Human activities release excessive greenhouse gases into our atmosphere, leading to increased temperatures and climate change.

Global concentrations of greenhouse gases from human activities have been increasing since the pre-industrial era (before 1750). In NSW, greenhouse gas emissions mostly come from burning fossil fuels and industrial processes.

There is an urgent need to reduce emissions in order to slow down global warming and mitigate the worst impacts of climate change.

At a glance 💿

How NSW is tracking

• NSW net greenhouse gas emissions in 2021–22 were 111 million tonnes tCO2-e, which was 27% lower than the emissions in 2004–05.

Greenhouse

gas emissions

- The highest contributor, the electricity generation sector, has been slowly decreasing due to uptake of renewable energy.
- The emissions of the second highest contributor, the transport sector, only decreased marginally (2%) compared to 2004–05 levels.
- Since 1993, the land use, land use change and forestry sectors have acted as 'carbon sinks' absorbing more carbon than they emit and contributing significantly to the reduction in net emissions in NSW.
- Annual emissions continue to decouple (separate) from both population and economics drivers.

The big picture



This topic's 'global concentrations of greenhouse gases' indicator aligns to the 'climate change' planetary boundary. Globally, this boundary has been crossed.

Greenhouse gas emissions rates

In 2021–22, the rate of NSW greenhouse gas emissions was **27% lower** than **2005** rates. However, gases continue to accumulate in the atmosphere, and are yet to peak.



Highest emitter

In **2021–22, stationary energy** (electricity generation) remained as the highest emitter, contributing **39%** of NSW emissions.







Greenhouse gas emissions

NSW status and trend indicators

These indicators track important metrics on greenhouse gases.

Indicator	Environmental status	Environmental trend	Information reliability
Global atmospheric concentrations of greenhouse gases	POOR	Getting better Stable Getting worse	Good
Annual net NSW greenhouse gas emissions	POOR	Getting better Stable Getting worse	Good
Annual NSW per capita greenhouse gas emissions	POOR	Getting better Stable Getting worse	Good

Indicator table scales

- Environmental status: Good, moderate, poor, unknown
- Environmental trend: Getting worse, stable, getting better, unknown
- Information reliability: Good Good Reasonable Limited

Indicator definitions

Global concentrations of greenhouse gases – the amount of greenhouse gases present in the Earth's atmosphere, measured in parts per million (ppm), parts per billion (ppb), or parts per trillion (ppt). These gases include carbon dioxide, methane and nitrous oxide.

Annual net NSW greenhouse gas emissions – the total amount of greenhouse gases emitted minus the amount sequestered or absorbed by activities such as land use, land-use change, and forestry.

Annual NSW per capita greenhouse gas emissions – the average amount of greenhouse gases emitted per person in NSW over a year.