CLIMATE ANALYTICS

Briefing

1.5°C-aligned climate targets for Western Australia

Climate Analytics

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Summary

Despite being the wealthiest, Western Australia (WA) is the only Australian state without an emissions reduction target. WA setting science-based 2030 and 2035 emission reduction targets aligned with the Paris Agreement's 1.5°C limit will be an important part of meeting stronger federal emission reduction goals. The Paris Agreement has called for countries to submit 1.5°C aligned targets this year, the paramount importance of which has been reinforced by the July 2025 ICJ advisory opinion on climate change.

To align with 1.5°C pathways, WA would need to reduce its **net emissions** (includes the carbon sinks from the land use, land-use change and forestry sector, or LULUCF) **by 42-74% below 2005 levels by 2030, and 63-90% below 2005 levels by 2035.**

1.5°C aligned emissions reductions below 2005 levels	2030	2035	2050
Net emissions - including LULUCF	**42-74%**	**63-90%**	**102-124%**

Emissions reductions aligned with 1.5°C for WA by 2030 and 2035, measured as a percentage relative to 2005 levels, are lower than those required for Australia overall. This is because WA's emissions have increased sharply since 2005, due to the development of its massive LNG industry—which now accounts for around 23% of the state's emissions—and contributions from energy-intensive mining sectors. As a result, WA reductions start from a higher absolute level of emissions relative to 2005, but WA percentage reductions required below current levels by 2030 and 2035 are similar to those for Australia.

WA's current slow progress on renewables, slow electrification, ongoing support for carbon-intensive fossil fuel projects without incentives to decarbonise, its support for virtually indefinite continuation of LNG exports and exploration and development of new gas resources, including potential fracking in the Kimberley, are all obstacles to emission reductions that need to be overcome.

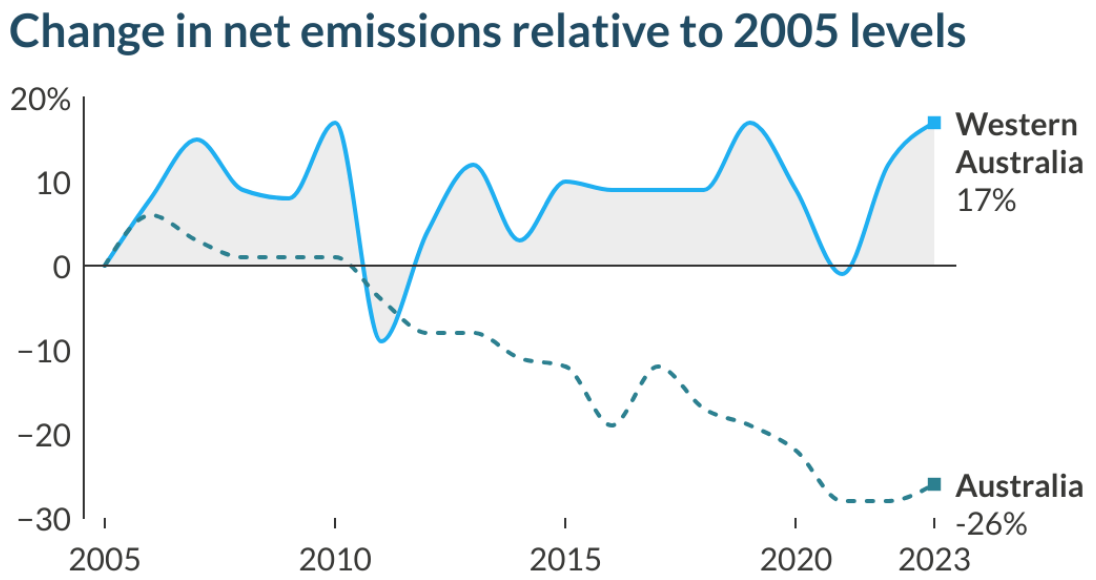
While countries' top-level targets under the Paris Agreement (or Nationally Determined Contributions, NDCs) are usually set in terms of net emissions, the main driver of climate change is fossil fuel CO_2 and greenhouse gas emissions from industry and agriculture. In shorthand, these are emissions outside of the LULUCF sector, which are referred to as gross emissions. For WA, a 1.5°C aligned gross emission reduction target should be at least 17% below 2005 levels by 2030, and 42% by 2035.

