Submission to the Climate Change Authority *Issues Paper: 2025 Annual Progress Report*

Climate Analytics

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Climate Analytics welcomes the opportunities to submit a response to the Climate Change Authority Issues Paper: 2025 Annual Progress Report.

Supporting and enabling the transition to a net zero economy

1. How well is the Australian Government supporting the transition to net zero?

Australia still has a lot of work to do to address its climate policies: it is not on track to meet its renewables target; its flagship industrial emissions policy allows more fossil fuel emissions, and its support for the fossil fuel industry – especially exports – remains unwavering. The re-elected Albanese government will have to work to bring its climate action up to a standard that withstands global scrutiny as it campaigns to host COP31 in 2026.

Australia has yet to submit a 2035 emission reduction target. Its current 2030 NDC target – a reduction of 43% below 2005 levels – is not aligned with 1.5°C: this would require significant strengthening (refer to questions 3 and 4 below for detailed recommendations on 2030 and 2035 targets).

The government's projections (December 2024) indicate that it may already be close to meeting its 2030 target (42.6% reduction). While this is partly due to the rollout of renewables in the power sector, it is also down to an increase in projected land use, land use change and forestry removals, which has little to do with policy. Excluding the land and power sectors, emissions from all other economic sectors are projected to be 4.5% above 2005 levels in 2030 (only 5% below 2024 levels).

The government is relying heavily on a LULUCF sink to reach its climate targets

Australia's maximum land use, land use change and forestry (LULUCF) net emissions in the last 30 years are greater than 30% of total emissions. Continued revision of Australia's historical and projected LULUCF estimates erodes the ambition of its NDC for fossil fuel and industrial emissions, the main drivers of climate change, and where the government holds the most leverage. Effective climate policies are needed to decarbonise all sectors in line with the 1.5°C temperature limit irrespective of projected LULUCF sequestration, which is inherently uncertain.

Australia government climate action overall rated as "Insufficient"

The Climate Action Tracker (CAT)[1] rates Australia government climate action overall as insufficient. The "Insufficient" rating indicates that Australia's climate policies and commitments need substantial improvements to be consistent with the Paris Agreement's 1.5°C temperature limit.

Australia's current policies are rated as "Insufficient"

Australia's current policies are rated as "Insufficient" against modelled domestic pathways. This rating indicates that Australia's climate policies and action needs substantial improvements to be consistent with modelled domestic pathways limiting warming to 1.5°C. If all countries were to follow Australia's approach, warming would reach over 2°C and up to 3°C.

Australia's 2030 NDC target rated as "Insufficient"

The CAT continues to rate Australia's 2030 NDC target as "Insufficient" when compared to modelled domestic emissions pathways. Australia's NDC targets emissions 43% below 2005 levels by 2030, including LULUCF.

The CAT rates Australia's 2030 NDC target as "Insufficient" when compared to its fair share emissions allocation. The "Insufficient" rating indicates that Australia's NDC target in 2030 needs substantial improvements to be consistent with its fair share of the global mitigation effort to limit warming to 1.5°C.

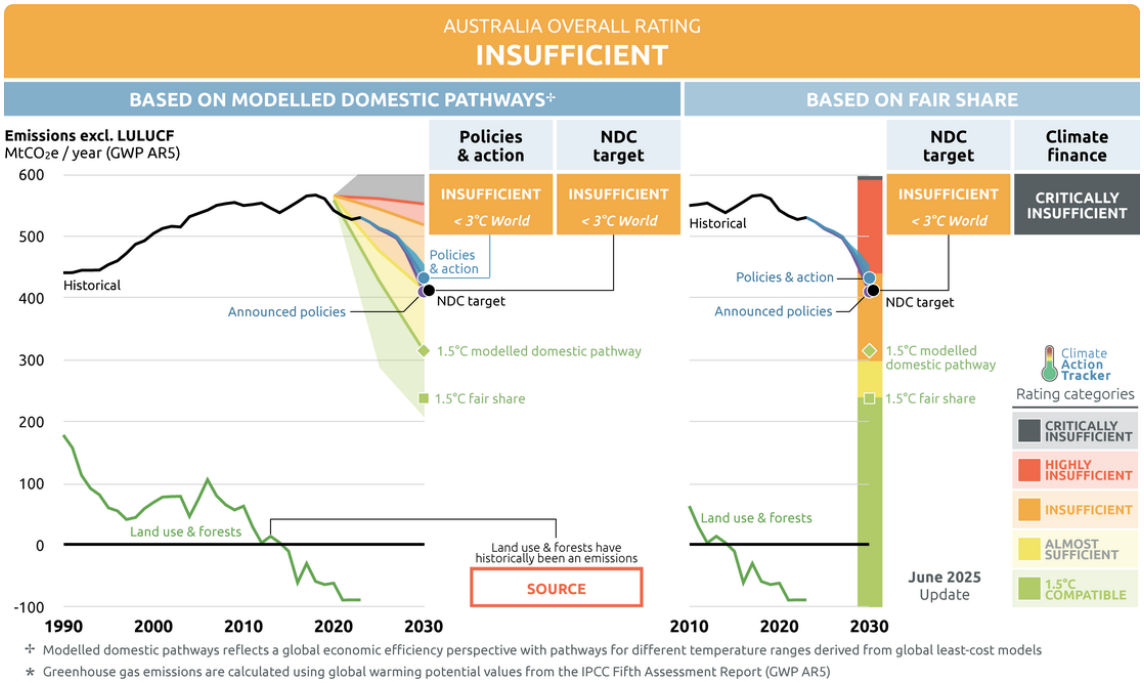
Australia's climate finance contributions are rated "Critically insufficient."

