Electric Vehicle Frequently Asked Questions

Overview

Electric vehicles registrations in Lake Oswego grew by more than 50% in 2020. As the effects of climate change become more pronounced switching to electric vehicles is one of the quickest and most significant changes people can make to both reduce greenhouse gas emissions and reduce air pollution.

Consequently governmental entities around the world are setting deadlines to end the sale of fossil fuel vehicles. Recognizing this major car companies such as Ford, GM, Volkswagen and others have plans to switch to all electric offerings within a decade or so.

EVs are too expensive!

That used to be true but no longer is. Nissan's 2022 Leaf S is listed at $24,700 and is eligible for $10,000 in financial incentives. The 2022 Chevy Bolt with 259 miles of range starts at $31,995 while a used 2017 Chevy Bolt can be had for $19,000.

The Hyundai Kona EV, an SUV crossover, with a 258 mile range and list price of under $34,000 also qualifies for $10,000 in financial incentives making it one of the most sought after electric vehicles on the market. These are just some of the 50 EVs available for sale in Oregon.

When you realize that the cost to operate and maintain your EV can be up to 70% less than a fossil fuel car, you can actually save money by buying an EV now.

They take too long to charge

"Refueling" electric vehicles requires rethinking the difference between refueling with fossil fuel and with electricity.

With fossil fuel you fill up your tank when it gets low. Some days you may have a full tank. Other days it maybe low. Most people with electric vehicles will charge their car at home meaning that virtually everyday they will leave with a "full tank".

The only times you need to be concerned about charging is when you are driving beyond the range of the car's batteries. At this point you will want to plan to charge with a high voltage or super charger. Tesla has installed over 25,000 super chargers that will charge to about 80% of capacity in 20 minutes and they recently announced they will make their chargers available to non-Tesla owners.

In the meantime, other EV companies are working with Electrify America, EVgo and others to install DC fast chargers that in some cases are faster than Tesla.

Most of these chargers are located in areas with coffee shops and restaurants so by the time your "break" is over your EV will be ready to go.

There aren't enough charging stations around

The number of charging stations is rapidly growing. Besides Tesla, Electrify America is using Volkswagen settlement money to install 3100 high speed DC chargers throughout the country by the end of 2021. The latest is a bank of high speed chargers installed at the Bank of America parking lot in downtown Lake Oswego.. Chargepoint, the world's largest charging company, has over 90,000 chargers installed globally with a goal of 2.5 million by 2025

Locally PGE has opened new Electric Avenues in Milwaukie, Hillsboro and Wilsonville and is offering financial incentives of $500 for home and commercial chargers. In Lake Oswego the number of charging locations is rapidly expanding to the point where there are now more charging stations (17) than gasoline stations (11). See the list www.losn.org/ev/LOchargers.pdf

The city now offers public charging at City Hall and the Maintenance Center in addition to the city owned charger on A and Second streets. A great way to keep track of this expanding list of chargers is to use the Chargeway app or the Plugshare app to find what chargers are available anywhere in the country.

Since so much electricity is generated by coal, isn't pollution worse with EVs?

Actually, no. EVs are a cleaner alternative right now in every part of the U.S. As utilities move toward more renewable sources of electricity generation this will get even better.

In accordance with Oregon's recently passed Clean Energy Bill, PGE and Pacific Power are on a path to reduce greenhouse gas emissions by 80% by 2030 and to be at 100% clean energy by 2040. This is not just happening in Oregon but through out the U.S. as the cost of renewable energy has become cheaper than fossil fuel causing utilities to move away from coal and eventually from natural gas.

Won't all of these batteries just end up in a landfill?

Electric car batteries can be repurposed for other applications such as solar energy storage and data center backup. After that, as Volkswagen and Tesla are now doing, they can then be recycled for the materials such as lithium and cobalt which can be extracted and reused.

Won't EVs put a strain on utilities to produce enough electricity?

As more energy efficiency practices are put into effect, the per capita demand for electricity has decreased. Utilities see electric vehicles reversing that trend. Even so recent studies show that if 80% of all passenger cars became electric this would lead to a total increase of 10-15 % in electricity consumption.

Isn't the environment better off if I just keep driving my old car?

Not according to a study done by the Union of Concerned Scientists. Their analysis shows that in a life cycle analysis the manufacturing of a fossil fueled automobile is only responsible for 8-12% of its total GHG emissions. The rest comes from burning fossil fuel to operate the vehicle. Depending on how rapidly renewably generated electricity comes online the payback of moving to an electric vehicle can be quite rapid.

Why not wait until these cars get cheaper and better?

The biggest cost of building an electric vehicle is the batteries. Electric vehicle battery costs have declined 80% in the last six years and are continuing to decline. So EV prices will continue to go down over time. For those who are concerned about declining costs, one approach is to lease an EV and get a newer model later. Also, don't forget that the vast majority of EVs available in Oregon qualify now for $10,000 of financial incentives.

As for getting better, electric cars are more than just fossil fuel-free vehicles. They are like a computer-on-wheels that can be improved and upgraded with software downloads. Tesla is constantly adding features at no additional cost with software downloads to owner's cars at night. So unlike internal combustion cars, EVs have the ability to get better over time.

What happens if my home loses electricity?

If that happens your local gas station most likely won't have electricity for their pumps and if they do you may end up in a long line hoping they don't run out of gas. If you keep your EV plugged in at night you will be starting with a "full tank" that can give you more than a couple of hundred miles to reach a charger. However if you own a car with vehicle to grid capability you can use the car's batteries to run your home for a few days.

What other benefits are there?

Safety is a big plus for EVs. With batteries in the undercarriage there is a low center of gravity and without an engine in the front there is less chance of being impaled from a front end collision. Data from the National Highway Safety Administration confirms this. The Tesla Model 3 received their highest Five Star safety rating and their data shows that the Model 3 has the lowest probability of injury of any car they tested

One of the most significant additional benefits of moving toward electric vehicles is the health benefit of eliminating air pollution generated by the burning of fossil fuel by vehicles. A study by MIT calculated that increased air pollution from vehicles that burn fossil fuel contributes to 58,000 premature deaths annually in the U.S. This compares to 37,000 deaths caused by automobiles accidents.