ELECTRIC VEHICLE FAQ

Q: What is an EV?
A: An EV is an electric vehicle that can be driven using electricity without relying on any combustible fuels.

Q: What is an ICE vehicle?
A: ICE stands for Internal Combustion Engine, like gas, or diesel, etc.

Q: What happens to an EV battery at the end of its lifecycle?
A: Recycling facilities for Lithium batteries have been operating since the 1990s. Many depleted EV batteries serve a second life in home or commercial storage before finally being dismantled for recycling at end of life. Visit this site for detailed info: https://goo.gl/m5AUTi

Q: What is the top speed of an EV?
A: Basic EVs have a top speed of about 150km/h. Acceleration is brisk and quick, because EVs have all of their torque available from a stop, unlike ICE vehicles which have to speed up in RPM and shift gears to accelerate the vehicle. Dollar for dollar, EVs are more pleasant and fun to drive than their ICE counterparts.

Q: How far can an EV go?
A: That depends on the size of the battery, it's condition, and driving conditions. Much like a cell phone battery, the demands placed on the battery affect how many hours it will run before requiring a recharge. Current range varies from 60km - 500km on a single charge. Daily range is double or triple that number due to the ease of destination and opportunity charging. Some heavy commercial use requires drivers may require several charges daily. These occur during times when the vehicle is sitting.

Q: What is destination or opportunity charging?
A: Destination charging means using public charge stations when you and your vehicle have reached your destination, like your work place, or a hotel, airport, B&B, etc. Opportunity charging means using public charge stations at parkades, the mall, the grocery store, etc. If you're parking for 45 minutes, why not charge for 45 minutes?

Q: How many kms will the battery in my EV last?
A: The battery is not designed to last any particular driving distance. Modern EV batteries are engineered to last ten years of service, and have about 70% battery capacity remaining at that time. Some will last longer, some will expire earlier, depending on type of use, geographic location, and the driver's charging habits.

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Q: What maintenance requirements does an EV have?
A: Regular service includes wheel rotation, brake and suspension inspections, wiper blade replacement, wiper fluid top up, lubrication of door hinges, cabin air filter replacement, etc. These service items can be carried out at any competent mechanical facility. Yearly battery health reports are encouraged, at supporting franchised dealers.

Q: What is the warranty on an electric car?
A: Japanese manufacturers typically include a 3 year comprehensive and a 5 year powertrain warranty from new. European manufacturers typically include a 4 year comprehensive warranty from new. Used EV's carry the balance of the original warranty. Many carry a separate "loss of capacity" warranty. Our staff can supply more detailed information regarding specific vehicles.

Q: What is a plug-in hybrid vehicle?
A: It is a hybrid electric vehicle that uses batteries that can be recharged by plugging it in to an external source of electric power. These cars have both an electric motor as well as an internal combustion engine. Their all electric range varies between 20-90Kms depending on the size of the battery.

Q: What is an extended range electric vehicle?
A: It is an electric vehicle equipped with an auxiliary power unit known as a "range extender". This small ICE powers a generator which charges the EV's main battery. When battery power is depleted, the ICE range extender will power the vehicle until as long as there is fuel in the tank.

Q: Does my EV have a spare tire?
A: No, most newer vehicles don't come with a spare tire. Instead they are equipped with a compressor and a bottle of tire sealant to "repair" the tire so you can get to a proper facility.

Q: Does my EV have a regular 12v battery?
A: Yes, the 12v battery is used to power the accessories in the vehicle such as the lights, audio and heated seats, power windows, and heater.

EV CHARGING FAQ 1

Q: Does my car come with a charger?
A: All electric vehicles come with a Level 1 EVSE. These are compact, and lightweight, and fit in the trunk or frunk of your EV.

Q: How long does it take to charge an EV?
A: With level 2 home or public charging, most EVs will charge to 100% from empty in under 4 hours.

Q: Can the EV battery be over charged?
A: Software in the EV controls the rate of charge, and shuts off the charger when the battery is full.

Q: Why are some EV's able to charge faster than others?
A: EVs have on board chargers with different capacities (capabilities). The size of the charger is measured in KW. The smallest level 2 chargers operate at 3.3kw, the largest (Tesla dual chargers) can handle approx. 19.2kw.

