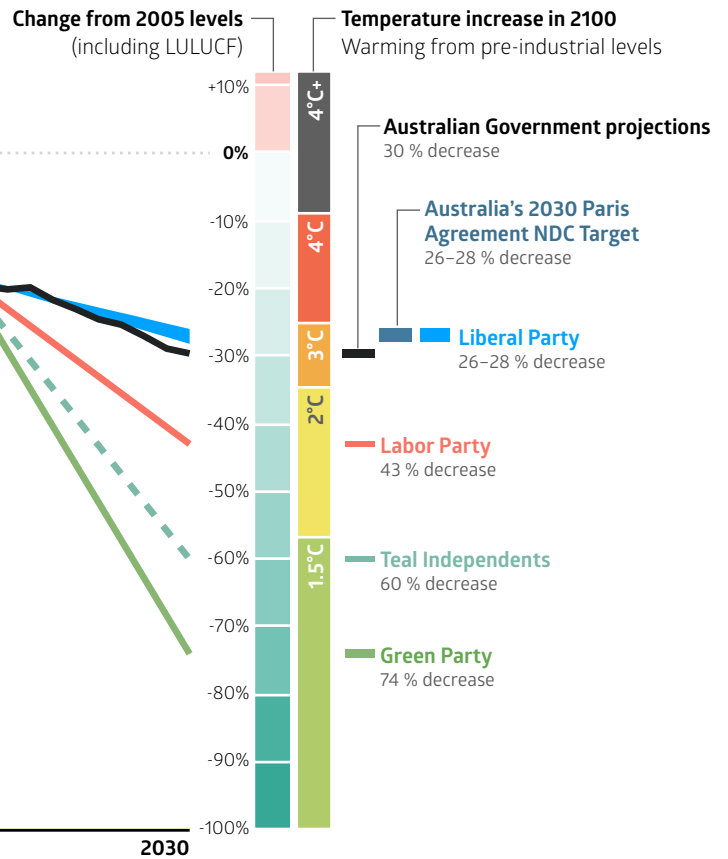
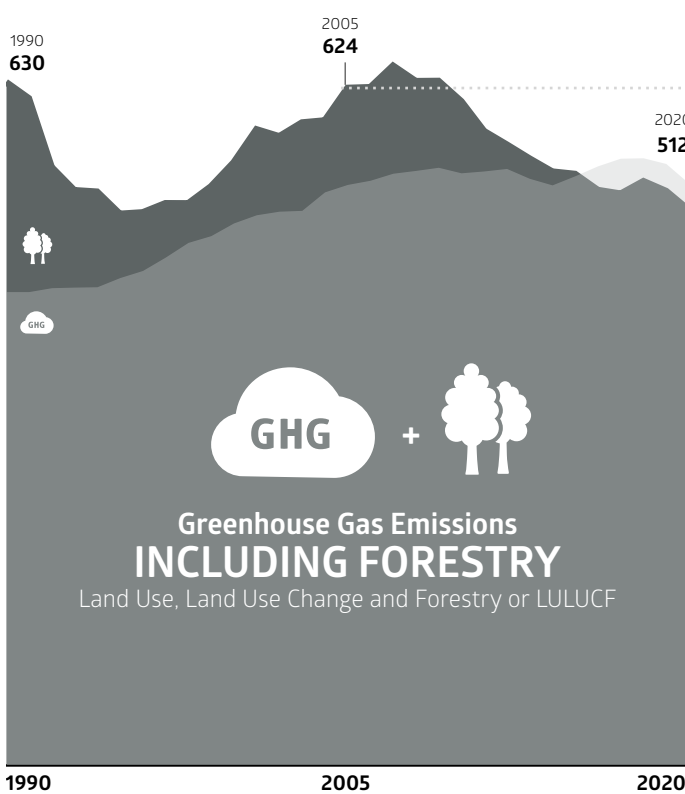




Political party and independent climate goals: analysis

Australian GHG Emissions



LIBERAL NATIONAL PARTY

The LNP climate commitment of a 26-28% emissions reduction by 2030 is consistent with a warming of 3°C globally, bordering on 4°C. Under this level of warming, the Great Barrier Reef and all other tropical reefs would be destroyed. At the global level the most extreme heat events could be 5-6 times more frequent than in recent decades and in Australia the highest maximum temperatures about 3°C hotter. In other words, an intense heat event that might have occurred once in a decade in recent decades could occur almost every year, and be substantially hotter.