Australia's international public climate finance contributions are rated "Critically insufficient." This rating indicates that Australia's climate finance contributions to date are low and not in line with any interpretation of a fair approach to meeting the Paris Agreement's 1.5°C limit.

Australia's net zero target is evaluated as "Poor."

An updated Net Zero Plan is under development by the government but is yet to be published.

[1] The Climate Action Tracker is an independent scientific project that tracks government climate action and measures it against the globally agreed Paris Agreement aim of "holding warming well below 2°C, and pursuing efforts to limit warming to 1.5°C." A collaboration of three organisations, Climate Analytics, NewClimate Institute and Institute for Essential Services Reform (IESR), the CAT has been providing this independent analysis to policymakers since 2009.



Please refer to the full analysis which is available here

Positive developments worth highlighting:

- Australia's AUD 22.7bn (USD 14.9bn) Future Made in Australia plan sets out a vision for Australia to capitalise on its substantial renewable energy and critical mineral resources and to attract investment in clean industries. The updated 2024 National Hydrogen Strategy specifically focuses on renewable-based hydrogen production, rather than fossil fuel-derived hydrogen. If successfully implemented, these plans could provide a pathway out of reliance on coal and gas exports.
- Australia's States and Territories continue to lead the way on climate action, with all except for Western Australia and the Northern Territory having their own 2030 targets. Momentum in state-led action remains tied to political support. Queensland hit its 2030 target a decade early, but the new state government has announced a review of the legislated GHG reduction plan released in 2024, which could lead to its withdrawal.

Closing the ambition gap to align with 1.5°C

The science is clear: in order to keep warming as close as possible to 1.5˚C, it is critical that countries aim to get to net zero CO2 emissions, at the latest by 2050. The solutions are also clear: it is both technologically and economically feasible to make the rapid changes needed. The main barriers to this are political, not scientific.

The July 2025 International Court of Justice's advisory opinion (ICJ AO) on climate change further reinforced the obligations of states to align their policies and actions with the Paris Agreement's 1.5°C limit (International Court of Justice 2025).

The advisory opinion finds that 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 reduction targets but also in support for fossil fuel industry, "*may constitute an internationally wrongful act with damages attributable to the state.*"

The Federal government must deliver its new Net Zero Plan, which it also pledged to deliver during its first term in office. The ICJ AO has reiterated 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).

The Australian Government has a target for net zero emissions by 2050, which was enshrined into law in September 2022. The current long-term emissions reduction plan, released in 2021 under the previous Government, only reduces emissions to 75% below 2005 levels by 2050 including LULUCF before consideration of 10-20% "international and domestic offsets", which generally do not reduce emissions. A deliberate 15% gap to net zero is left to unspecified "technology breakthroughs" rather than direct government action.

2. What changes could the Australian Government make to improve the effectiveness of existing policies or address gaps in supporting Australia's transition to a low-emissions, climate resilient, and prosperous economy?

A range of additional measures and reforms are required to align Australia's emissions reduction efforts with global temperature goals.

Most importantly, Australia needs to both bring its current 2030 net target of a 43% reduction below 2005 levels in line with the 1.5°C limit, and put forward an adequate 2035 target(Climate Analytics 2025b).

Net emissions target recommendation (including the land sector):

- 2030 target: around 72% below 2005 levels
- 2035 target: around 81% below 2005 levels

These targets would set Australia on a pathway towards achieving net zero greenhouse gas emissions at the national level close to 2050. Please refer to our response to Question 4, for our detailed analysis and recommendations.

The government's two main policies covering emissions are the renewables target in the power sector (35% of total emissions) and the Safeguard Mechanism (SGM) which covers large-scale emitters in the industrial sector (31% of total emissions).

Australia has an 82% target by 2030 for on-grid renewable electricity generation, supported by its expanded Capacity Investment Scheme (CIS). However, the government's own estimates show that accounting for off-grid power generation means an 82% on-grid renewables target would be only 77% nation-wide by 2030.

While the government projects it will meet its 82% target, the independent Climate Change Authority finds that an additional 8 GW of utility-scale renewable energy projects are required on top of the expanded CIS. The International Energy Agency projects that, based on current policies and deployment trends, the share of renewables in Australia's power mix will only reach 58% by 2030, well below the government's target. In this scenario, where barriers to renewables deployment are not addressed, the CAT estimates that Australia's 2030 emissions, excluding LULUCF, would be 10% higher than government projections.

The "Safeguard Mechanism" (SGM), which is the core policy for reducing industrial emissions, is an example how offsetting delays or avoids decarbonisation. The nominal SGM target requires emissions to decline to 100 $MtCO_2e$ by 2030, or 28.1% below 2023. However, it also allows the industries it covers to meet this target with offsets. Currently less than a third of the 'reductions' achieved were from real emission reductions and two thirds due to the use of offsets. This undermines the effectiveness of the mechanism, so the real emissions reductions are therefore unlikely to be close to the nominal target and the covered sectors will not be able to decarbonise as required by Australia's net zero target.