Q: What are the different types of charging?
A: Level 1 refers to 110v charging, and is intended for emergency use, like a spare tire. Level 1 EVSEs use the J1772 connector. Not for every day use. Output is about 1.4kW.
A: Level 2 operates at 220v and is not only more efficient than level 1, but much faster. Most EVs are equipped with one of the following sizes: 3.3kW, 3.6kW, 6.6kW, 7.2kW, 10kW.
A: Level 3 refers to DC (Direct Current) fast charging. This is done using a stand alone roadside charger. This type of charger bypasses the level 1/2 onboard charger and sends DC power straight into the EV battery. These chargers are commonly equipped with 2 connectors, a CHAdeMO (used by Nissan, Kia and Mitsubishi) and an SAE Combo connector (used by VW, GM, BMW, Ford and Hyundai).

Q: How much does it cost to charge an EV?
A: With level 1 and level 2 charging, your car takes in 110-240v A/C power, which feeds an on board charger. The capacity of your onboard charger determines how quickly your vehicle's range will be replenished. All level 1 and 2 charging uses the standard J1772 connector.

Q: How much does it cost to charge an EV?
A: Lightweight electric vehicles like LEAF and i3 cost about 2.5¢ per km to operate, based on 12.8¢ per kWh. Heavier and more powerful EVs like Teslas cost around 3-3.5¢ per km driven. Filling a 24kWh car like a Nissan Leaf costs about $3.00 from empty.

EV CHARGING FAQ 2

Q: What is the fee for public charging?
A: Most Level 2 public stations in BC are free of charge. You may have to pay for the parking spot but not for the use of the charger. DC Fast Chargers do have a minimum $2.00 fee, they charge about 35¢ per kWh. Most times the fee is around $4.00 for a DC fast charge. Expect to see changes in billing as EV's gain popularity.

Q: How do I find charging stations?
A: The best way to find charging stations is by using the website www.plugshare.com, or use the smartphone app with integrated map.

Q: How do I charge at a public charging station?
A: Upon arrival, you may or may not have to authenticate the charge station. Some stations are "Smart Chargers", these are networked and often require the users to have an account (phone app) for the charge provider. The user can then "unlock" the station using an app or a charging fob. If the station is not a "Smart Charger" you can simply plug the J1772 connector into your EV to begin charging.

Q: Can I charge my EV at a Tesla charge station?
A: Tesla has thousands of charge stations around the world. Some are called Superchargers, and use DC power through a proprietary plug, and can only charge Tesla vehicles. Others are called destination charge stations, and they use the popular J1772 connector, and can charge most any EV.

Q: Can all charging stations charge all EV's?
A: No. There are a few variations, but the charging protocols are quite standardized so it's always easy to find the right charge station.

Q: Can I use an extension cord?
A: No, extension cords are a bad idea, and are unsafe to use with EVSE. Every manufacturer warns against using extension cords.

HOME CHARGING FAQ

Q: Do I need a home charge station?
A: Modern EV batteries require level 2 charging to maintain battery health and performance. Unless you can rely on workplace or public charging, you'll need a level 2 EVSE for home use.

Q: What is EVSE?
A: Electric Vehicle Supply Equipment. These are the boxes that are commonly referred to as "chargers" in conjunction with a cord and a J1772 handle. They get installed in public locations, businesses and at homes. They are not actually chargers. They simply supply A/C power to your EV at 120 or 240v. Some have more power handling capability than others.

Q: Who installs EVSEs?
A: Contact Motorize – Your EV Store for a quote for residential or commercial level 2 or DC Fast Charge stations.

Q: How much does a home charge station cost?
A: $999 will buy you a well built, long lasting Canadian built FLO EVSE with a 25' cord and a high quality J1772 connector. Many others are available with a wide range of options and features.

Q: Can I charge my EV at my condo?
A: Speak with your strata and suggest installing a group of metered EVSEs to future proof your building. More and more drivers are switching to EVs all the time. EVSEs at multi unit residential units are becoming the norm.