CONSISTENT WITH
3°C
OF WARMING



LABOR PARTY

The ALP's 2030 target of a 43% emissions reduction is consistent with 2°C of warming globally. Under this level of warming, if sustained, the Great Barrier Reef would very likely be destroyed, along with all other tropical reefs in Australia and elsewhere. At the global level the most extreme heat events could be about three times more frequent than in recent decades, and in Australia the highest maximum temperatures about 1.7°C hotter. In other words, an intense heat event that might have occurred once in a decade in recent decades could occur about every three years and would be significantly hotter.

CONSISTENT WITH
2°C
OF WARMING



TEAL INDEPENDENTS

The Teal Independents have rallied around the Zali Steggall Climate Bill, which contains a target of a 60% emissions reduction by 2030. This is close to, but within, the upper boundary of modelled 1.5°C pathways for Australia. A stronger target would give a higher probability of meeting the 1.5°C limit, but it is still within a 1.5°C pathway. Under this warming some areas of the Great Barrier Reef and other Australian tropical reefs, including Ningaloo, would survive. At the global level the most extreme heat events could be nearly twice as frequent than in recent decades and in Australia the highest max temperatures about 1.1°C hotter.

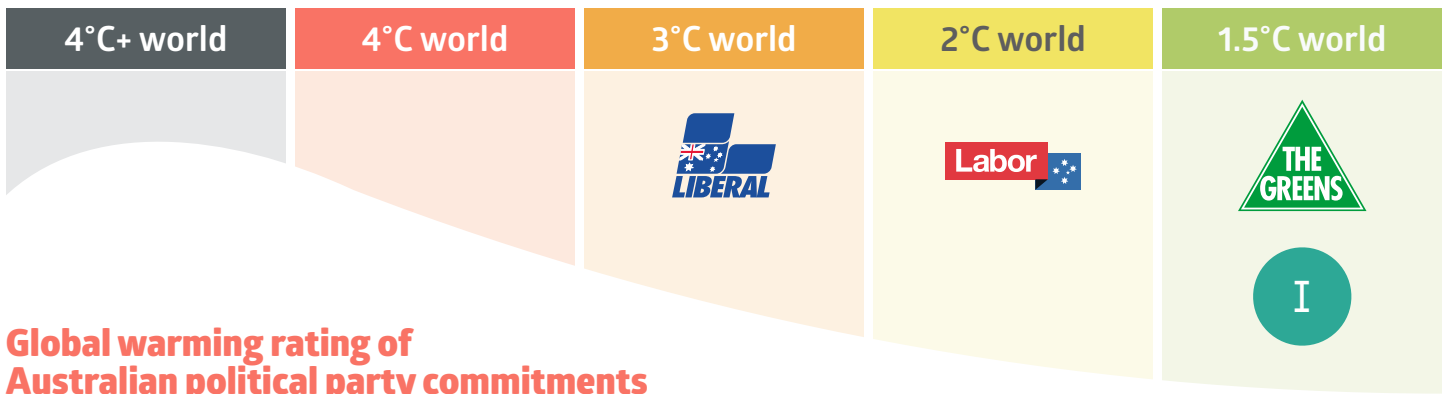
CONSISTENT WITH
1.5°C
OF WARMING



GREEN PARTY

The Greens' target of a 74% emissions reduction by 2030 is consistent with limiting warming to 1.5 degrees. Under this level of warming some regions of the Great Barrier Reef and other tropical reefs around Australia, including Ningaloo, would survive. At the global level the most extreme heat events could be nearly twice as frequent than in recent decades and in Australia the highest maximum temperatures about 1.1°C hotter. In other words, an intense heat event that might have occurred once in a decade in recent decades could occur every five years and would be noticeably hotter.