Under 1.5°C aligned pathways, WA's net greenhouse gas (GHG) emissions need to become negative between 2040 and 2050, ahead of the state government's stated but not legislated commitment to achieve net zero GHG emissions by 2050.

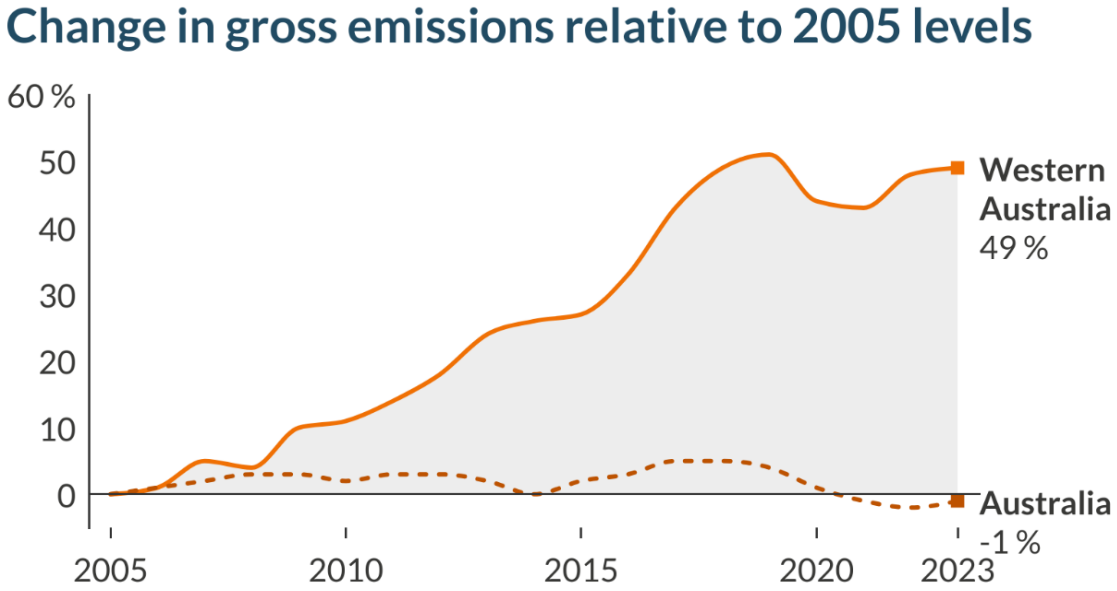
Reducing emissions from fossil fuels towards zero and minimising those from all other sectors to keep residual GHG emissions by mid-century as low as possible will be critical to achieving net zero GHG emissions.

Emission trends in WA

Western Australia's *net* emissions rose by 17% between 2005 and 2023, driven by the production and consumption of fossil fuels in the power, industry, buildings, and transport sectors. By comparison, Australia's net emissions decreased by 26%, and 32% excluding WA, over the same timeframe (DCCEEW, 2025b).



