Raising the bar: setting a strong 2035 emissions reduction target

Background

Under the Paris Agreement, signatory governments are required to submit an updated emissions reduction target -- or Nationally Determined Contribution (NDC) - every five years. Together with other nations, Australia is due to submit an updated NDC by 2025. This will address the target amount of emissions reduction to be achieved by 2035.

Under the *Climate Change Act 2022*, the Climate Change Authority has a statutory responsibility to provide the Australian Government with advice on setting NDCs and other key climate policy issues. The Government has formally sought this advice, and the Authority has commenced a process to consult and engage with Australian experts, industry, civil society and the community to inform this. The Authority is expected to provide its advice to Government in mid-2024.

The process for setting NDCs is part of a broader set of commitments to 'pursue efforts to limit temperature increase to 1.5°C above pre-industrial levels with each party's NDC reflecting their highest possible ambition and the principle of 'common but differentiated responsibilities and respective capabilities. This principle recognises that developed countries must take the lead in combating climate change.

Other factors that should influence country NDCs include the accelerating pace of global warming, the enormous costs of inaction, the remaining global emissions budget, and the amount of the remaining budget that can fairly be used by any one developed country - such as Australia.

Climate science must sit at the centre of these considerations. Every fraction of a degree matters when it comes to the dangers of climate change and every country is expected to put forward their highest possible effort when determining their next NDC.

Where are we now?

Australia's current targets are to reduce emissions by 43% on 2005 levels by 2030 and achieve net zero emissions by 2050. When announced by the Albanese Government, this was a significant improvement on the previous government's commitment to reduce our emissions by only 26-28% by 2030. However, neither the 2030 or 2050 targets currently reflect the strong level of effort the science says is needed now to avoid runaway climate change.

Australia is amongst the countries most impacted by climate change. The costs and risks of insufficient action now will include impacts to our health and wellbeing; our precious natural environment including critical eco-systems, biodiversity and natural icons such as the Great Barrier Reef; and our future economy.

We are also well-positioned to take stronger action and benefit from the world's transition to a zero emissions economy through our enormous renewable energy resources, critical minerals, green manufacturing opportunities and skilled workforce.

With heat and weather extremes pointing to a very dangerous future if we do not turbo charge action, and untapped opportunities available to Australia, it's time for the Australian Government to do what's necessary to secure a safer and more prosperous future. That means setting a strong 2035 target that is aligned with holding global warming as close as possible to 1.5°C.

What the climate science says

The scientific evidence for human-induced climate change is clear and unequivocal. Human activity – primarily the use of fossil fuels like coal, oil and gas - is heating our oceans, land and atmosphere. It is already causing extreme weather events, bushfire, drought, and floods and these hazards will escalate in the years ahead if we don't act now.

The World Meteorological Organization has warned that the next five years will likely be the hottest on record. Much of the planet is experiencing dangerous climate and weather extremes; critical systems - like ocean currents - that keep parts of the planet habitable are noticeably changing; glaciers and sea ice are melting; and those most vulnerable in our communities are in desperate need of assistance to deal with unavoidable climate impacts.

The Intergovernmental Panel on Climate Change (IPCC) has made it clear that every increment of global warming will intensify multiple and concurrent threats. The extent to which current and future generations will experience a hotter and more dangerous world depends on choices we make now.[1]

Scientists say it is still possible to avoid the worst impacts of climate change but only, in the words of the UN Secretary General, if we take a quantum leap in climate action - with "unprecedented levels of acceleration and cooperation to keep 1.5°C alive".

Setting a science-backed benchmark for action by 2035

For Australia to play our part in tackling this threat, we need to take strong action that aligns with what expert evidence and science tells us is necessary. Science-based analyses have been conducted by the Climate Targets Panel, Climate Council and Climate Resource – all with similar conclusions.

In 2021, Professors Will Steffen, Lesley Hughes and Malte Meinshausen (the Climate Targets Panel) concluded that to align with a 50% chance of limiting warming to 1.5°C, **Australia should reduce its emissions to 74% below 2005 levels by 2030 and reach net zero by 2035.** The assessment was based on the emissions budget from the IPCC's Special Report on 1.5°C, and the same methodology used by the Climate Change Authority in 2014.