CONSISTENT WITH
1.5°C
OF WARMING



Global warming rating of Australian political party commitments

One of the critical issues in the 2022 federal election is what position the major parties are taking on the top-level emission commitments for Australia. 2030 emission reduction commitments are a critical part of the Paris Agreement, and the UNFCCC had requested governments to update these for the Glasgow COP26 conference in 2021.

However at Glasgow Australia did not improve its 2030 commitment of a 26-28% emissions reduction, first made in 2015. In 2021 it resubmitted the same target to the UN as it had in 2015.

Under the Glasgow Climate Pact (2021), governments were requested to revisit and strengthen their 2030 NDCs this year, 2022, to align with the 1.5°C goal. There is a strong expectation on Australia to bring forward a more ambitious 2030 1.5°C aligned target by November at the UN climate Conference - COP27 - in Egypt.

Emission reductions for 2030 are very important if the world is to have a reasonable chance of limiting warming to 1.5°C, the long-term temperature goal of the Paris agreement.

At the global level total government commitments fall far short of the reductions needed in 2030 to be on a Paris Agreement compatible pathway.

Countries such as Australia need to play their role in meeting the Paris Agreement's 1.5°C goal.

Australia has a direct and vital national interest in the world getting onto a 1.5° compatible pathway in order to protect its own natural ecosystems such as the Great Barrier Reef, agriculture, economy and health.

While the world has warmed about 1°C since around 1900 Australia has experienced an increase in average temperature of 1.4°C, with nine out of the 10 warmest years on record occurring since 2005. There is a clear scientific attribution of this warming to human-induced emissions of greenhouse gases.

A decline in Australian crop yields is projected due to hotter and drier conditions, with heat and drought likely interacting to lead to greater losses. By the time the world warms over 2°C wheat yields are projected to decline, with a median loss of 30% in south-western Australia and up to 15% in South Australia by 2050.

The Great Barrier Reef has been seriously damaged by coral reef bleaching to date. Australia has experienced extreme, unprecedented wildfires, decreasing winter rainfall, and extreme, unprecedented rainfall events leading to catastrophic flooding. All of these climate risks are projected to accelerate rapidly with every increment of global mean warming.

It is possible to work out what individual countries need to do in terms of their domestic emission reductions to be on a pathway consistent with different levels of warming. Here we have used standard methods deployed by the Climate Action Tracker to provide a range of domestic emissions consistent with different levels of warming between the present time and 2030.

These emission pathways are drawn from complex energy system models that produced scenarios consistent with the 1.5°C limit in the Paris agreement and that have been assessed in the IPCC Special Report on 1.5°C (IPCC SR1.5) and, more recently, the IPCC Sixth Assessment Report (AR6).

There is no single pathway that is 1.5°C compatible, so -consistent with their methodologies deployed elsewhere by the Climate Action Tracker - we take the range of pathways in the literature filtered with the sustainability constraints identified in the IPCC SR1.5. For the upper bound on each range of pathways for each temperature level we used the median of the set of scenarios consistent with each warming level. Emission ranges for each group are determined by those pathways that have a 66% or greater chance of holding warming below 2°C, 3°C, and 4°C. Paris Agreement compatible pathways are defined as those that limit warming to below 1.5°C with a 50% probability and no or limited overshoot (<0.1°C).

It is important to emphasise that domestic emission reductions are only part of a government's fair share contribution for the Paris Agreement, as that also requires wealthier countries to contribute climate finance to assist developing countries to reduce their own emissions. That means that even if a country's domestic emissions are close to a 1.5°C compatible zone, that country would also need to put forward sufficient climate finance, or further compensating domestic emission reductions, to achieve a similar fair share rating for its entire contribution to the Paris Agreement.

Here, we locate 2030 climate targets within bands of domestic emission reductions consistent with the different levels of warming globally if all other countries were to follow similar levels of action.

Emission reduction commitments in Australia have been expressed in terms of GHG emissions *including* land-use, land use change and forestry (LULUCF), and hence the top-level findings of this piece of work will be presented along those lines.

Nevertheless it should be noted that in Australia, LULUCF emissions and removals are highly volatile, and the amount assumed in 2030 has an impact on the level of emission reductions needed from greenhouse gas emissions *excluding* the land sector.

