

## Electric vehicles in WA

Electric vehicles (or EVs) are helping us drive into a cleaner, more efficient future. Instead of running entirely on petrol or diesel, EVs use electricity for all or part of their fuel needs. This can include electricity from renewable sources, for example if an EV is charged during the day at a home with solar panels.

### WA's EV Charging Network: Fast Facts

Synergy, Horizon Power and the State Government have partnered to help EV drivers enjoy even more of WA. Due for completion in 2024, this is set to be the world's longest continuously connected electric highway!

- ✓ 98 new EV chargers
- ✓ 49 locations around WA
- ✓ 6,600km distance covered
- ✓ 15-minute charge time if using the fast charger option.
- ✓ \$4.1 million State Government investment

### Here's your fast guide to the three types of EV:



## BEVs - Battery Electric Vehicles

BEVs run entirely on battery power, which makes them a fully electric vehicle. There's no petrol or diesel fuel involved at all, which means no fuel tank, no exhaust pipe and minimal driving emissions!

(Technically BEVs can't be called "zero emissions" since the electricity used to charge them may not come from renewable sources).



## HEVs - Hybrid Electric Vehicles

HEVs run on a combination of fuel and battery power. Under the bonnet is an electric motor and a petrol engine, controlled by an internal computing system. Typically the electric motor in an HEV gets the car moving, then the fuel engine takes over as the car gets faster.



## PHEVs - Plug-in Hybrid Electric Vehicles

PHEVs are similar to HEVs – in that they have a petrol engine and a battery-powered electric motor. The difference, as the name suggests, is how they operate. By plugging a PHEV into an electric charger to charge the battery it can drive a certain distance using just the battery power, before the petrol engine is required.



### EV Quiz: Test your knowledge

1. It's cheaper to drive the same distance in an EV than a car with a petrol engine.  True  False
2. Australia is a world-leader in buying and driving EV's  True  False
3. If you drive an EV in Western Australia, you can only drive within our main cities and towns.  True  False
4. When it comes to servicing, EVs generally need:  
 A. The same amount of servicing as a car with a petrol engine  
 B. More servicing than a car with a petrol engine because of the battery and electric components  
 C. Less servicing compared to car with a petrol engine because there are less moving parts in the engine.

#### Driving Forward

Name 3 advantages that an electric vehicle has over a car with a petrol engine.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

#### Overcoming bumps along the road

What are 3 obstacles that might make someone think twice before they buy an EV - and how could these obstacles be overcome?

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

#### PM FOR A DAY

If you were the Prime Minister of Australia, how would you encourage more Australians to buy an EV as their next car?

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## EV Quiz: Answers

### 1. TRUE:

Compared to the cost of petrol to drive the same distance, the cost to charge an EV is much lower (based on today's prices).

### 2. FALSE:

The UK, the Netherlands, Norway, India, and China are some of the countries which have committed to banning Internal Combustion Engine (ICE) vehicles (cars powered by petrol or diesel fuel) by a set year.

### 3. FALSE:

WA has hundreds of EV charging stations and EV drivers can enjoy trips around WA with plenty of dedicated places to charge along the way.

### 4. (C):

EVs generally don't have as many moving parts as vehicles powered by combustible liquid fuel like petrol, so there's generally less maintenance needed. For example, they don't need spark plug replacements or oil changes!

