http://www.environment.gov.au/climate-change/climate-science-data/emissions-projections

Australia's emissions projections

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Australia's emissions projections 2018

This report provides detail on emissions trends, including sector specific analysis of factors driving emissions.

The projections were released in December 2018.

Read the report and fact sheet

- Australia's emissions projections 2018

What are emissions projections?

Emissions projections are estimates of Australia's future greenhouse gas emissions. They provide an indicative assessment of how Australia is tracking against its emissions reduction targets. The projections provide an estimate of the abatement task associated with Australia's emissions reduction targets. This represents the total emissions that must be avoided or offset for Australia to achieve its target. If the abatement task is a negative value, this indicates Australia is on track to over-achieve on its commitments.

The projections use sector-specific models to build a robust modelling system for Australia's domestic greenhouse gas emissions. These sectors are electricity, direct combustion, transport, fugitives, industrial processes and product use, agriculture, waste, and land use, land-use change and forestry (LULUCF).

The emissions projections are prepared consistent with international guidelines adopted by the United Nations Framework Convention on Climate Change (UNFCCC).

Australia's Paris targets are based on the complete emissions inventory, including the LULUCF sector. This all-inclusive approach is the most accurate way of representing a country's whole-of-economy emissions. Analysis that omits any category of emissions to intentionally misrepresent a country's progress in meeting emissions reduction targets – such as recent analysis published by The Australia Institute – will give an incorrect conclusion.

Why undertake emissions projections?

The projections demonstrate Australia's progress towards meeting its emissions reduction targets, illustrating where emissions arise in the economy and the drivers behind long-term trends. The projections therefore form a key input into policy development and policy evaluation for the Australian government and stakeholders, quantifying the likely efficacy of emissions reduction policies and offering insights into which activities could offer future emissions reductions. Reporting Australia's emissions projections also fulfils one of Australia's reporting requirements under the UNFCCC.

What is the difference between emissions projections and emissions forecasts?

The Department regularly prepares emissions projections using the latest data including production and activity levels, commodity prices and macroeconomic assumptions. The Department makes reasonable assumptions about this data into the future based on the advice of other government agencies and external consultants. These include macroeconomic forecasts by the Australian Treasury; activity forecasts by other government agencies such as the Australian Bureau of Agricultural and Resource Economics and Sciences and the Department of Industry, Innovation and Science; forecasts by other public bodies such as the Australian Energy Market Operator; and announced investment intentions by businesses.

The projections are modelled taking this data into account and indicate what Australia's future emissions could be if the assumptions that underpin the projections continue to occur. For example, the projections presume that assumptions around the current rates of economic and population growth, the take up of certain technologies and the impacts of current government policies will remain valid. The projections do not attempt to account for the inevitable, but as yet unknown, changes that will occur in technology, energy demand and supply and the international and domestic economy.

In contrast, emissions forecasts speculate on the expectations or predictions of what will happen in the future and thus what future emissions will be. In a forecast the assumptions represent expectations of actual future events or changes. For example, this could mean forecasting emissions based on alternative predictions of how technology may evolve, how consumers and businesses will react to these technological changes and subsequently what impacts this would have on emissions. Alternatively this could mean forecasting emissions based on expectations about restructures in the Australian economy. Often a number of

different scenarios that reflect different forecast assumptions are undertaken at the same time.

Both projections and forecasts are inherently uncertain, involving judgements about the future growth path of global and domestic economies, policies and measures, technological innovation and human behaviour. This uncertainty increases the further into the future emissions are projected (or forecast).

The distinction between forecasts and projections can also be seen in the Treasury's economic estimates underlying Australian Government fiscal projections. The estimates divide the forecast horizon into two distinct periods: the near–term forecast period which covers the first two years beyond the current financial year; and the longer–term projection period which includes the last two years of the forward estimates, and up to 36 more years for intergenerational analysis. The economic estimates over the forecast period are based on a range of short–run forecasting methodologies, while those over the projection period are based on medium– to long–run rules.

Further information

- Previous projections
- Tracking Australia's greenhouse gas emissions
- Australia's Seventh National Communication on Climate Change
- Estimating the cost of abatement—Framework and practical guidance