In Australia, action on greenhouse gases not including the land sector is fundamental to getting onto a 1.5° compatible pathway. We therefore show emission reductions both including and excluding LULUCF.

1.5°C compatible commitments

1.5°C compatible domestic emission reductions including land use change and forestry by 2030 are modelled to be greater than 57% from 2005 levels. Excluding land use change and forestry (LULUCF) the emission reductions would need to be greater than or equal to 47% by 2030.



The Greens have a commitment to a 74% reduction in total greenhouse gas emissions by 2030 compared to 2005 levels. This is well within a 1.5°C compatible pathway range. This would correspond to a reduction of around 67% in GHG emissions *excluding* LULUCF by 2030.



The Teal Independents have a common commitment to support Zali Steggall's climate change bill that calls for a 60% reduction in emissions by 2030. This reduction is at the top of the 1.5° compatible range of emissions but still lies within it. This would correspond to reductions of around 50% in GHG emissions *excluding* LULUCF by 2030.

The Climate Action Tracker scaling up study for [Australia](#) assessed all sectors and estimated that with a 66% emissions reduction by 2030 the total GHG emissions would be consistent with 1.5°C, reaching net zero by the 2040s. Excluding land use, land use change and forestry, GHG emission reductions would need to be 50% or greater.

2°C compatible commitments



The ALP's 43% reduction by 2030 commitment is in the middle of the 2° compatible range of emissions. Excluding Land Use, Land Use Change and Forestry (LULUCF), GHG emission reductions would be about 30%. These emission reductions are not compatible with the Paris Agreement's long-term temperature goals 1.5°C limit. The Paris Agreement specifically moved beyond the ambition level of limiting warming to 2°C.

The recent IPCC Sixth Report on climate impacts found with "high confidence" that overshooting 1.5°C degrees temporarily, even for several decades, would result in severe and potentially irreversible impacts. A global 2°C warming would very likely see the elimination of most of the Great Barrier Reef, along with other tropical reef systems, including Western Australia's Ningaloo Reef system.

