Factsheet

Why avoiding 2 degrees of global warming matters for Australians

April 2015

Key points

+ Global warming puts weather systems on steroids. Australia, already a land of extreme weather, is very vulnerable. CSIRO says Australia is already experiencing climate impacts at 0.9°C warming above pre-industrial levels. It is in Australia's national interest to avoid further warming.

+ Over 190 countries have committed to limit global warming to 2ºC (or lower). Australia, with bipartisan support, is among those who committed to this goal. .

+ Yet the central policy scenario being used by recent government documents such as the Energy White Paper would lead to around 4ºC global warming. This level of warming would see significant detrimental impacts, including severe damage to coastal infrastructure and settlements, strain on the capacity to meet food demand due to agricultural impacts and loss of the Great Barrier Reef.

+ The scenario assumes little or no new policies to further clean up and decarbonise energy systems over the next 25 years. Relying on this scenario is a gamble that other countries won't continue to act on air pollution, clean energy and climate change.

+ Avoiding warming of 2ºC requires global emissions to fall to net zero and below. We need to be removing carbon as well as reducing it.

Australia's national interest

Global warming puts weather systems on steroids. Australia, a land of extreme weather, is very vulnerable. CSIRO says that Australia is already experiencing climate impacts.[1] It says Australia has suffered 0.9°C warming and business as usual would mean over 5°C.

Given that we are likely to be more adversely impacted by climate change than other countries (see table below), Australia has a strong interest in achieving deeper and rapid reductions in global emissions.

Under the UNFCCC's Cancun Agreements[2] and Durban Platform for Enhanced Ambition,[3] Australia made undertakings to help avoid a 2°C increase in global temperature and to raise the ambition on short-term emissions reductions.

The urgency behind this is real, and confirmed by the most recent projections by the International Energy Agency, which said in its "New Policies Scenario" that actions countries have taken to date would only limit warming to around 4ºC by 2100.[4]

In Australia, the need to avoid 2ºC was recognised in the Intergenerational Report and by some government comments. However the Energy White Paper relied upon the New Policies scenario and its 4ºC implication.

The table below shows global warming of this magnitude is projected to produce the following consequences in Australia: dangerous water shortages, severe damage to coastal infrastructure and settlements, large areas of agricultural land taken out of production, strains on the capacity to meet food demand, major risks to human life from extreme climate events and significant loss of species (including the Great Barrier Reef).

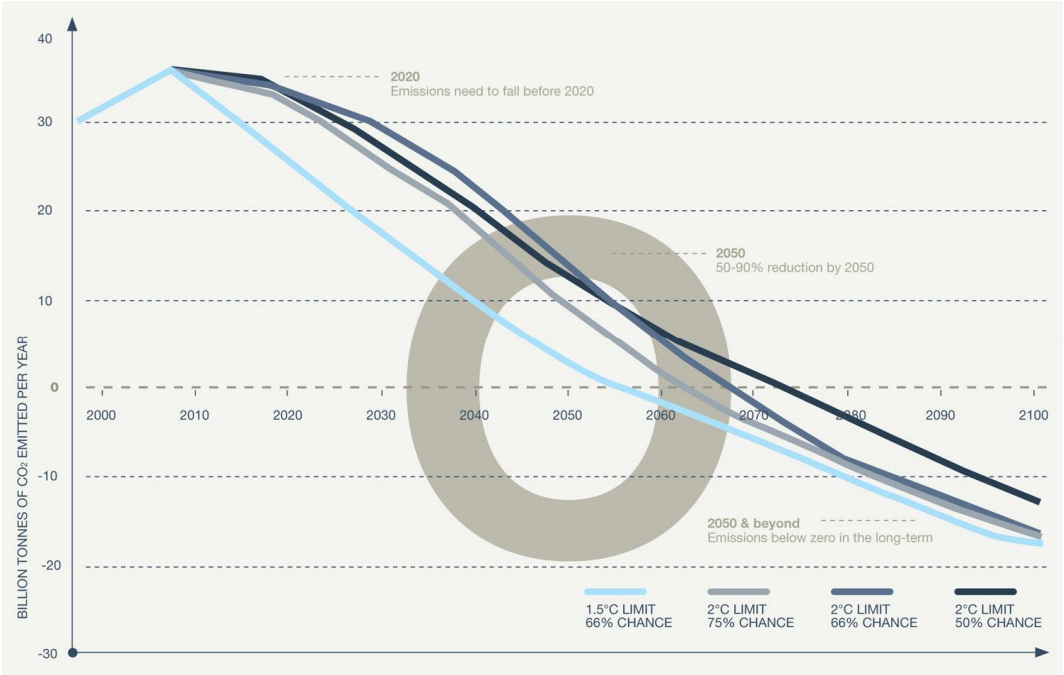
The government has since confirmed its continued support for the international goal of avoiding 2ºC warming[5]. Its initial post 2020 targets will be a key test of its climate credibility.

Net Zero and below

To limit warming to less than 2ºC, global emissions from the burning of fossil fuels will need to be net zero by around 2050.[6]

The need for full decarbonisation and zero emissions is recognised and widely supported by conservative institutions such as the G7, IPCC, World Bank, OECD and others.

The majority of emissions pathways that avoid 2ºC also require pollution levels to move below zero in the latter half of the century[7]. We need to be removing carbon as well as reducing it.



ENDNOTES

[1] CSIRO and Bureau of Meteorology (2015), *Climate Change in Australia Information for Australia's Natural Resource Management Regions: Technical Report*, CSIRO and Bureau of Meteorology, Australia.
[2] UNFCCC (2010), *The Cancun Agreements: Outcome of the work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention*, Decision 1/CP.16, FCCC/CP/2010/7/Add.1.
[3] UNFCCC (2011), *Establishment of an Ad Hoc Working Group on the Durban Platform for Enhanced Action*, Decision 1/CP.17, FCCC/CP/2011/9/Add.1.
[4] International Energy Agency (2014), *World Energy Outlook*, IEA, Paris.
[5] Conroy, J (2015), "Hunt confirms commitment to 2-degree goal", *Business Spectator,* April 15, 2015, http://www.businessspectator.com.au/news/2015/4/15/policy-politics/hunt-confirms-commitment-2-degree-goal
[6] IPCC (2015), Intergenerational Report 2015, Government of Australia, Canberra. See also Climate Analytics http://climateanalytics.org/files/infosheet_timetables_for_zero_emissions_and_2050_emissions_reductions_20150211_final.pdf
7 See for example Potsdam (2011) The RCP greenhouse gas concentrations and their extensions from 1765 to 2300 and UNEP (2012) Emissions Gap Report 2012. See also TCI's *Below Zero: Carbon Removal and the Climate Challenge http://climateinstitute.org.au/verve/_resources/BelowZero_March2014.pdf*