

WILL YOUR NEXT CAR BE ELECTRIC?

FREQUENTLY ASKED QUESTIONS



Drive Electric Hudson Valley is a 4 month consumer education and outreach pilot program that aims to help you figure out if an electric vehicle is right for you. Here are some frequently asked questions about plug-in hybrids and 100% electric vehicles (EV). With your help, we hope to make clean transportation technologies more affordable and available to everyone in the Hudson Valley.

1. What is a hybrid vehicle?

Regular hybrid vehicles have an internal combustion engine (gas or diesel) and an electric motor. Depending on the make, model and driving needs, the engine and electric motor work together or separately to provide the best combination of power or fuel efficiency. There isn't a plug in feature with regular hybrids.

2. What is a plug in hybrid vehicle?

A plug-in hybrid (PHEV) is similar to a regular hybrid but the battery can be plugged in to recharge. They can usually go longer on electric mode alone than regular hybrids.

3. What is a 100% Electric Vehicle (EV)?

A 100% Electric Vehicle uses only an electric motor and a battery pack to power the vehicle. It does not have an internal combustion engine as back up.

4. How far can you go on a single charge with a plug in hybrid?

It varies depending on make and model of vehicle. Current models range from 10 to around 50 miles.

5. How far can you go on a single charge with a 100% Electric Vehicle?

It varies depending on make and model of vehicle. Current models range from 80 to over 300 miles.

6. How do you charge an EV?

Either at home with level 1 or 2 stations or at public level 2 charging stations or DC Fast Chargers. Refer to "Charging Stations" handout for more information.

7. How long does it take to fully charge an EV?

It varies depending on the size of the battery and type of charger that's available. Tesla Superchargers and DC Fast chargers can usually do it in under an hour. It may take 4-8 hours with a level 1 or 2 charging station.

8. If I get or have a solar electric system (PV) can I use to charge an EV?

Absolutely. In fact, NYSERDA has an online tool to help you figure out if an electric vehicle is right for you and how you can get the best benefit by adding solar: <https://nyserda.wattplan.com/>

9. Where are charging stations located?

Refer to Chargepoint and other apps for location finder. Some apps will tell you how much energy is being put into the vehicle, distance equivalent in miles and cost per charge.

10. What are the different types of charging stations out there?

Level 1, level 2 and DC fast chargers are the most common ones. Refer to "Charging Stations" handout for full explanation, details and chargers currently available in the market today.

11. What is the actual cost of ownership?

Depends on the dealer, down payment, discounts available and structure of monthly payments. Maintenance costs will be reduced for there's no oil changes, tune ups, fuel or air filters to be replaced. Charging cost will depend on electric rates or charging stations rates depending on dealer and municipality. See question 7 and 8 for more details.



12. What is the cost to charge an EV?

It depends on the electric rate from the utility and size of battery. For example if the electric rate is \$0.14 per kWh and the battery size is 24kWh then $\$0.14 \times 24 \text{ kWh} = \3.36 cost to fully charge battery. Keep in mind some EV makers will let you charge for free at their charging stations and there are municipalities that offer free/reduced cost charging options.

13. What is the cost per mile to drive an EV?

It depends on the electric rate from the utility, size of battery and driving conditions. For example, if a car uses 34 kWh to travel 100 miles and the electric rate is \$0.14/kwh then $\$0.14 \times 34 \text{ kWh} / 100 \text{ miles} = \0.0476 or 5 cents per mile

14. How can I get the best range out of my EV?

Become familiar with the different "Eco Modes" that your vehicle may have and with the different braking regeneration or recuperation modes that your vehicle may come equipped with.

15. Have you saved money driving your EV?

Yes, mostly gas money. Should be saving money on maintenance as well.

16. What is the best part of owning an EV?

Low cost of operation, smooth driving, low impact on the environment, ability to use new technology.

17. Are EV for city driving only?

No, EVs can be taking anywhere as long as the trip is planned properly

18. Are they fast?

Yes, due to full torque available from stand still they can be faster than most gas/diesel powered vehicles

19. What happens if you run out of charge?

The vehicle will stop. Same as if you run out of gas. If your mindful of your range and travel situation this should not be a problem.

20. Does it handle different than my gas car?

No. The suspension and handling is as good as any regular car. In fact, due to the batteries low center of gravity, some drivers feel an EV handles better than regular gas powered vehicles.

21. Are EVs a primary or secondary vehicle?

Both. It depends on your commuting and lifestyle situation

22. What kind of maintenance will I have to do on a 100% EV?

Mainly adding washer fluid and tire rotation. There's no need to do oil changes or replace fuel or air filters because there aren't any.

23. When do I have to replace the batteries?

It depends on manufacturer estimates. Ask your dealer about warranties during the first 100,000 and take replacement battery cost into account when pricing the car.

24. Should I buy or lease an EV?

It depends on your financial comfort, incentives available and desire to keep a vehicle for a short or long period.

25. Are there any incentives or rebates to help with purchase?

Federal and state!

26. What are the down-sides of owning and driving an EV (if any)?

It may require some adjusting to the lack of noise. You need to be more vigilant of pedestrians because they may not hear you coming.