The most recent emission inventory shows that emissions from the fossil fuel industry, agriculture, and waste sectors continue to flatline, as the government's ongoing reliance on – and revision of – its land sector for emission removals gives the appearance of action where there has been little.

Australia still lacks federal-level strategy, plans or committed timelines for a transition away from coal and fossil gas as agreed at the first Global Stocktake at COP28. Instead, the government has continued to approve coal and gas projects. Seven new coal mine projects in 2023 and 2024 will allow coal mining and exports to continue for decades to come. Shortly after returning to power in May 2025, it approved a 40 year lifetime extension to Woodside Energy's massive North West Shelf LNG Plant, allowing it to operate until 2070 – decades beyond the point when Australia is meant to have reached net zero. The facility will be able to essentially triple its historical emissions (Climate Analytics 2025c). This is incompatible with the Paris Agreement's goals and with the government's emission reduction commitments.

As the third largest fossil fuel exporter, Australia's exported emissions were already more than two times its total domestic emissions in 2022 (Climate Action Tracker 2024), and its exported emissions almost doubled between 2010 and 2022. Together with domestic emissions, its total GHG footprint adds to about 4.5% of global fossil fuel CO_2 (Climate Analytics 2024).

Under its "Future of Gas Strategy", the government continues to support the oil and gas industry, reaffirming its support for the production and export of fossil gas until 2050 and beyond. Its support of the fossil fuel industry hinges on false solutions such as its support for carbon capture and storage (CCS), and offsets. According to the IEA, no new fossil fuel projects are required in its Net Zero Emissions scenario, which reaches net zero emissions by mid-century in a way that limits global warming to 1.5°C, consistent with the Paris Agreement's long-term temperature goal.

The rollout of electric vehicles in Australia lags behind most OECD countries, and holistic transport policies, which consider public transport, freight, and modal shift, are still missing and Australia was the last developed country but Russia to adopt a (weak) vehicle efficiency standard in 2024. As a result, the transport sector is projected to become the country's greatest source of emissions by 2030. Australia will need to adopt more ambitious climate policies and take further action to reach 1.5°C Paris Agreement compatibility. Time is running out in the crucial period to 2030. To improve its climate action, Australia could:

Decrease its reliance on LULUCF sequestration by implementing ambitious policies in other economic sectors. Australia not only needs to submit an upgraded 1.5°C aligned 2030 target and a new 2035 1.5°C compatible NDC in 2025 but also needs to set targets for genuine emissions reductions from its economy without relying on highly uncertain estimates from the land sector. It should introduce full transparency with respect to its land sector modelling and revisions.

Stop supporting the fossil fuel industry. Australia increased its subsidies to fossil fuel producers and major users by around 30% from 2022/23 to 2023/24 to a total of around AUD 14.5bn, and budget estimates indicate this will further increase (Australia Institute 2025). Australian governments, state and federal, need to cease this support and stop other administrative and political support for coal and gas projects, halt new developments, and establish a framework to shift away from fossil fuel exports.

Accelerate the phase-out of fossil fuelled power generation by streamlining regulatory approvals that are slowing investment in large-scale renewable generation and storage, accelerate grid modernisation and expansion, incentivising demand-side management, and planning the phase-out of coal by 2030 and gas-fired plants by the mid-2030s – including off-grid – in a fair and just way.

Foster the decarbonisation of the transportation sector through policies to accelerate the deployment of electric vehicles, public transport planning, incentives for modal shift, and transition pathways for heavy mobility.

Address emissions from the agriculture, waste and buildings and industry sectors, with targeted policies that guarantee a fair and just transition.

Transition Australia's industry to future-oriented, low-carbon exports, by exploiting its vast renewables potential and mineral resources, without backing false solutions such as offsets and carbon capture and storage.

Please refer to the full analysis of Australia under the Climate Action Tracker.

The Safeguard Mechanism

The "Safeguard Mechanism" (SGM), which is the core policy for reducing industrial emissions, is an example how offsetting delays or avoids decarbonisation. The nominal SGM target requires emissions to decline to 100 $MtCO_2e$ by 2030, or 28.1% below 2023. However, it also allows the industries it covers to meet this target with offsets. Currently less than a third of the 'reductions' achieved were from real emission reductions and two thirds due to the use of offsets. This undermines the effectiveness of the mechanism, so the real emissions reductions are therefore unlikely to be close to the nominal target and the covered sectors will not be able to decarbonise as required by Australia's net zero target.

The mechanism allows for unlimited use of offsets to meet declining baselines, creating uncertainty about actual emissions reductions achieved and the effectiveness of the scheme. Modelling undertaken for the government and for the CCA found that 58–68% of reductions under the SGM to 2030 could be met with offsets rather than onsite emissions reductions (Climate Change Authority 2024). Without stronger restrictions on offsets or clearer incentives for decarbonisation at the facility level, the mechanism risks delaying the structural change needed across high-emitting sectors such as mining, oil and gas, and heavy industry.

Detailed analysis is provided in the section below.

To overcome the barriers to renewable energy deployment and align with a 1.5°C pathway, the Australian Government must adopt a more ambitious, coordinated, and systemic approach.