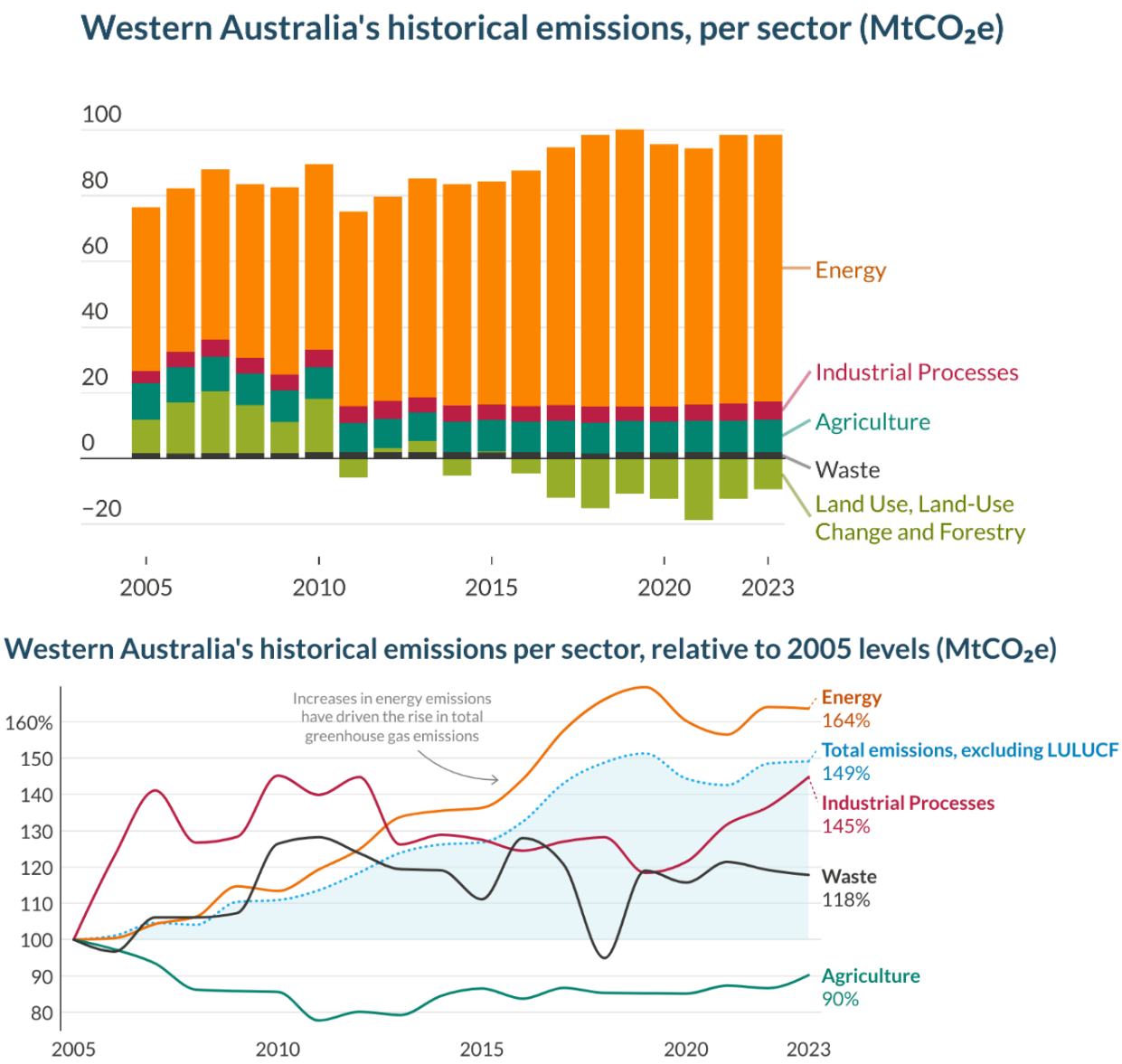
WA's *gross* emissions (i.e., those excluding the LULUCF sector) have risen by nearly 50% above 2005 levels, largely due to the rise in energy emissions (see graph below). The rise of the LNG industry, which led to a tripling of the state's gas production between 2005 and 2023, has been the main driver of these emissions: excluding the LNG sector, gross emissions have increased by 14%. Meanwhile, Australia's gross emissions have decreased by 1% (9% excluding WA) since 2005.



By 2023, production and consumption of fossil fuels made up more than 80% of WA's gross emissions.[1] Industrial process emissions rose back to their 2010 levels, but remain much lower in absolute terms, accounting for 6% of the state total.

WA's land use, land-use change, and forestry (LULUCF) sector has been masking these trends, switching from being a net emitter in 2005 (10 $MtCO_2e$), to a net sink. In 2023, it sequestered 9.4 $MtCO_2e$.

Emissions from the LULUCF sector are, however, uncertain and variable. Countries, including Australia, are already over-relying on the LULUCF sector to reach their 2030 emissions reductions targets (Climate Action Tracker, 2025a; Dooley et al., 2024). The WA greenhouse gas inventories, for instance, show the amount of greenhouse gas sequestered shrank from 18.8 $MtCO_2e$ in 2021 to 12.3 $MtCO_2e$ in 2022, as shown below.



