

Conventional cars

What fuel do they use and where it is sourced?

conventional cars use petrol or diesel fuel, occasionally there is also bio-diesel and ethanol fuel. Australia gets about 90% of its fuel imported from other countries most of it coming from Asia.

How do conventional cars work?

most conventional cars have a combustion engine. in the engine a mixture of air and petrol reach a cylinder thru valves, the mixture then makes little explosions causing a type of gas that pushes against pistons which helps the car run

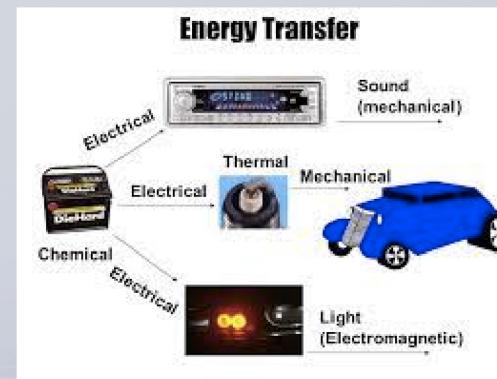
Where is energy wasted?

in conventional cars, energy is wasted and emitted as sound and heat energy. All cars make noise typically conventional cars are louder than electric cars because conventional cars use combustion in their engines. Conventional cars also tend to waste energy as heat which is often wasted as convection.

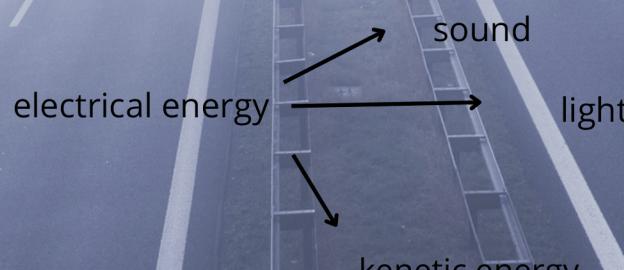


CONVENTIONAL CARS VS ELECTRIC CARS

Energy Transformation in conventional car



Energy transformation in electric car



Electric cars

Where do electric cars get power?

Electric cars do not run off of petrol or diesel like conventional cars instead they run off of electricity.

Ausfahrt

The charging stations for electric cars are expanding in quantity rapidly over time. in western australia there is approximately 3,000 Charging stations, most of the electricity which powers the stations come from powerplants which often use coal burning.

where is energy wasted?

In electric cars about 60% of energy is wasted as heat energy.

Pros of electric cars

1. Buying electricity is cheaper than fuel. Fuel is more expensive everywhere as it's harder to obtain than making electricity.
2. less fossil fuel emissions from the actual car. Electric cars don't use a standard combustion engine, therefore don't release the gasses that come from a combustion engine into the atmosphere.
3. The maintenance costs of electric cars is cheaper as they don't need things like oil checks, fuel filters, or spark plug replacements.

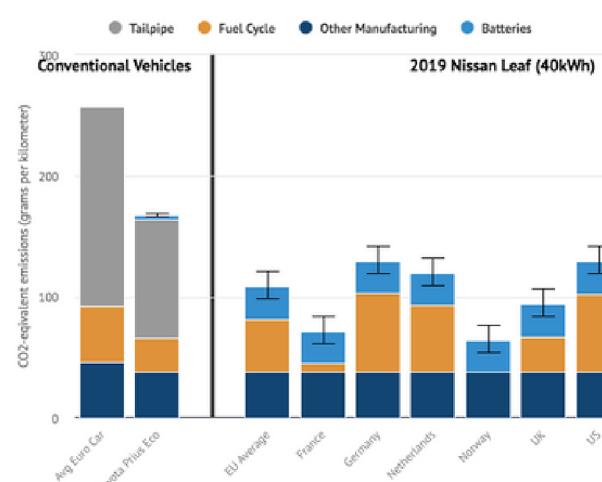
Cons of electric cars

1. The batteries contain harmful chemicals. Electric car batteries often contain harmful chemicals such as lithium, nickel, cobalt and manganese. The batteries need to be replaced every 8 - 20 years depending on the type and care of the battery. When these get replaced the chemicals are often released into the environment causing damage to ecological systems.
2. They take a while to recharge. Unlike conventional cars which can fuel up within minutes, electric cars take up to half an hour to charge a little or up to 8 hours to charge from empty to full.
3. There isn't many charging stations around at the moment. If your car runs out of charge in the middle of nowhere it will stop moving and you will have to get towed to the nearest charging station unless you have a portable one (which won't charge very much and will take a long time). As there isn't many around Australia the distance between them may be a little while.

ELECTRIC CARS

VS

CONVENTIONAL CARS



This graph represents data about the CO₂ emissions from the whole process of the cars being manufactured to when

they are in use. Overall electric cars are safer for the environment as it produces less overall CO₂ emissions even though the manufacturing, batteries, and fuel cycle make more emissions. The conventional car produces approximately 150 and 250 emissions mostly from tailpipe emissions whereas the electric cars emit an average of 102.14 CO₂ and has 0 tailpipe emissions.



Pros of conventional cars

1. They can go off-roading, electric cars just aren't built to go off-roading quite yet. Conventional cars like 4WDs have more power and adaptions that make them more suitable to follow trails or go places that aren't as stable as a standard road.
2. More places to fuel up. Conventional cars that use petrol or diesel have thousands of places to charge up and it isn't a hassle to find one nearby if you are running low on fuel.
3. Quick to fuel up. Conventional cars are much quicker to fuel up than an electric car with charging. You can take it down to a petrol station, fill it up, pay and be on your way within the span of minutes.

Cons of conventional cars

1. They cost more for fuel. Unlike electric cars, conventional cars use fuel which is much more expensive to afford than electricity.
2. They require more maintenance. Conventional cars need more maintenance such as oil checks, fuel filters or checking for any other issues with things that are present in conventional cars and not in electric ones.
3. They have a very high amount of CO₂ emissions. Over time conventional cars burn through petrol or diesel constantly releasing these gasses into the atmosphere and contributing to the greenhouse effect and climate change.