

How do plug-in hybrids save money?

■ Saving on fuel

Plug-in hybrids save money on fuel because they run on both electricity and petrol or diesel and they also have a battery with a higher-capacity than regular hybrids so they can store more electricity. This means that they have a double advantage: the low cost of electricity and the convenience of service station's **widespread** availability enables quick refueling.



Plug-in hybrids also save energy through regenerative braking, which **recovers** much of the energy typically lost when you apply the brakes. Regenerative braking slows the vehicle by converting the braking momentum into electricity to be stored in the battery.

They also save fuel by using a start-and-stop system that turns off the engine, instead of keeping it **idle** while the car is stuck in traffic or waiting at the traffic lights and automatically starts the engine again when the accelerator is pressed.

habit: *abitudine*
idle: *inattivo*
to recover: *recuperare*
widespread: *diffuso*



Volvo XC60 concept battery pack

■ Maximising battery potential

The big advantage of a plug-in hybrid is that you can plug it in to re-charge the battery. They have a larger battery than regular hybrids and this lets you use more electricity and less fuel. When the electricity runs out, it operates just like a regular hybrid.

It is still important to consider that not all plug-ins are alike. Some have batteries that hold more electricity than others and some can go farther on electricity without using any fuel. Since using electricity instead of fuel is key to saving money with a plug-in hybrid, driving **habits** – especially the distance you drive between recharging the battery – can have a big effect on your fuel costs.

■ Saving on maintenance

Electric vehicles require less maintenance. In a fully electric car, there is no need for operations such as oil changes. Brake pads last longer, too thanks to regenerative braking: instead of slowing down with the brakes like a normal car would, a plug-in hybrid car uses the engine to slow down.

In a car with a petrol engine, a brake pad normally lasts between 40,000 and 90,000 km.

1 PAIR WORK Recommend a plug-in hybrid car to your friend. Follow the prompts.

- Properties of plug-in hybrids (battery, fuel/electric engine, regenerative braking, start-and-stop system)
- Saving on fuel
- Less maintenance

2 Fill in the gaps with the given words.

runs • battery • power • vehicle • charger • distance • charged • petrol • engine • ways

What's the Difference Between a Plug-In Hybrid and a Hybrid?

A hybrid **1.** gets its energy simultaneously from a **2.** engine and an electric motor. The engine and the motor work together to **3.** the car; this helps to increase the fuel economy ratings (i.e. how many miles you can travel with one litre of petrol). The **4.** also uses petrol to help recharge the vehicle's **5.**, which powers the electric motor. A plug-in hybrid vehicle (PHEV) also uses a petrol engine and an electric motor, but in different **6.** The plug-in hybrid runs primarily using its electric motor, powered by the battery. A plug-in hybrid won't tap into your petrol tank until the battery **7.** out of power. Instead of the electric motor and the engine working together at the same time, a plug-in hybrid uses its engine as a backup plan. The **8.** you can travel before this happens is often advertised as a vehicle's all-electric range. Once the battery runs out of power, it has to be **9.** using a plug-in electric **10.**; the engine can not sufficiently recharge a plug-in hybrid's battery.

Adapted from: <https://thenewswheel.com/whats-the-difference-between-a-hybrid-and-a-plug-in-hybrid/>