3. 1.5°C aligned climate targets for Australia

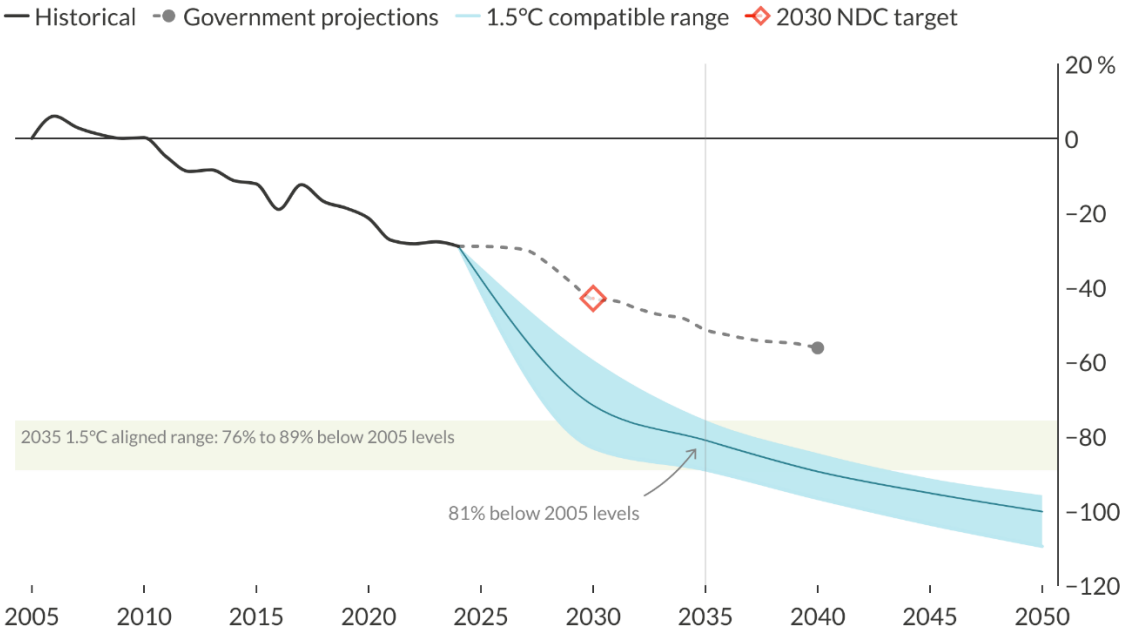
In submitting its new, 2035 NDC, Australia needs to both bring its current 2030 net target of a 43% reduction below 2005 levels in line with the 1.5°C limit and put forward an adequate 2035 target.

Recommended net emissions targets for Australia:

2030: around 72% below 2005 levels
2035: around 81% below 2005 levels

Australia's net emissions, relative to 2005 levels

Australia's historical and projected greenhouse gas emissions, including land use, land-use change and forestry, compared with 1.5°C aligned pathways, relative to 2005 (%).



Reliance on land sector sinks has obscured lack of action

To clarify the level of abatement required from the economy, Australia's new NDC needs to include a commitment to reduce reliance on land sequestration and provide full transparency on the land sector sequestration it plans to use to meet its commitments.

While net emissions have dropped by 29% between 2005 and 2024, gross emissions have only decreased by 2% over the same timeframe. Not only has land sector sequestration obscured the sluggish emission reductions across the economy, successive increases in estimated sequestration for 2030 have substantially reduce the action needed across the economy to reach the current 43% 2030 target.

Fossil fuel phase out is the key

Australia's new NDC needs to include a commitment to policies that will reduce fossil CO_2 emissions by about 54% by 2030 and 71% by 2035, through the phase-out of fossil fuels from power, industry, transport and other sectors of the economy.

Government policies must be laser-focused on reducing fossil carbon dioxide emissions as fast as possible, as warming will halt once net zero CO_2 emissions are achieved globally. This needs to happen by mid-century to limit peak global warming to 1.5°C or close to that level.

