



Will Your Next Car Be Gas or Electric?

The choice between electric and gas is not a simple one. There are many different costs and considerations you'll want to factor in before you buy.

There are now over 70 electric and plug-in hybrid models available in the U.S.

The transition to electric vehicles (EVs) is gaining momentum. Although EVs currently constitute only about 6% of new vehicle sales in the U.S., they are expected to account for over 50% by 2030.¹ And with recent price reductions and tax incentives, EVs are more affordable than ever. But to make a meaningful comparison between gas and electric cars, you need to look at a number of different factors.

Compare *All* the Costs

Sales Price. EVs generally have higher sticker prices than their gas-powered counterparts (GPVs). If you are looking for an inexpensive economy car, there aren't that many EV models to choose from. But there are a whole range of luxury EVs, and their prices are not that much different from other high-end vehicles. There are also tax credits that effectively lower the price of an EV -- sometimes significantly.

Tax breaks. As part of the Inflation Reduction Act of 2022, EV buyers can benefit from a generous federal tax credit. The Act extended and modified the tax credit for EV purchases, up to \$7,500 for new vehicles and up to \$4,000 for used vehicles. But the credit comes with many caveats. It has both income and vehicle price limits -- i.e., it is not available to high earners or for expensive cars. Even more restrictive are the requirements that a certain percentage of the vehicle and battery must be manufactured in North America -- which is not the case for many of today's EVs.

Some states may also offer tax credits for EVs. They may even allow you to pay lower tolls on highways. But such subsidies vary widely from state to state, and often come with restrictions. Dealers can help you determine how big a tax break you will get for a given model.

Fuel. EVs cost much less to "fill up" than GPVs. How much? A 2022 study compared the average price for 100 mile charge-up versus the average price of gas to fuel the same driving distance. The difference was striking: \$5.14 vs. \$14.08 -- or over \$1,000 per year, assuming 12,000 miles of driving.² Of course the disparity varies from model to model, and with the prices of gas and electricity. But in general, EV charging costs less than half than the gas equivalent for a GPV.

Maintenance. EVs require much less maintenance than GPVs. An EV drivetrain has about 20 moving parts, versus over 200 for a GPV. That means no oil changes or tune ups. Even brakes last much longer, due to regenerative braking. This can add

up to a lot of money over five years, especially when compared to GPVs that recommend service every 7,500 miles.

Insurance. Despite their low maintenance costs and generally good safety record, EVs tend to cost more to insure than GPVs. According to insurance companies, this is due to the fact that EVs do not yet have a well-established track record and because some repairs, particularly those involving battery damage, tend to be expensive.

Resale. A typical GPV will lose about 40% of its value over three years. How well EVs hold their value over time is yet to be seen, since their track record is limited. Prior to last year's skyrocketing used car prices, EVs -- mostly Teslas and Nissan Leafs at that point -- generally did not fare as well as GPVs, primarily due to concerns about battery life. But with last year's spike in fuel prices, EV resale prices shot up. They have since moderated. But given the fact that most models have been introduced in the past three years, their long-term resale value is yet to be determined.

Other Considerations

Range. This is a big concern with EVs. And it should be. Most all-electric EVs currently offer a much lower range than a GPV, typically 200 to 300 miles, versus 400 to 600 miles for many GPVs. A handful of EVs offer ranges of over 400 miles, but those are for pricey, top-of-the-line models. Range, like mileage, also varies widely, depending upon driving conditions. EV range drops at highway speeds, while GPVs do worse around town. And running out of juice is a definite no-no with an EV -- which means not letting the charge run too low and making more frequent stops on long trips.

Charging. There are many thousands of charging stations across the country and a lot more to come, thanks in part to a provision in the Inflation Reduction Act. But they are still far outnumbered by gas stations, and it can be a challenge to find a high-speed charger in certain sections of the country. Tesla owners can access an extensive network of Superchargers, which typically charge to 80% capacity in under 30 minutes. And although Tesla has started to provide other EVs limited access to its network, quick chargers can be harder to find if your EV is not a Tesla. In fact, most EV buyers do most of their charging at home. Home chargers run on lower current, and a full charge can take up to eight hours. Setting up a home charger typically involves some rewiring and can cost \$1,000 or more.

Longevity. Today's GPVs can run for years -- 200,000 miles is common -- without major problems. But the jury is still out on EVs because they have not been around very long. Their batteries are typically guaranteed for 100,000 miles or more, but there is simply not a long enough track record to accurately assess whether or not they rival GPVs in longevity. Note, however, that batteries have a limited life, and battery capacities decline over time.

The environment. The primary reason electric cars were reintroduced is, of course,

the environment. Even after accounting for the ecological damage from battery production and recycling, EVs still come out way on top of their GPV counterparts when it comes to eco-friendliness.

Ideal Owner Profiles

EV

- Mostly uses vehicle for local, short-range driving
- Has a garage or carport where the vehicle can be charged at night
- Lives in a warmer climate
- Has easy access to public chargers
- Is eco-minded
- Is willing to pay more up front for lower operating costs over time

GPV

- Uses vehicle frequently for long trips
- Lives in an area where there are not many public chargers
- Does not garage the car or must park it on the street
- Lives in a colder climate
- Seeks a car with the lowest sticker price

Of course, the EV/GPV choice is not necessarily an either/or decision. For those seeking the efficiency of electric but the convenience of fuel, there are hybrids, which feature a limited electric range -- typically under 40 miles -- but also have gas-powered engines for longer trips. While there are a number of hybrids available today, many car manufacturers are phasing them out in favor of pure electric models.

Whether you opt for gas or electric -- or both -- make sure to shop around and check reviews from publications such as *Consumer Reports*. And keep in mind that some of today's downsides to EVs -- price, number of models, range, and charging stations -- will likely improve as technology and infrastructure advance to accommodate the transition away from fossil fuels.

¹Bloomberg, [More Than Half of US Car Sales Will Be Electric by 2030](#), September 20, 2022.

²CNBC, [These Charts Show How Much it Costs to Charge an EV vs. Refueling a Gas Vehicle](#), March 20, 2022.