[1] Energy emissions include emissions from fossil fuels consumption in power, industry, buildings and transport, as well as fugitive emissions, the unintentional releases of greenhouse gases during the extraction, processing and transport of fossil fuels.

Given WA is the only state without an emissions target, its growing emissions add pressure to the national net zero target and global climate goals.

Setting 1.5°C aligned targets for Australia and WA

The federal government is preparing Australia's Nationally Determined Contribution to include an emissions reduction target for 2035 aligned with the Paris Agreement's 1.5°C. As part of this process, the government also needs to strengthen its current 2030 NDC, which includes the goal of reducing greenhouse gas emissions by 43% below 2005 levels by 2030. This target has been rated by the Climate Action Tracker as "Insufficient," meaning if all countries were to follow Australia's approach, warming would reach over 2°C and up to 3°C (Climate Action Tracker, 2025a).

As called for in the 2023 Global Stocktake, Australia's 2030 and 2035 domestic emission reduction targets need to align with the Paris Agreement's 1.5°C limit (UNFCCC, 2024).[2] The July 2025 International Court of Justice's advisory opinion on climate change reinforces the obligations of states to align their policies and actions with the Paris Agreement's 1.5°C limit, and with the requirement under the Agreement's article 4.1, for global greenhouse gas emissions to reach net zero in the second half of this century (International Court of Justice, 2025).

Western Australia, as a contributor to national and global emissions through its export-oriented economy, has a role in closing the gap if the world is to have any chance of limiting peak global warming close to 1.5°C and for the world to reach net zero greenhouse gas emissions in the second half of this century (Climate Analytics, 2025).

Given the WA state government's focus on further fossil fuel development and the absence of action to curtail it, a few elements of the International Court of Justice's advisory opinion are worth emphasising as they relate to state and corporate liability for climate damages should the government fail to act appropriately:

- Governments cannot distance themselves from the harm caused by the fossil fuel companies and others under their jurisdiction.
- All governments have an obligation to put forward the highest possible ambition in their climate targets, and it is not acceptable to submit a weak NDC that does not align with the Paris Agreement 1.5°C limit.
- Failure to take action aligned with a 1.5°C limit, not only on emission targets but also in approving exploration licences, providing fossil fuel subsidies, etc., may constitute an

[2] The Global Stocktake Text requests parties to "strengthen the 2030 targets in their nationally determined contributions as necessary to align with the Paris Agreement temperature goal by the end of 2024, taking into account different national circumstances" (UNFCCC, 2024).

internationally wrongful act with damages attributable to the state (International Court of Justice, 2025).[3]

Peaking global warming as close to 1.5°C as possible and getting to net zero greenhouse gas emissions globally in the second half of this century requires considering how fast gross emissions can be reduced as close to zero as possible, across all sectors, once all abatement options have been deployed.

A major focus must be on reducing fossil fuel CO_2 emissions – and therefore, gross emissions – as fast as possible, as once net zero CO_2 emissions are achieved warming will halt. This typically happens around mid-century in 1.5°C aligned pathways.

The remaining residual greenhouse gas emissions will require negative CO_2 emissions, through carbon dioxide removal (CDR), to counteract their warming effect and bring global greenhouse gas emissions to net zero in the second half of this century as required under the Paris Agreement Article 4.1.

Residual emissions in any sector must be as low as possible (if not eliminated) to keep global CDR deployment within limits. Negative CO_2 emissions through CDR, subject to serious limitations, should only be used to counterbalance the "truly unavoidable" residual GHG emissions to achieve net zero greenhouse gas emissions, globally.

Gross emission reductions are needed for 1.5°C alignment

The first step in the logic of working out 1.5°C aligned emission reductions for a country or region is to evaluate the gross emission reductions needed and how they can be achieved. While the Paris Agreement NDCs are set on a net basis, gross emission reduction pathways allow evaluation of the likely level of residual emissions by mid-century, and the subsequent requirements for negative CO_2 emissions.