Methane emissions reductions are critical

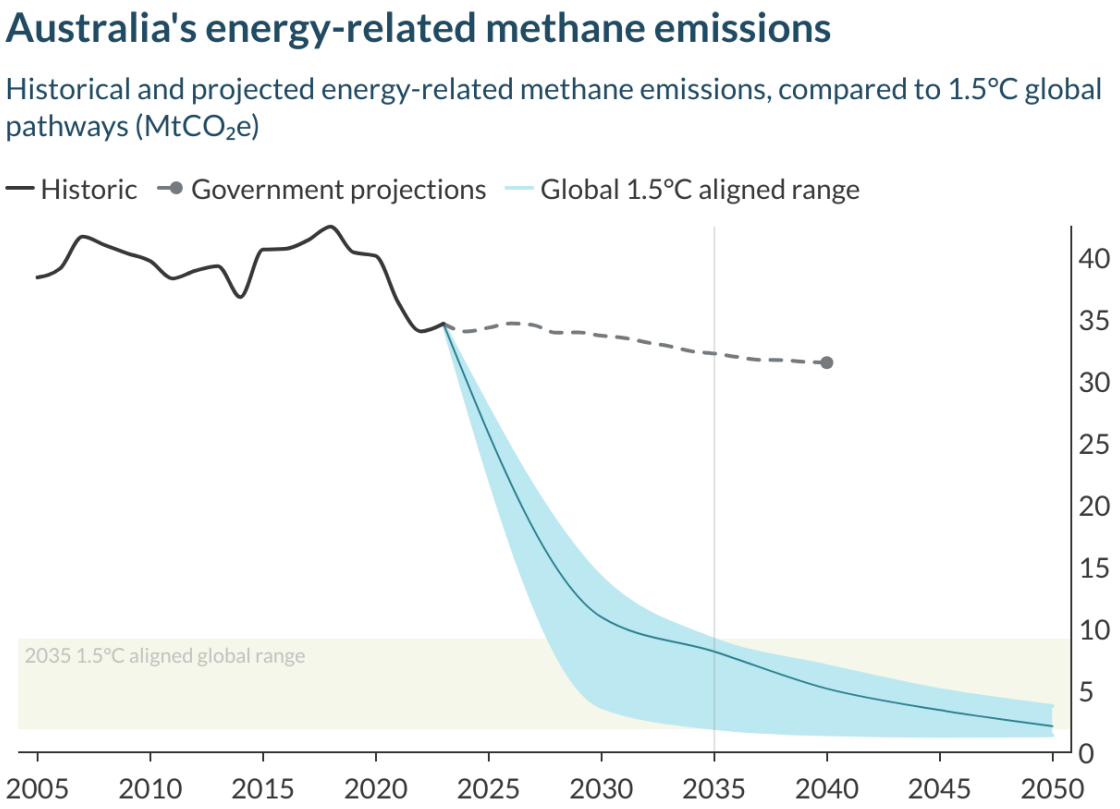
Australia's NDC needs to include methane targets, with policies to back this, to provide the basis for much-needed emissions cuts, particularly from the fossil fuel industry. Australia has failed to cut its methane (CH_4) emissions. The government projects them

to be only 2% below 2020 levels by 2025, compared with the 30% target from the Global Methane Pledge Australia has signed onto.

Australia's total methane emissions need to be about 40% below 2020 levels by 2030, and about 48% below 2020 levels by 2035.

Methane abatement potential differs by sector. The IEA notes that "tackling methane emissions from fossil fuel operations represents one of the fastest and lowest-cost opportunities to reduce greenhouse emissions globally". In global 1.5°C compatible pathways, cuts from energy-related methane emissions are much steeper than in the rest of the economy.

To align with 1.5°C aligned pathways, Australian energy-related methane emissions would need to drop by about 73% below 2020 levels by 2030, and about 80% by 2035.



Include International aviation and maritime emissions in NDC

Australia does not include international aviation and Maritime emissions in its whole of economy NDC target: these emissions are effectively excluded from action. The new Australian NDC needs to commit to including international aviation and marine emissions inside its whole-of-economy 1.5°C aligned targets for 2030 and 2035.

Australia's new NDC must recognise the need for a fossil fuel phase-out and undertake planning for a transition away from fossil fuels. It needs to immediately stop the development of new fossil fuel production projects, as well as the lifetime extension or

expansion of existing ones, so that an orderly phase-down of fossil fuel production can occur in line with the Paris Agreement's 1.5°C limit.

Please refer to Climate Analytics detailed analysis *A blueprint for climate leadership 1.5°C aligned climate targets for Australia.*

Deploying renewable energy infrastructure

4. What are the main challenges to deploying the renewable energy and related infrastructure needed to reach Australia's targets

Australia faces significant challenges in deploying the renewable energy and related infrastructure needed to meet its climate targets. The scale and speed of renewable expansion required is unprecedented: wind and solar generation must grow four- to fivefold by 2030, with around 170 GW of new capacity added (NewClimate Institute and Climate Analytics 2024). Yet, under current policy settings, deployment is tracking at less than two-thirds of what is needed. This shortfall risks leaving the country well behind its 1.5 °C-aligned pathway.

Gap between government ambition and scientific benchmarks

The current renewable energy target—82% of generation on the main grid by 2030—falls short of the 90–95% renewable share required (Climate Action Tracker 2023). Installed capacities projected under existing policies also remain well below the necessary 156–178 GW of renewable energy by 2030, even when factoring in planned storage. This reflects a deeper challenge: while Australia has strong renewable energy potential, the policy framework is not yet aligned with the scale of transformation required.

Sustained and substantial investment

To achieve this level of renewable energy deployment annual funding of nearly USD 10–12 billion is needed between 2026 and 2030, a level of investment far above historical trends (Climate Analytics 2025a).

Investment in large-scale renewable generation stalled in 2023, with just AUD 1.5bn committed to new projects, substantially down from AUD 6.5bn in 2022 (Clean Energy Council 2024). The rollout of renewables in Australia continues to be obstructed by slow planning and environmental approval processes, higher costs, and tighter markets for equipment and labour. This is reflected in forecasts published by the International Energy Agency (IEA), which show that under current trends and policies, the share of renewables in generation would reach only 58% by 2030 (IEA 2024).

At the same time, deployment is being slowed by systemic barriers: complex and lengthy planning and approval processes, local community resistance, rising costs, supply chain pressures, and shortages in skilled labour. In addition, measures like the SGM are not providing a sufficient price signal to support fuel switching and use of renewable energy in commercial and industrial sectors to drive preferential pricing for

renewable energy on the demand side, especially when covered facilities can meet obligations through the use of low-cost offsets from other sectors.

