

Electric Vehicle Adoption

The background is a solid teal color. On the right side, there are several decorative elements: a large, semi-transparent pie chart with three segments, a smaller pie chart above it, another smaller pie chart to the right, and a bar chart at the bottom right with four bars of increasing height. The text is white and positioned on the left side of the image.

A simple way to have a huge impact on our
environment



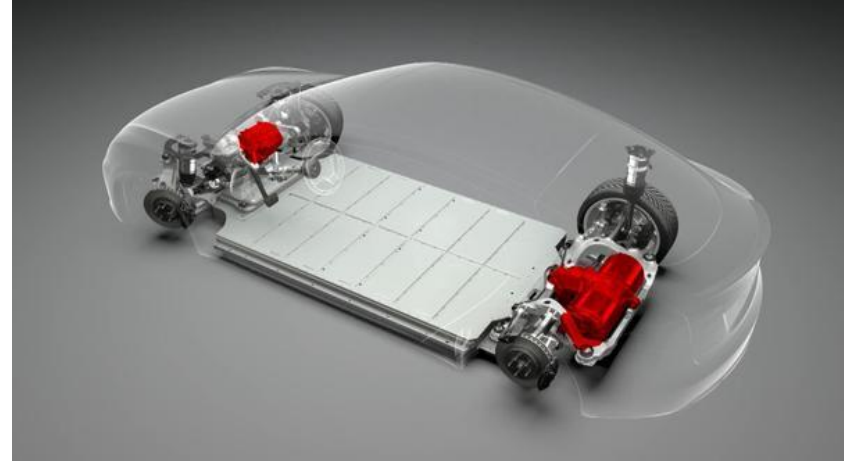
Why Electric Vehicles?

Electric Vehicles (EV's) are our best option to transition away from Internal Combustion Engine (ICE) vehicles and make a huge impact on our environment (28.9 percent of 2017 greenhouse gas emissions were from transportation in the U.S.)

- No tailpipe emissions from them
- *Extremely inexpensive* to operate and maintain
- So much fun to drive! Quick and quiet
- Easy to charge
- Range is increasing and price is decreasing

BEV vs. PHEV vs. Hybrid

- BEV = Battery Electric Vehicle
 - Just batteries and an electric motor!
- PHEV = Plug-in Hybrid Electric Vehicle
 - Like a BEV and ICE car combined
 - Plugs in
 - Typical electric range of ~55kms
- Hybrid
 - Does not plug in
 - Electric motor only runs at low speeds





How Far Do They Go?

- EV's have range from 70kms to 500kms+
- Range depends how you drive and the environment you are in
- Popular Canadian EV brands:

Company	Brand	Range	Price	Price per KM
Nissan	Leaf	242	\$42,000	\$174
Nissan	Leaf E+	363	\$44,300	\$122
Hyundai	Kona	415	\$45,600	\$110
Hyundai	Ioniq	249	\$37,900	\$152
Kia	Niro	385	\$44,995	\$117
Kia	Soul	179	\$35,900	\$201
Tesla	Model 3 SR +	386	\$56,990	\$148
Tesla	Model 3 LR	499	\$70,490	\$141
VW	E-Golf	201	\$36,300	\$181
Chevy	Bolt	383	\$43,200	\$113

How Long to Charge?

- “Level 1” 110v standard outlet “trickle charging” = **~7kms** per hour of charging
- “Level 2” 240v “dryer” outlet or hard-wired = **35-45kms** per hour
- “Level 3” DC Fast charging = **100-1,600kms** per hour



What If You Run Out Of Charge?!?!

- You get a ton of warnings on your head-up display
- You can run out of gas too, didn't you know?
- Electricity is EVERYWHERE, but gas stations aren't!

But really,

- you'd have to get towed on a flatbed tow truck
- 110v charging isn't very convenient
- Tell your Municipality to add more level 2 chargers and your province to add more level 3 chargers!