To be in line with 1.5°C aligned pathways, Western Australia needs to cut its gross emissions (excluding LULUCF) by 17-45% below 2005 levels by 2030, and 42-64% below 2005 levels by 2035.[4]

As shown in the figure below, the range of residual greenhouse gas emissions by around 2050, consistent with the downscaled emission pathways, range from 6 $MtCO_2e$ to zero with small negative CO_2 deployment (referring, in this case, to technological CDR solutions such as direct air

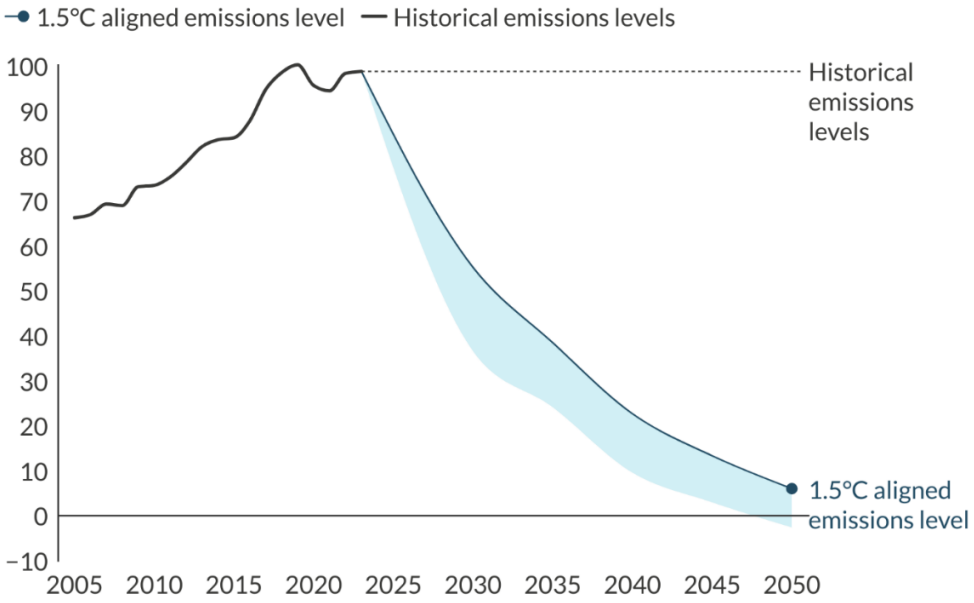
[3] "Failure of a State to take appropriate action to protect the climate system from greenhouse gas emissions – including through fossil fuel production, fossil fuel consumption, the granting of fossil fuel exploration licences or the provision of fossil fuel subsidies – may constitute an internationally wrongful act which is attributable to that State" (International Court of Justice, 2025).

[4] Relative to the latest 2005 inventory estimates, based on the downscaling of 1.5°C aligned pathways to Western Australia as per the 1.5°C National Pathway Explorer's methodology.

capture). To achieve net zero greenhouse gas emissions by 2050 would therefore require WA to deploy up to 6 $MtCO_2e$ of technological CDR.

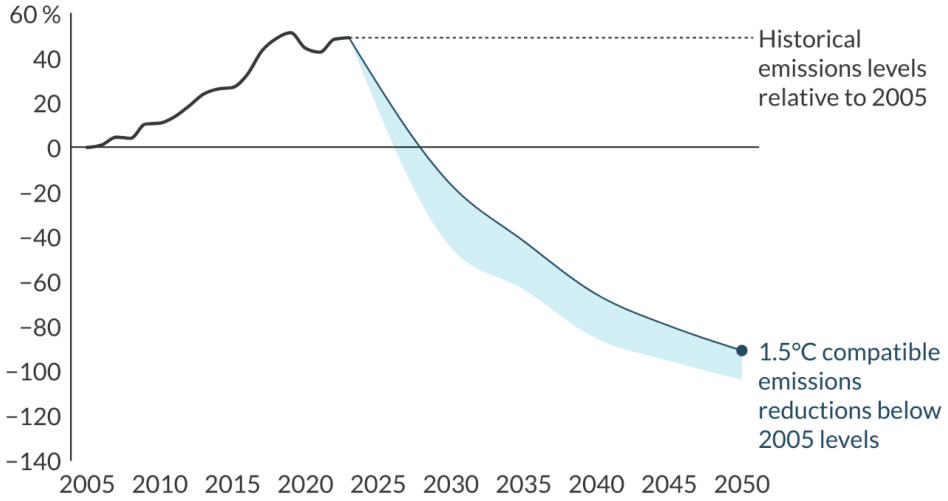
Western Australia's gross emissions under 1.5°C aligned pathways