Together, these factors risk delaying project rollouts precisely when speed is essential.

Continued reliance on fossil fuels

Despite clear evidence that coal must be phased out by around 2030 and fossil gas by 2035 to align with 1.5°C, there are still no formal phase-out commitments. Fossil fuel production remains deeply embedded in the economy, contributing significantly to exports and GDP. This creates both political resistance to rapid transition and risks of stranded assets, particularly in the gas sector. Carbon capture and storage, often suggested as a bridge, plays only a marginal role in credible 1.5 °C pathways and cannot substitute for rapid renewable expansion.

Compounding these challenges, electrification will sharply increase demand as transport, buildings, and industry transition away from fossil fuels. In some 1.5 °C compatible pathways, electricity demand is projected to triple by 2050 (Climate Analytics 2025a). Meeting this demand requires not only a vast scale-up in renewable generation but also significant investment in grid infrastructure, storage, and system flexibility. Without such systemic upgrades, bottlenecks will persist, undermining progress toward decarbonisation.

For additional details please refer to Climate Analytics *Australia country briefing* from *Setting 1.5°C compatible wind and solar targets* report, as well as Australia's profile in the our National Pathway Explorer.

5. What can the Australian Government do to address these challenges?

Increase the renewable energy target scope and ambition

While not legislated, the 82% renewables target applies to the nation's four main grids, but not to other minor grids or off-grid generation. Given that a significant amount of generation is off-grid (~10%), and is not yet been addressed by government policy except for the Safeguard Mechanism, even if the government's 82% target is met the nation's electricity generation is only projected to be 77% renewable by 2030 (DCCEEW 2024b). The government's target of 82% renewable penetration of the main grid by 2030 is commendable, but falls short of 1.5°C compatibility.

On the demand side, the use of offsets and other flexibility mechanisms, and the limited coverage of the SGM is not providing a sufficient price signal to drive preferential demand for renewable energy from Australia's largest energy consumers, or the large number of commercial operations that are not covered by the scheme.

Policy ambition needs to be raised

Renewables supplied 64 TWh in 2022, but to align with a 1.5 °C pathway this must rise to 280–330 TWh by 2030—a four- to five-fold increase in just eight years (NewClimate

Institute and Climate Analytics 2024). Current renewable energy targets—such as the goal of 82% renewable penetration by 2030—fall short of what is required. Instead, government planning should commit to achieving a 90–95% renewable share by 2030 and ensure installed capacities meet the benchmarks of 120 GW solar and 45 GW wind by that date. This higher ambition must be matched by binding coal and gas phase-out schedules, with coal fully retired by around 2030 and gas by 2035, consistent with 1.5°C compatible scenarios. Without such commitments, renewable energy deployment will continue to be undermined by fossil fuel lock-in.

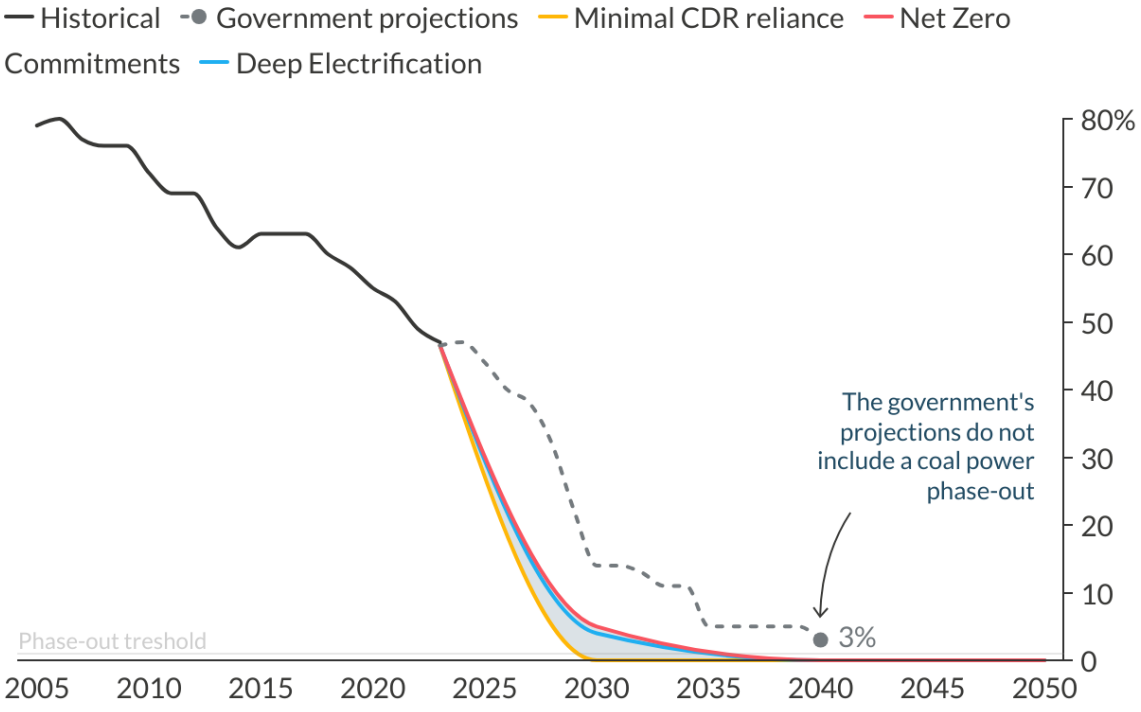
The government must commit to clear fossil fuel phase-out timelines

Coal power still accounted for nearly half of Australia's total generation in 2023, while fossil gas accounted for 18% (DCCEEW 2024a). There is no explicit emissions reduction policy for the electricity sector, nor a federal-level coal and fossil gas phase-out plan and timeline.