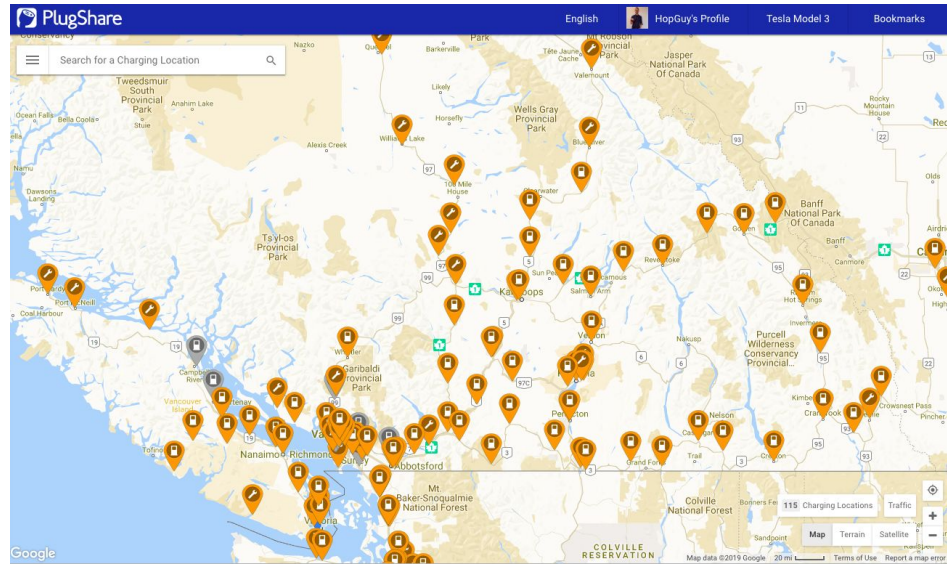
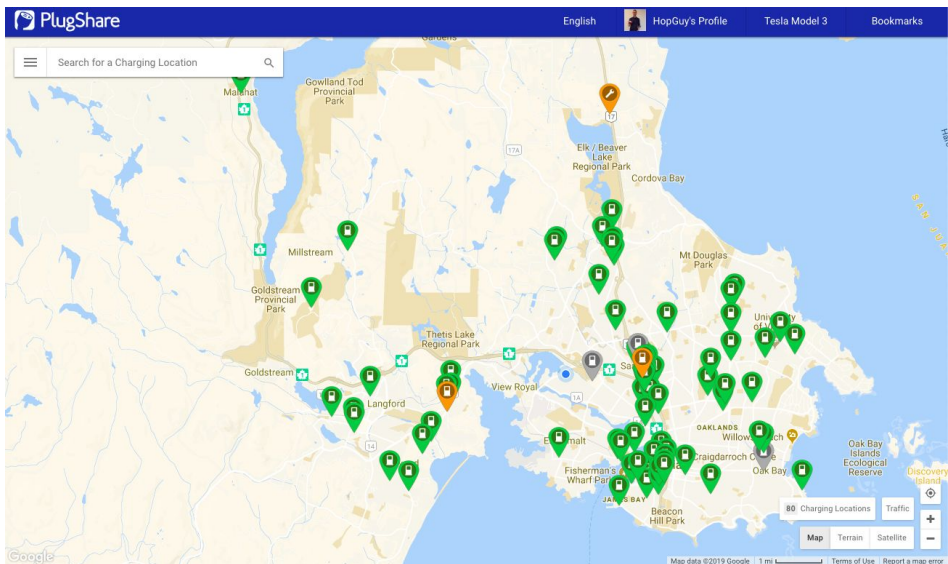


Where Can I Charge?

#1 - At home!

Primarily Lvl2 station in Saanich, etc.

Lvl3 “Fast charge” locations in BC





Aren't They Expensive?

- To purchase, yes they are more expensive than ICE vehicles
- There are 3 purchase incentives available to you!
 - CEV for BC program: \$5,000 off a an under \$77K (and \$2,500 off a PHEV)
 - New Federal incentive: \$5,000 off a vehicle under \$55K (and \$2,500 off a PHEV)
 - BC Scrap-It Program: if the dealership has credits left, \$6,000 off a new EV if you scrap your ICE
- They are SO inexpensive to operate!
 - 1,000kms = ~\$22 at BC Hydro tier 2 rates! (the most expensive home electricity rate)
 - Drive 15,000kms a year? Expect to pay ~\$325 for “fuel”
- Maintenance?
 - Tires, brakes, brake fluid, cabin air filter, windshield wipers and fluid
 - Electric motor could last as long as 1.5 million kms or more!
 - But, the batteries?!?!



Caring for Your Battery

A few rules for maintaining your lithium ion batteries:

- Don't keep the batteries at over 90% for more than a few hours
- Don't DC fast charge for daily driving
- Make sure they don't get hot (only applies to non-liquid cooled batteries)
- Don't 110v "trickle charge" 100% of the time - the battery needs to be exercised!

Given these rules, your batteries will likely last 10+ years. Even if there is some battery degradation, the vehicle is still usable and portions of a battery pack can be replaced

Let's Go See Them!