Total greenhouse gas emissions, excluding land use, land-use change and forestry sector ($MtCO_2e$)



Western Australia's gross emissions under 1.5°C aligned pathways, relative to 2005 levels

Change in greenhouse gas emissions relative to 2005 levels, excluding land use, land-use change and forestry sector (%)



	2030	2035
1.5°C aligned WA gross emissions reductions below 2005 levels (excluding LULUCF)	**17-45%**	**42-64%**

A 1.5°C aligned net emissions reduction target for Western Australia

Under 1.5°C aligned pathways for the state, net emissions need to drop by 42% to 74% below 2005 levels by 2030, and further to 63% to 90% by 2035.[5] In 2023, they were 17% *higher* than in 2005. Net WA emissions need to fall below 45 $MtCO_2e$ by 2030, and 29 $MtCO_2e$ by 2035.

These reductions, *compared to 2005 levels*, are lower than those for Australia only because WA's emissions have increased steeply in the past two decades due to the development of its massive LNG industry and, to a lesser extent, its energy-intensive mining and mineral processing sectors (see graphs and values in the Emissions trends section). This means the reductions start from a higher level in absolute terms and therefore result in a different requirement compared to 2005 relative to Australia as a whole.[6]

Because much of Western Australia is arid, the state's share of land carbon sequestration in Australia's remains also limited compared to its overall landmass. Nevertheless, 1.5°C aligned reductions for Western Australia relative to current levels are like those of Australia.

Aligning with these pathways would still require a policy shift for the WA state government. The current weak renewables pipeline, lack of a fossil fuel phase-out plan, slow vehicle electrification, and more importantly, major fossil fuel developments like Woodside Energy's North West Shelf extension or potential Browse approval threaten emissions reductions.

Achieving these net emissions reductions would also require WA ensuring its LULUCF sector remains a net sink: it needs to ensure its sequestration remains at current levels - or it needs to enhance them. Unlike the federal government, the state government does not provide emissions projections or forward estimates of LULUCF sinks.

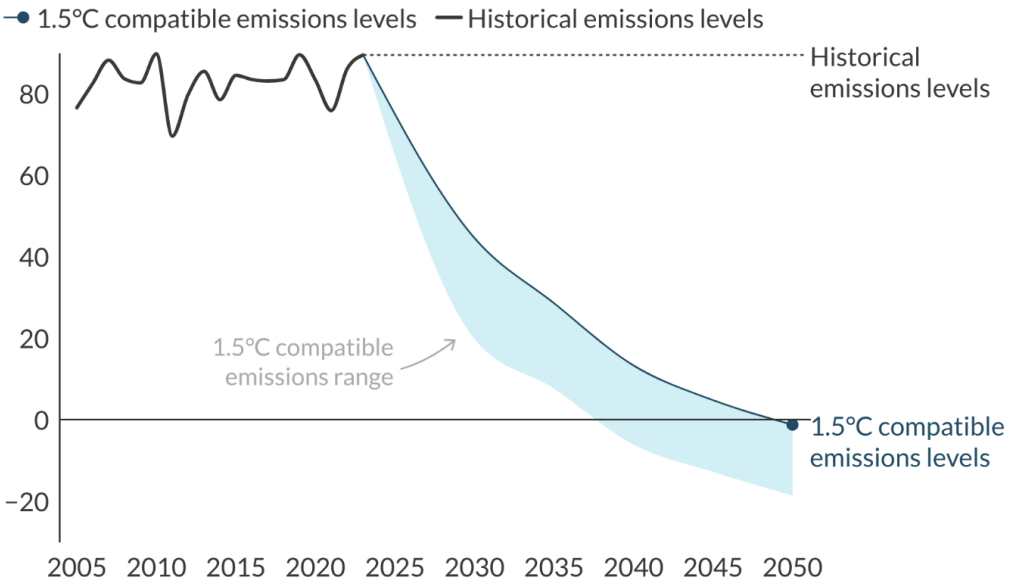
As shown in the figure below, Western Australia would need to reach net zero GHG emissions by 2050 at the latest, with some pathways reaching it as soon as 2040. By 2040, gross emissions, mainly fossil fuels CO_2, are reduced to less than 25 $MtCO_2e$.

