinces, being largely powered by hydro electricity, with more solar and wind coming on line soon (we hope!): mostly clean, green low-carbon energy sources.

Alberta not so good. Too much natural gas is being burned for electricity. This is trying to change, as more and more solar and wind are aimed at a province that is so rich in these clean energy resources. But even so, most studies show that it still makes good environmental sense to drive an EV in Alberta.

Most EV charging is done at home: plug in overnight and you are ready to go in the morning. So put a small 3000 watt grid-tied solar array on your roof, and you can charge up with your own inexpensive, clean, green solar energy. Ideal!

BATTERIES

You may have heard horror stories about slave labour lithium and rare metal mining and impending shortages of these critical metals that make the EV transition possible. These problems are real and must be addressed.

But full life-cycle, 100% recycling of critical minerals is on it's way (Tesla is leading here), as well as new battery technologies that may well make today's lithium batteries look like the Model T's of energy storage.

The recent completion of the Electric Highway is one small but significant piece of this province's climate crisis solution. British Columbia, well done!

**As an
average
EV driver
you can
expect to
save about
\$1,800 a
year on fuel**



A few of the electric vehicle owners in the BC/Alberta Peace Region. This photo was taken in 2018 and shows some of the first EVs in the area. There are many more now!