



An Australian Government Initiative



Green
Vehicle Guide
Driving better choices

HYBRID ELECTRIC VEHICLE GUIDE

THIS GUIDE CAN HELP YOU DECIDE WHETHER A HYBRID ELECTRIC VEHICLE (HEV) IS RIGHT FOR YOU.

HEVs are common in Australia and provide the benefits of having both an electric and petrol motor. They are a cheaper alternative to a fully electric vehicle and provide the benefits of having better fuel economy and reduced impact on the environment than a standard car with only a petrol or diesel motor.



If you're thinking about buying an HEV, you should consider:

- your driving needs and lifestyle, including how often and far you travel
- purchase price, fuel, running and service costs
- if you want a more economical car that can also be environmentally-friendly.

What is a HEV?

Hybrid vehicles use an electric motor as well as a petrol or diesel engine.

There are 2 types of hybrids:



Non-plug-in hybrid electric vehicles (HEVs)

Use electricity generated by driving the car, such as from the braking system or kinetic energy when you stop accelerating, to recharge the battery instead of an external plug.



Plug-in hybrid electric vehicles (PHEVs)

PHEVs run on a combination of petrol or diesel and electricity. They can be plugged into a power outlet or charging station to charge the electric motor. Some also charge while driving from braking or when you stop accelerating.

Benefits

Hybrid electric vehicles are a good option if you're looking for a more environmentally-friendly vehicle but need a petrol or diesel option to extend driving range.

They are a cheaper alternative to a fully electric vehicle and provide other benefits like:

- Reduced running costs
- Lower tailpipe emissions
- Greater driving range
- Lower stamp duty and/or registration charges in some states and territories
- Less dependence on imported fuel.

How much does a HEV cost to buy and run?

HEVs generally cost more to buy than a traditional petrol and diesel vehicle but are cheaper than most electric-only vehicles. HEVs have become more cost competitive since the first models were introduced in the early 2000s.

Running costs will depend on fuel pricing and servicing.

For a plug-in hybrid, the cost to charge the battery depends on where you charge it. If at home using a power outlet, this will depend on your household electricity plan. It is generally more expensive to charge at a public charging station than at home.

Given the cost of fuel, it is also more expensive to run a plug-in hybrid on petrol or diesel power if the battery is low. However, when used in combination, the fuel economy of hybrids means cheaper driving than a traditional car.

What about ongoing costs?

Plug-in hybrid vehicles registered in some states and territories may have to pay a distance-based charge, in addition to registration charges.

More information on this is available from your [state or territory registration authority](#).

Find out more



[View the concessions available for hybrid vehicles in your state/territory.](#)



[Estimate the cost and time it would take to charge your plug-in hybrid vehicle using the home charging calculator.](#)

There are now

3000+

publically accessible charging stations at

1750+



locations

How and where can I charge an HEV?

All hybrid vehicles can be refuelled at a service station when charging is not possible.

Some HEVs charge the battery while driving using kinetic energy or the vehicle's braking system.

Plug-in hybrid vehicles can be charged at home from a normal wall outlet or at a public charging outlet.

For a list of public charging stations see [Electric Vehicle Council's charging page](#).

How long does it take to charge?

A plug-in hybrid vehicle can take several hours to charge, especially if the battery is low. Keeping your battery around 80 per cent charged whenever you can will help maximise your vehicle's battery range and battery life and reduce the money you spend on petrol or diesel.

To maximise battery capacity and minimise battery degradation:

- Keep your battery at least 20 per cent charged at all times.
- Where possible, charge it to 80 per cent.
- Use fast chargers only when necessary.

For faster charging at home, you can install a special charging outlet. These can be purchased from your vehicle's manufacturer or a company that sells charging equipment for electric vehicles.

What models are available in Australia?

View the models available in Australia and their estimated battery range on the [Search vehicle by feature page](#).

Find out more

See our

- [Electric vehicle guide](#)
- [Hydrogen vehicle guide](#)

What emissions are produced by a HEV?



HEVs produce exhaust emissions when they run on the petrol/diesel engine.

The battery motor produces no emissions while running, however emissions may be produced:

- to generate the electricity to charge the battery
- to manufacture a vehicle and its battery
- from tyre, brake and road wear

Find out more about [lifecycle emissions](#) for vehicles.

How far can HEVs travel without recharging?

Many plug-in hybrid models sold in Australia can travel around 50kms on battery power.

Plug-in hybrid vehicles can travel further on electric power only than non-plug-in hybrid vehicles.

Your vehicle's fuel consumption will be higher when your battery is low. On-road fuel consumption and battery range will also be affected by individual circumstances, including:

- how much weight the vehicle is carrying
- use of accessories such as heating or air-conditioning
- acceleration and braking
- the charge level of the battery and trip distance.