

# Hybrid cars

## - Let's drive the future! -

The demand for hybrid, plug-in hybrid and electric cars has never been stronger!

In 2020, sales of pure electric cars grew by 186% meaning up to 108K units/year, while sales of plug-in hybrids rose up to 91% or to roughly 67K units/year. This trend will continue as we head towards the 2030 ban on the sale of new petrol and diesel cars.

The Toyota Prius is arguably the most famous hybrid car on the planet. It was launched in 1997, the world's first mass-produced hybrid vehicle becoming the brand generic for green motoring, loved by everyone from greenwashed celebrities to Uber drivers and of course to us.

If you're serious about reducing your carbon footprint in all aspects of your life, you've likely taken a close, hard look at the car you drive. But, how much better is a hybrid vehicle, really? Are hybrid cars worth it? We have some arguments for and against hybrid vehicles to look at before considering a purchase.

### **But what makes Hybrid Cars so special?**

Hybrid vehicles utilize two engines to produce the best results possible. They feature a standard internal combustion engine but complimented with an electric motor. This electric engine is powered by a rechargeable battery pack installed in the vehicle.

The technology isn't new, it first got invented at the end of 1890's but as it was not popular back in the day it became "forgotten" until 50 years ago when researchers arrived at the conclusion that our petrol resources will one day be finished and so the electric engine made a comeback in the automobile industry.

## **What Are the Pros of Hybrid Cars?**

Given the way they operate, hybrid cars manage to get “the best of both worlds” being combustible & electric fueled.

### **1. Better Overall Fuel Economy.**

Hybrid cars are designed with the fuel et carbon emission reductions in mind, to travel more kilometers while saving money at the pump.

### **2. Improved City Mileage.**

Hybrid cars feature a regenerative braking system that indeed helps with power regeneration. Unlike the traditional car where the braking energy is just wasted and the whole braking system sustain hard friction and usage, the hybrid car is designed to capture the braking energy and use it to power the battery of the electric engine.

The regenerative braking system helps in extending the brake lifespan, as well as increasing the battery power which indeed helps in less fuel consumption. At lower speeds, aerodynamic drag robs less power as well.

### **3. Less Carbon Released.**

The whole principle around the hybrid cars is using both petrol and electricity but cutting on the petrol use as much as possible. The less fuel that's burned, the less carbon gets released in the atmosphere.

### **4. Lower Pollution.**

The hybrid car technology is designed to feature green fuel, making the cars environmental-friendly. They produce up to 90% less pollutants than a “regular” car.

Also, as stated above, hybrid cars have better gas mileage and are cleaner compared to gas engines, hence environmentally friendly.

The environmental friendliness can go up to 100% as some hybrid cars are designed to allow driving while using electricity only. This happens only when driving at low speeds, during engine start-up, or when idling at a spot.

### **5. Lower Depreciation.**

Hybrid variants of popular vehicles demand a higher resale value due to their popularity within the used-car market. With the hybrid technology expect reduced maintenance, that directly relates to saving your money.

In 2014, AutoTrader did research on hybrid cars and found that on average, the hybrid batteries lasted for 10-15 years with up to 200,000 miles. Working with these values, then it is true that hybrid batteries are reliable and long-lasting.

## **What Are the Cons of Hybrid Cars?**

Hybrid cars are very economical and environmental-friendly. Despite the many advantages of hybrid cars, they also have several drawbacks. Here's how they fall short:

### **1. Higher Price.**

Hybrid variants for popular car models can sometimes cost thousands of euros more than their gas-only counterparts. In fact, this is one of the reasons why hybrid cars have not been well known for so many years. However, the higher purchasing cost is leveled down by the lower cost of running. Therefore, if you can afford the initial buying price, then you can consider buying a hybrid car.

### **2. Reduced Power.**

Hybrid output usually pales in comparison to gas-powered vehicles because they're built to maximize efficiency.

Comparing a hybrid car with traditional models by performance standards, the hybrid cars do lag behind most conventional gasoline-powered cars when accelerating.

Also, if you're a petrol-head, tweaking your hybrid is almost out of question. The inside of the car is untouchable and has to stay standard. The heavyweight battery affects the handling of hybrid cars due to the imbalanced weight distribution, so before actually buying one, testing the car is imperative, as this conduit might not suit your taste.

### **3. Less Impressive Highway Mileage.**

At highway speeds, hybrid cars lose some of their fuel economy advantage because braking is seldom necessary and wind resistance is more of a factor.

### **4. Limited Size.**

Most hybrid cars are smaller than most conventional ones. The SUV branch is also lacking with very few models existing. In case you have a big family, then finding a hybrid car with enough space to carry them around might be a problem.

The SUVs do not deliver what you would exactly expect from a hybrid car. For instance, the Highlander Hybrid SUV has a third row – so it's big enough for a family of 5 but only delivers an autonomy of 75km whilst using the electrical engine. This is not what you expect to get from a real hybrid car.

### **5. Costly Battery Replacement.**

Replacing the battery on a hybrid can cost up to 2000\$-2500\$, though they're usually built to last, and are under warranty for at least 150,000 kilometers or up to 10/15 years in some manufacturer cases. A solution to this problem can be buying a secondhand battery, dropping the price by up to 1000\$.

## **Should I Buy a Hybrid Car?**

If the added upfront cost surpasses your budget or you're in need of a larger vehicle, then a hybrid probably isn't your best option. If these aren't concerns, however, and you regularly drive through city traffic, then you might find a hybrid to be a sound investment. Keep in mind, though, that this is a long-term investment because it'll likely take years to regain the extra money spent on buying a hybrid through gasoline savings.

## **Conclusion**

In conclusion, it is evident that most hybrid cars utilize advanced technology and are environmentally friendly. These cars come with a lot of advantages making them worth buying.

I've tried explaining and give 5 advantages of hybrid cars and 5 disadvantages to make it fair. But despite the cons, in my opinion, hybrid cars are worth buying and a great investment for saving your money as well as conserving the environment, by ensuring low carbon dioxide emissions as well as reducing the dependency on fossil fuels.

So, in the end, would you buy one?