



An Australian Government Initiative



**Green**  
Vehicle Guide  
Driving better choices

# ELECTRIC VEHICLE GUIDE

USE THIS GUIDE TO HELP YOU DECIDE WHETHER AN ELECTRIC VEHICLE (EV) IS FOR YOU.

EVs are becoming more common in Australia and charging infrastructure is increasingly available.



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

- your driving needs and lifestyle, including how far and often you drive
- purchase price
- fuel, running and service costs
- if you want a more environmentally friendly car

## Types of EVs

There are 4 main types of EVs in Australia:



### Battery electric vehicles (BEVs)

Use an electric motor and battery. These are powered by plugging into a power outlet or charging station. Also known as pure EVs.



### Non-plug-in Hybrid Electric Vehicles (HEVs)

Has an electric motor but uses a petrol or diesel engine to charge the battery and provide additional power when required. Energy generated by the braking system recharges the vehicle, instead of an external plug.



### Plug-in Hybrid Electric Vehicles (PHEVs)

An electric vehicle, with a petrol or diesel engine to extend the battery's range and provide additional power when required. Can be charged by an external charging outlet.



### Fuel cell electric vehicles (FCEVs)

Powered by a fuel cell (using hydrogen) to generate electricity instead of a battery.

The most commonly available EVs for everyday drivers are BEVs, PHEVs and HEVs.

## EV benefits

Australian drivers travel on average around 33 kilometres (km) a day <sup>1</sup>. Given that charging stations are becoming more available, EVs are an increasingly viable and convenient solution in cities, towns and major holiday destinations.

There are a range of benefits to driving electric, including:

- Reduced fuel costs and higher efficiency
- Less maintenance
- Fuel security
- Reduced traffic noise
- Air quality improvements
- Better for the environment

1 Australian Bureau of Statistics (2020) [Survey of Motor Vehicle Use, Australia](#)

## How much does an EV cost to buy and run?

EVs generally cost more to buy than a petrol or diesel vehicle. However, the purchase price of EVs is expected to become more competitive as more models become available in Australia.

Some states and territories also offer discounts on stamp duty and/or registration charges.

The cost of charging an electric vehicle will depend on where you charge it. If you charge it at home, the costs will depend on your home electricity plan. It is generally more expensive to charge an electric vehicle at a public charging station than at home.

### Find out more

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



Estimate the cost and time it would take to charge your EV using the [home charging calculator](#).



## What about service and other costs?

Because EVs have fewer moving parts than petrol or diesel cars, they are generally cheaper to service and maintain.

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

More information on these charges is available from your [state/territory registration authority](#).

## How far can EVs travel without recharging?

The range depends on the type of EV:

- Most BEVs can travel on average 400kms before they need to be recharged.
- PHEVs have a range of around 50kms on the electric battery before switching to petrol or diesel.

The **battery range** 

of EVs sold in Australia vary between



**250 – 650km**

The average is about

**400km**

There are now

**3000+**

publically accessible charging stations at

**1750+**



locations

## How and where can I charge an EV?

EVs can be charged from a normal wall outlet in your home. You can also install a special charging outlet to charge your EV faster. These can be purchased from your vehicle's manufacturer or a company that sells charging equipment for electric vehicles.

Out on the road, EVs can be charged at a public charging station. There are now over 3000 charging stations across Australia and this is increasing.

For information on public charging stations see the [Electric Vehicle Council's charging page](#).



## How long do EVs take to charge?



EVs can take several hours to charge from a wall outlet, especially if the battery is low. For longer trips, many public charging stations have a higher rates of charge, which can charge your vehicle faster.



Depending on your vehicle:



- A 50kW charger can add 50km of battery range in 10 minutes
- A 200kW charger can add 200km of battery range in 10 minutes.



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.



## What emissions are produced by an EV?

Battery electric vehicles do not produce any tailpipe emissions.

However, emissions may be produced:

- to generate the electricity for an electric vehicle
- to manufacture a vehicle and its battery
- from tyre, brake and road wear.

Find out more about [lifecycle emissions for 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

Learn more about electric vehicles

- [Australian Renewable Energy Agency](#)
- [Electric Vehicle Council](#)

See our

- [Hybrid electric vehicle guide](#)
- [Hydrogen vehicle guide](#)