3°C compatible commitments

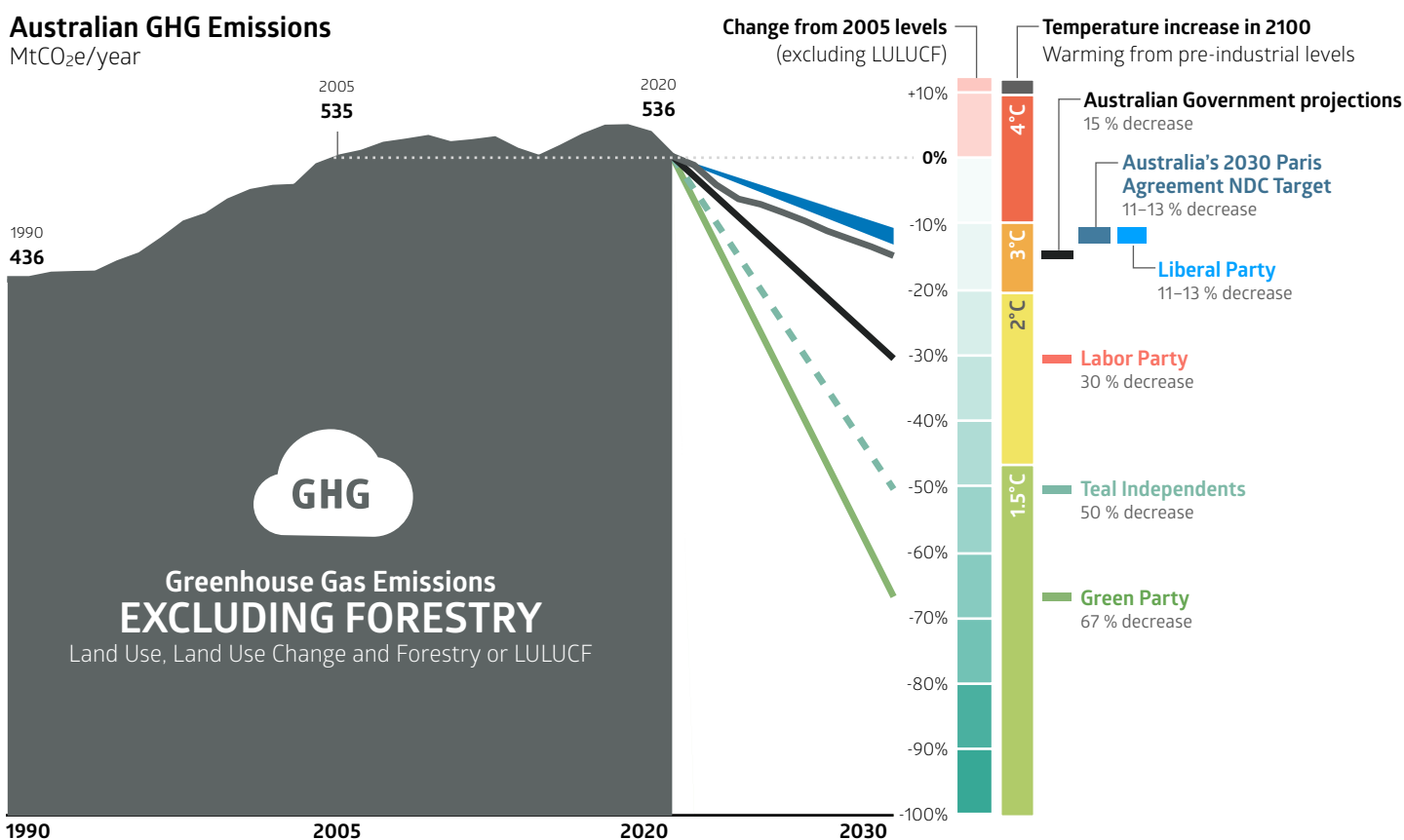


The LNP's 26 - 28% reduction commitment by 2030 is at the top end of the 3°C compatible range. Excluding LULUCF, GHG emission reductions would be about 11-13% below 2005 levels.

The government released new projections at the end of 2021 which showed that total GHG emission reductions could be close to 30%, but this does not modify the 26-28% formal Paris Agreement commitment submitted to the UNFCCC. Excluding LULUCF, GHG emission reductions would be about 15% below 2005 levels. These projected reductions are close to the top end of the 3°C range.

Factoring out land use and forestry

In Australia's case, emissions from the LULUCF sector largely come from deforestation. Australia had very high and highly variable levels of deforestation up to 2010. Including LULUCF in any figures ends up clouding the overall picture of how well the Australian economy is truly decarbonising. The graph and table below shows the situation when excluding LULUCF emissions and presents a more accurate picture of emission reduction efforts.



| | Including forestry* emissions | | Excluding forestry* emissions | |
|-----------------------|--------------------------------------|---------------------|--------------------------------------|---------------------|
| Reference year - 2005 | 624 | MtCO ₂ e | 535 | MtCO ₂ e |

All percentages below are 2030 levels relative to the 2005 levels above

| | | | |
|--|--|-----------------|--------------------|
| 4°C threshold for domestic emissions reductions | | 9% decrease | 9% <i>increase</i> |
| Liberal National Party 2030 Paris Agreement NDC Target | | 26-28% decrease | 11-13% decrease |
| 3°C threshold for domestic emissions reductions | | 25% decrease | 10% decrease |
| 2°C threshold for domestic emissions reductions | | 35% decrease | 21% decrease |
| Australian Labor Party Proposed 2030 Target | | 43% decrease | 30% decrease |
| 1.5°C Paris Agreement compatible threshold for domestic emissions reductions | | 57% decrease | 47% decrease |
| Teal Independents Proposed 2030 Target | | 60% decrease | 50% decrease |
| Australian Greens Proposed 2030 Target | | 74% decrease | 67% decrease |



Supporting science-based policy to prevent dangerous climate change, enabling sustainable development.

Climate Analytics is a non-profit institute leading research on climate science and policy in relation to the 1.5°C limit in the Paris Agreement. It has offices in Germany, the United States, Togo, Australia, Nepal and Trinidad and Tobago.

climateanalytics.org
