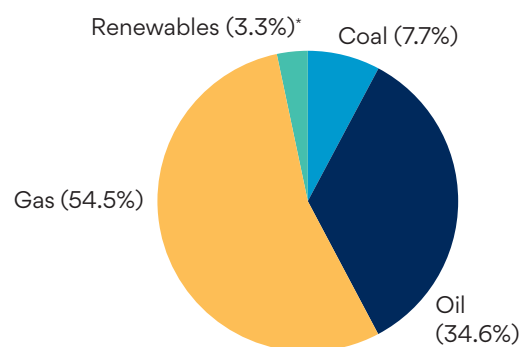


Where does our electricity come from in WA?

In WA, we currently use a combination of renewable and non-renewable energy resources to generate our electricity:

💧 Carbon-based organic materials such as coal, oil and natural gas are called fossil fuels and take many millions of years to form. They are described as **non-renewable energy resources** because using them is not sustainable and they can be all used up at some point. When used to generate electricity, these resources produce greenhouse gases and other pollutants.

⚙️ **Renewable energy resources** are from sources that are constantly replenished by nature / naturally occurring. Except for bioenergy, they are not based on carbon materials, so they don't produce greenhouse gases when used to generate electricity. This is why they are described as clean and sustainable.



Here in WA, Synergy is phasing out our coal-fired power stations and making way for even more renewable energy sources.

Our biggest electricity network in WA is called the South West Interconnected System (the SWIS).

We have a range of electricity generation sources on the SWIS including renewable sources which can be constantly replenished. This includes solar and wind generation.



Solar generation works by capturing energy from the sun as it shines onto solar photovoltaic (PV) cells on the solar panels you can see on rooftops. This energy is sent along wires to a solar inverter and converted into useable electricity which can be used to power homes, schools and businesses, or even stored in a battery.



Wind power works by harnessing the wind to move giant turbines. As these move, the energy is used to generate electricity, which is then available to be sent out into the SWIS.

Electricity generation in the SWIS still includes non-renewable energy sources, which means these can't be replaced or replenished. Fossil fuels, including coal, oil and natural gas, are non-renewable energy sources. These are burned inside a power station to create steam. This steam spins a turbine which creates an electrical current.

*Source: Department of Climate Change, Energy, the Environment and Water
(2024) Australian Energy Statistics, Table C

