TOP 10 FAQ FOR PROSPECTIVE EV DRIVERS

DRIVE ELECTRIC HAWAII

1. SHOULD I GET A FULLY ELECTRIC OR A PLUG-IN HYBRID MODEL?

There are two major factors to consider: how far you drive in a single day and whether you can charge at home. New fully electric vehicles can drive anywhere from 100-300 miles on a single charge. Hawaii residents only average 30 driving miles per day, so if people have access to reliable charging at home or work, a fully electric car would fit easily into most people's lives. If a person drives long distances—think 100-200 miles every day—and doesn't have access to charging at home or work, then they may want to look into plug-in hybrid options for now. These plug-in hybrid options have gasoline backup for when the battery runs low. However, these plug-in hybrid vehicles do have more moving parts, which leads to higher maintenance costs.

2. CAN I CHARGE MY VEHICLE AT HOME?

If you live in a single-family home or townhome with a garage, you can plug your electric vehicle into any 120V outlet in the garage using the charger cord that comes with the car at purchase. You will be charged by the electrical utility per kWh of energy used. If you require faster charging, you can either use a 440V dryer outlet or install a Level 2 charger in your garage after confirming you have sufficient electrical capacity on that breaker.

If you live in a multi-unit dwelling like a condominium or apartment building, you will need to ask your HOA or AOAO for permission to install a Level 2 charger in your stall, or ask them to install a Level 2 charger for residents to use. People living in these buildings will continue to rely more heavily on the public charging network until more buildings install chargers for their residents.

3. ARE THERE PUBLIC CHARGING STATIONS NEARBY?

Yes! There are over 720 publicly-available electric vehicle charging outlets at over 350 locations throughout the state of Hawaii. EV drivers can find stations near them through phone apps like Plugshare, or through certain network apps, including Chargepoint.

If you are in a pinch and need to find a DC Fast Charger to fill up from empty on the go, Hawaiian Electric operates 22 fast chargers throughout their territory.

4. HOW MUCH WILL ELECTRICITY COST?

If you charge at home, you will pay per kWh of energy used, the same residential electricity price you pay throughout the rest of your house, on your next electricity bill.

Hawaiian Electric does offer an EV time-of-use rate, under which residents can pay a lower kWh rate during the day (9a-5p) and a higher rate in the evening. This pay structure only makes sense for those residents that are home and can charge their vehicle during the day, which may include retirees, students, and those with flexible schedules.

If you use public charging stations, what you pay will vary. Some charging stations may charge per kWh, others by time parked, and others still may offer free charging. The phone apps used to locate chargers often share the pricing for each station.

5. WHAT INCENTIVES ARE AVAILABLE FOR ELECTRIC VEHICLE OWNERS?

A federal tax credit of $7,500 is available for a full battery electric vehicle. Additionally, a federal tax credit of $2,500 for the first 4kWh + $417 for each additional kWh is available for a plug-in hybrid vehicle. This program is available for each manufacturer until they sell 200,000 electric vehicles. So far, GM and Tesla have hit this limit and are no longer eligible. It is worth noting that the tax credit must be filed with your taxes for the tax year of the purchase, cannot roll over into later years, and cannot be taken as a tax rebate.

6. WHAT DO I NEED TO KNOW ABOUT ELECTRIC VEHICLE MAINTENANCE?

Because electric vehicles have no engine, they require less regular maintenance than gas-powered cars or even plug-in hybrids. EVs require no oil changes, transmission fluid, spark plugs, mufflers, or other parts associated with car engines. Electric vehicles also create less strain on brake pads due to regenerative braking. All of this can save EV owners time and money.

One study in Canada found a 43% maintenance cost savings for a fully electric vehicle versus a gas car, which was conservative because it didn't take brake pad life into consideration.

Unfortunately, plug-in hybrids do still have engines, so maintenance cost savings don't translate over.

7. HOW LONG UNTIL I'LL NEED A NEW BATTERY?

Battery degradation is a natural process that permanently reduces the amount of energy a battery can store or the amount of power it can deliver. As a battery degrades, that can be seen in the amount of energy it can hold, but it won't affect the power output of the vehicle. Batteries start their life with 100% capacity, and over time they deteriorate. For example, a 60 kWh battery with 80% capacity would effectively act like a 48 kWh battery.

An EV battery is considered no longer useful when its capacity drops to 70-75% battery capacity, reducing a car's total range to lower than the owner needs. Typical batteries in new electric vehicles are expected to have a lifespan of 8-20 years. Research has shown that batteries are exhibiting high levels of sustained health and that the vast majority of batteries will outlast the usable life of the vehicle.

Battery life length varies depending on several factors including time, high temperatures, time spent at very low and high charge, and frequency of using DC Fast Chargers. Owners can extend battery length by manipulating their charging strategy to include frequent convenience charges at Level 1 and Level 2 chargers instead of draining the battery near zero charge and filling up at DC Fast Chargers.

Every battery in an electric car sold in the U.S. comes with a warranty that lasts for a minimum of eight years or up to 100,000 miles. This standard warranty is excellent, but remember to take a look at the fine print. Some manufacturers only cover the battery if it completely dies and cannot hold a charge, which does not happen often. Brands like BMW, Chevrolet, Tesla, Volkswagen, and Nissan will cover a battery pack if its capacity drops to a certain percentage, usually 60 to 70 percent (Car and Driver, 2020).

8. SHOULD I LEASE OR BUY?

This decision should be made on an individual level after assessing your circumstances and financial situation.

The common recommendation is to lease electric vehicles at this stage because the technology is evolving rapidly, and early EVs have typically depreciated quickly. When you lease, you can trade in for a new model and new technology every couple of years.

However, that depreciation trend seems to be slowing as EVs are being developed with longer ranges and battery lives. Additionally, those that buy their EV can take advantage of the federal tax credit, which dealerships aren't required to pass on to consumers in the leasing process.

9. WHAT DOES IT COST TO INSURE AN ELECTRIC VEHICLE?

It may cost slightly more to insure an electric vehicle than it would to insure a comparably-priced gas car, as the vehicle may be valued somewhat higher and it generally costs more to repair a damaged EV (after an accident, fire, or theft) than it would a gas car. However, any additional cost may be offset by insurance discounts, and many EV owners with good driving records say they pay the same for insurance as they did with their previous gas car.

10. IS THE BATTERY GOING TO DIE BECAUSE I'M IDLING WHILE STUCK IN TRAFFIC?

No, idling will not drain your battery unless you use air conditioning because basic functions like radio and lights are run off the smaller standard 12V battery. However, air conditioning will pull power from your main electric vehicle battery, so drivers should use EcoMode or an equivalent if they are worried and running low. EV drivers rarely allow their batteries to get this low, though, because they charge their car whenever it is convenient, topping off regularly, similar to how we charge our phones.