Consistent with 1.5°C aligned pathways, coal power should be fully phased out by the early 2030s and unabated gas by 2035. At the same time, new fossil fuel projects must be stopped to avoid locking in emissions and infrastructure that would undermine Australia's climate commitments. This is one of the most important steps to align with Paris-aligned power sector benchmarks.

Role of coal power generation in the electricity mix

Share of coal in the power mix under 1.5°C compatible pathways, compared to the government emissions projections (%)



Note: a fuel is considered phased out when its share in the total generation mix reaches below 1%.

Special attention is needed for off-grid power systems and Australia's industrial regions

Mining and resource hubs in regions such as the Pilbara, Queensland, and the Northern Territory currently rely heavily on diesel and gas for off-grid electricity. Replacing these with renewables and storage offers a dual opportunity: cutting emissions while lowering energy costs for industry. Similarly, Australia's heavy manufacturing—including steel, aluminium, and cement producers—must be supported in switching to renewable electricity and green hydrogen, ensuring that decarbonisation aligns with global low-carbon trade requirements. Policies that integrate renewables into both grid and off-grid systems will be essential to deliver deep decarbonisation across the economy.

Government must prioritise proven solutions over speculative technologies

While offsets, land-use sinks, and carbon capture and storage (CCS) play only marginal roles in Paris-aligned pathways, Australia's current plans overemphasise them. Shifting focus firmly toward scaling wind, solar, storage, and electrification will ensure reliable, low-cost decarbonisation.

Accelerate the overhaul of investment and financing frameworks

Annual investment for renewable energy to reach around USD 10–12 billion between 2026 and 2030, required strong public policy that can play a catalytic role (Climate Analytics 2025a). These include long-term funding guarantees, investment incentives, and mechanisms to de-risk private sector participation, as well as reform of the SGM to deliver significantly increased demand and investment in renewable energy generation to supply Australia's largest energy users. Aligning finance flows away from fossil fuel expansion and towards renewable infrastructure, transmission, and storage is critical to scaling deployment at the necessary pace.

Address systemic and regulatory bottlenecks

Slow planning and permitting processes remain one of the key obstacles. Streamlining approvals, providing clear and consistent policy signals and ensuring regulatory certainty will help accelerate project timelines. Equally important is investment in the social dimension of the transition.

The Safeguard Mechanism

Overall direction to improve effectiveness of the Safeguard Mechanisms

We propose reforming the Safeguard Mechanism (SGM) into a full emissions trading system (ETS) with an explicit, annually declining cap on gross emissions that is aligned with a 1.5°C pathway to zero emissions by 2050. A 4.9% annual decline is insufficient. The system should follow a linear trajectory to zero emissions by 2050, with stronger reductions this decade.

In a legally capped system, facilities can trade compliance units generated inside the cap (Safeguard Mechanism Credits, or SMCs) to optimise abatement, while the use of external offsets (ACCUs) should be phased out rapidly. This would ensure the mechanism drives genuine on-site emissions reductions and prevents offsets from expanding the volume of allowed fossil emissions in the covered sectors and/or facilities. It would also introduce a market linked price signal which would provide the incentives for companies to invest in emission reductions and reap the benefits through sale of surplus SMCs.

Under the current SGM settings, and with almost unlimited use of offsets, gross emissions are unlikely to decline materially this decade. Attempts in legislation to constrain offset use via indirect averaging do not materially limit offset volumes when assessed against the numbers. Under the present arrangements there is a very serious risk gross emissions remain roughly flat for the rest of the 2020s, despite claims of nominal net emission reductions.

1. How effective is the Safeguard Mechanism in driving onsite emissions reductions at Australia's largest industrial facilities since its 2023 reform?

The Safeguard Mechanism (SGM) is the Australian government's primary policy for reducing emissions from industrial facilities, excluding the power sector. he SGM's role is to ensure large industrial facilities decarbonise in line with Australia's Paris Agreement obligations (Climate Analytics 2022). Without deep reform, it will remain ineffective as it allows companies to comply using offsets and avoid or minimise real emission reductions. It also appears structured to allow more fossil fuel projects to enter the system.

At present the SGM applies to large facilities emitting more than 100 ktCO_2e per year and sets emissions limits – or 'baselines' – which decline annually. Nominally, Facility baselines net emissions will now decline by 4.9% each year until 2030, with future reductions post-2030 to be determined in five-year blocks (DCCEEW 2024c). These declines however may not be real and only refer to net emission reductions.

Core problem: offsets expand allowed fossil emissions and displace on-site abatement

To comply with declining baselines, facilities can either cut their emissions at source acquire Australian Carbon Credit Units (ACCUs), or purchase Safeguard Mechanism Credits (SMCs) from facilities which have reduced more than their baseline allowance for the particular compliance period. ACCUs offset units which are generated from activities outside the capped SGM system and as such their use adds to the allowed fossil emissions within the covered sector and displaces real on-site emission reductions .