The Climate Council's Aim High, Go Fast, report provided science-based advice on emissions reduction targets based on a new analysis of the global emissions budget by Professor Will Steffen that considered additional carbon cycle feedbacks. This budget required that global emissions be at least halved by 2030 and reach net zero by around 2040. After considering Australia's very high level of emissions and huge renewable energy potential, the Climate Council concluded that **to do its fair share of the global emissions reduction task, Australia should aim to cut emissions by 75% below 2005 levels by 2030 and reach net zero emissions by 2035.**

Analysis done by Climate Resource in 2022 found that "**for a 50 per cent chance of limiting warming to 1.5°C, a 2030 emissions reduction target of 74 per cent (compared to 2005 emissions levels) and net zero by 2035 is consistent with the latest climate science.**[2] This analysis was recently updated to reflect increased certainty in the amount of warming that occurred in the early decades of the industrial revolution and how much warming is caused by emissions from international aviation and shipping. As a result, they determined that the timeframe to achieve net zero under their analysis could extend to 2038 at the absolute latest.[3] In that analysis, which reflects the most up to date available science, Professor Meinshausen and Dr Nichols found that Australia has already exhausted our fair share of emissions.

All these analyses allowed Australia a larger share of the global emissions budget (0.97%) than would be recognised as our fair share under the Paris Agreement. If calculated on a per person basis, Australia's share of

the global population would be .33%. The generous .97% carbon budget in these analyses gave Australia extra time to achieve net zero.

Australia's 2035 target must be net zero

Australia's 2035 emissions reduction target should be based on this clear and consistent climate science. It should line up as closely as possible with our commitment to pursue a 1.5°C limit to global warming, be based on a fair and equitable share of the remaining global emissions budget, abide by the principle of "common but differentiated responsibilities and respective capabilities", and represent our highest possible ambition. **That is why Australia's 2035 target should be to achieve net zero emissions.**

To get us on track to meet this strong target, Australia should also be targeting a 75% reduction in emissions by 2030, based on 2005 levels.

How we get there

The Australian Government recently announced development of a new net zero strategy that will bring together emissions reduction opportunities from six key sectors: electricity and energy, industry, the built environment, agriculture and land, transport and resources. Harnessing the opportunities from across our economy, particularly from sectors most responsible for our climate emissions makes sense.

However, the strategy is aligned with achieving net zero in 2050 - far too late. We need to make the most of opportunities in these sectors to reduce climate emissions to achieve net zero by 2035. Here's how we get there.

Ramp up and accelerate the delivery of new renewable energy generation, storage and transmission to deliver a multifold increase clean energy supply, enabling the full electrification of Australia's grid in parallel with the electrification of transport, buildings and industry.

Australia's old, polluting coal-fired power plants are failing, unable to compete with renewable energy and on their way out. We can't let them delay closure. Replacing coal and gas with renewable energy, energy storage and turbo-charged energy efficiency is the quickest way to clean up our electricity grid and reduce energy demand.

Many of the solutions for achieving zero emissions across our economy involve electrification with zero emissions renewable electricity. That means getting off oil and gas and plugging households, industrial facilities, and our transport into a clean grid. There's no time to waste in electrifying homes by replacing gas-powered appliances; installing electric heat pumps; updating industrial processes; and shifting off petrol by electrifying all our transport - from passenger vehicles to trucks, trams, buses, and trains.

End the approval of new coal, oil and gas export projects, and map out a comprehensive national plan - with timelines - for the phase down of existing fossil fuel exports.

Australia's coal, oil and gas exports drive emissions overseas and contribute to climate change no matter where they are burnt. In fact, our exported emissions from coal and gas are more than double our domestic emissions.[4] Coal and gas projects intended for export also add to our domestic pollution. Coal mines leak potent methane pollution, and gas developments release methane at every stage from extraction, to processing, delivery and use. While short-lived compared to carbon dioxide, methane is far more potent in immediately fueling global warming. So, reducing methane pollution is one of the quickest ways to slow climate change.