[5] Based on the median and fifth percentile of 1.5°C aligned pathways downscaled, excluding LULUCF, to Western Australia as per the methodology from the 1.5°C National Pathway Explorer. WA LULUCF 1.5°C aligned emissions, not downscaled but accounted for in the net emissions values, were derived using the same quantiles from the statistical distribution of emissions from the LULUCF sector in pathways downscaled to Australia that include them, assuming the ratio of Western Australia's LULUCF sinks relative to Australia's sinks remains at its five-year average (17%). This ratio has been relatively stable since Australia's LULUCF sector became a net sink in 2015 (DCCEEW, 2025a). We note, however, that this simple and highly uncertain approach yields more conservative results than applying the same ratio to the Federal Government's LULUCF projections.

[6] Australia would need to reduce its gross emissions by 41% and 57% below 2005 levels by 2030 and 2035, respectively, and net emissions by 60% and 76% below 2005 levels in the same years (Climate Action Tracker, 2025b) .

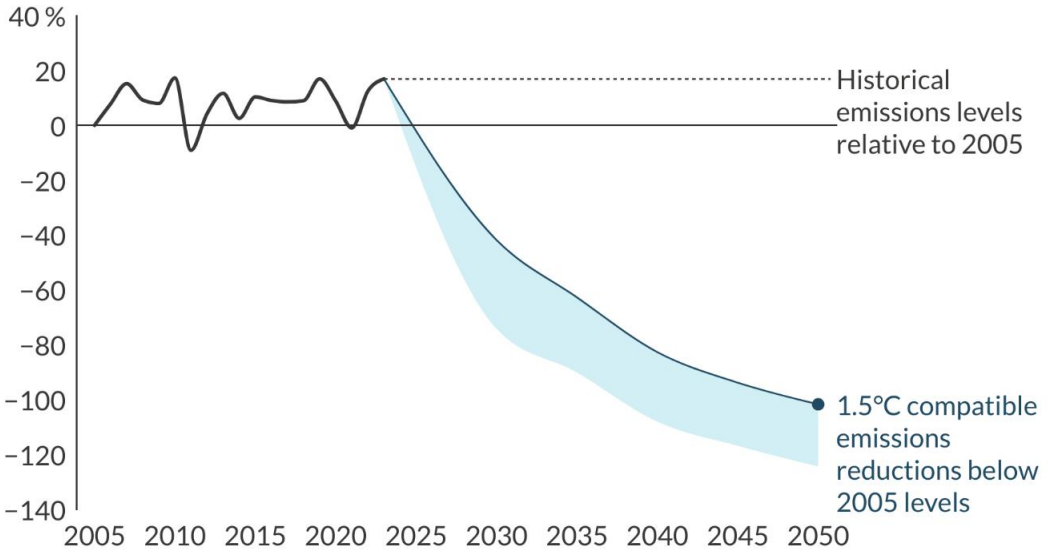
Western Australia's net emissions under 1.5°C aligned pathways

Total greenhouse gas emissions, including land use, land-use change and forestry sector ($MtCO_2e$)



Western Australia's net emissions under 1.5°C aligned pathways, relative to 2005 levels

Change in greenhouse gas emissions relative to 2005 levels, including land use, land-use change and forestry sector (%)



	2030	2035
1.5°C aligned emissions reductions below 2005 levels, including LULUCF	**42-74%**	**63-90%**

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