Shifting our exports away from fossil fuels will also reduce our dependence on exports which will inevitably fall away as global demand for fossil fuels dries up and ambition to reduce emissions increases.[5] Ending the approval of new coal, oil and gas projects needs to be an immediate first step alongside development of a detailed national plan to phase down existing fossil fuel exports.

Grow and incentivise clean industries - including in critical minerals, renewable hydrogen, green steel and cement, and the circular economy - with a focus on value-added onshore processing and manufacturing.

Australia has everything we need to become a renewable energy superpower. We have world-class renewable energy resources, vast stores of critical minerals, and all the inputs needed to add value to these resources and turn them into zero emissions, green manufactured products - like green hydrogen, steel and cement. Australia has the potential to be our region's clean energy exporter, helping energy hungry countries around us decarbonise by using our vast solar and wind power to develop exportable energy through options such as green hydrogen and undersea cables. We can get out front of the waste that renewable energy components will generate, and the emissions from waste streams more generally, by creating a circular economy and an industry that squeezes more value out products like critical minerals, metals and recycled solar panels.

Coordinate across all levels of government to enable the scale up of technologies, and deliver the infrastructure and services, which can enable a wide-spread shift to zero emissions transport modes and fuels - across personal, commercial and heavy transport.

Transport is critical to our daily lives, but it is also one of our fastest growing sources of climate pollution. Scaling up clean transport technologies and opportunities will provide advantages that go well beyond our efforts to address climate change. Clean transport removes health-impacting air pollutants; offers more opportunities for active transport; and would add to the availability of public transport. It also provides an opportunity to ensure greater mobility for more people.

The technology is already available to shift to electric passenger vehicles, trucks, buses, and trains - and it is improving rapidly. But the shift to zero emissions transport modes and fuels won't happen fast enough, fair enough or smoothly enough without all levels of government playing a role.

Protect and restore nature - including by ending native forest logging, curbing land clearing, and making agriculture clean and climate-friendly to address Australia's biodiversity and extinction crises and grow the land sector's capacity as an essential carbon sink.

Australia cannot address climate change without protecting nature. A 'nature positive' Australia means we halt and reverse nature destruction and drive a net positive gain in biodiversity. Nature must recover so that thriving ecosystems support future generations and the diversity of life and play a role in halting runaway climate change.

We cannot continue to cut down our native forests if we care about the many services they provide -- like critical habitat for wildlife and carbon sinks that absorb greenhouse gases. Our native forests play an essential role in helping with the two intertwined crises of biodiversity loss and climate change. It's time to end native forest logging; to protect and restore our forests; and for governments to take stronger action to curb land clearing.

Ensure Australia's pathway to net zero emissions is fair, inclusive and just

The wellbeing, livelihoods and security of Australian communities, and the precious ecosystems upon which we depend for our survival, rest on determined action to tackle the climate crisis. We need to move fast, but we also need to undertake this transformation in a way that maximises the benefits for all Australians, minimises and addresses impacts, and avoids repeating or perpetuating past injustices.

This calls for strong environmental and social safeguards, as well as good planning, consultation and co-design, and genuine benefit sharing. First Nations knowledges and voices should be at the centre of climate change mitigation and adaptation planning as well as the delivery of new clean energy and industry projects, addressing past injustice and exclusion by extractive industries. The communities who are most vulnerable to climate risks and impacts because of social, economic or cultural exclusion must also have a seat at the table to design solutions which can build a cleaner future while also making it a fairer and more inclusive one.

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[1] https://report.ipcc.ch/ar6syr/pdf/IPCC_AR6_SYR_SPM.pdf

[2] https://www.climate-resource.com/reports/wwf/WWF_March2022_a.pdf

[3] Climate Resource, "Updated Assessment of Australia's Emissions Reduction Targets and 1.5°C Pathways, June 2023

[4] https://grattan.edu.au/news/global-emissions-from-australian-carbon-exports-dwarf-any-declines-in-australias-domestic-emissions/

[5]https://d3n8a8pro7vhmx.cloudfront.net/auscon/pages/19495/attachments/original/1634172513/Clean_exports_detailed_report_vf_FINAL.pdf?1634172513