However, SGM facilities have mostly met their obligations under the scheme by purchasing offsets instead of cutting on-site emissions, which would deliver actual emissions reductions. The reform allows for almost unlimited use of offsets to meet declining baselines at a facility level.

Offsets cannot compensate for the climate effects of fossil carbon dioxide emissions and ultimately make the climate change problem worse compared to situation where offsets are not used. Offsets are not permanent over the time. Goals required to compensate for fossil carbon dioxide emissions and most offsets are not real and additional to what would otherwise have happened, and by design temporary in nature

Integrity concerns surrounding most ACCU units in that way they do not represent real and additional emission reductions and are not permanent make a bad system worse. Even so-called 'high-integrity' offsets are not a viable alternative to genuine emission reductions. See our detailed analysis: *Why offsets are not a viable alternative to cutting emissions.*

Limitations and design flaws in the SGM

The design of the SGM assumes significant new fossil fuel projects will come online, such as new carbon-intensive gas fields and coal mines (Clean Energy Regulator 2023; Department of Climate Change 2023; RepuTex 2023). The reform mandates new shale gas projects must have net zero scope 1 emissions, i.e. domestic emissions occurring during fossil gas production, and that new gas fields will be given a zero baseline for reservoir CO_2 (DCCEEW 2024b).

The effectiveness of the SGM in reducing emissions depends on the extent to which existing and new facilities covered under the mechanism rely on offsets to meet their baselines. Without a phase out of offset use and clearer incentives for decarbonisation, the SGM risks falling short of delivering Australia's climate goals by not ensuring that emissions from these sectors become established on a pathway to zero emissions by 2050.

In 2024, 215 facilities were covered by the SGM accounting for gross emissions of 135.8 $MtCO_2e$, which was approximately 26% of Australia's total emissions excluding LULUCF (Climate Change Authority 2024; DCCEEW 2025). In 2023, SGM facilities surrendered 1.2 million ACCUs, meaning that SGM facilities collectively offset 1.2 $MtCO_2e$ to meet their baselines in preference to making direct on-site emissions reductions.

The reformed SGM aims to reduce *net* SGM facility emissions from 138 $MtCO_2e$ in 2022 to around 100 Mt in 2030. The government projects that *gross* emissions from SGM facilities will reduce from 136 $MtCO_2e$ in 2025 to 121 $MtCO_2e$ in 2030 and that *net* emissions (i.e. accounting for offsets), would fall to 96 $MtCO_2e$ in 2030 (DCCEEW 2024b). Modelling undertaken for the government and the CCA found that 58–68% of compliance under the SGM could be met using ACCUs over the period to 2030. This means less than half of emission reductions are expected to come from the on-site emission abatement (Climate Change Authority 2024).

The CCA recommends that facilities be required to report on their expected share of onsite emissions reduction and carbon credit use. Heavy reliance on offsets demonstrates that offsetting undermines the mechanism's effectiveness in decarbonisation and delays the structural change needed across key high-emitting sectors, including mining, oil and gas, and heavy industry.

Reference to *Emissions as usual Implications for the Safeguard Mechanism of LNG and coal mine projects*

The Safeguard Mechanism is failing to prevent significant new fossil fuel demand

The Australian Energy Market Operator (AEMO) is currently projecting over 200 TJ/day of new demand for fossil gas entering the market in Western Australia around 2028.[2] This will add over 20% to current total domestic gas demand. Much of this projected demand is from facilities that will be covered by the SGM in the mining, mineral processing and fertiliser production sectors. In many cases these facilities could adopt 100% renewable energy solutions from commencement using technology that is either already mature and economically viable or is rapidly advancing.

This reveals that the SGM in its current design is ineffective at preventing significant new demand for fossil fuels (and therefore new emissions) coming online and more or less completely ineffective in encouraging companies to invest in decarbonisation strategies for their operations. Once this new demand is built and operational, it will be more difficult and expensive to retrofit and decarbonise than if the new facilities did not utilise fossil gas from commencement.

[2] AEMO 2024, Western Australia Gas Statement of Opportunities 2024

The Safeguard Mechanism drives ACCU offset demand rather than emission reductions

The Safeguard Mechanism is expected to be the main driver of ACCU demand, as large industrial emitters can meet their steadily declining emissions targets, or 'baselines', through offsets in lieu of cutting on-site emissions Demand for ACCUs linked to the SGM is expected to surge from under one million in 2023 to 25 million by 2030, while annual ACCU issuance is projected to increase from 19 million in 2024 to 25 million in 2030 and 32 million in 2040 (DCCEEW 2024b).

Despite being a central component of Australia's current climate policy framework within the SGM, mounting scientific evidence raises serious doubts about the environmental integrity of ACCUs (Macintosh 2022; Macintosh et al. 2022, 2023, 2024). Several studies have found that most associated projects do not result in actual emission reductions. This is because they are crediting, for example, avoided deforestation that was never going to happen, human-induced regeneration projects that actually oversaw a decline in forest cover, or initiatives to generate electricity waste-related methane that were already economic (not additional) (Macintosh et al. 2022). This lack of integrity - real, additional and verifiable admission reductions – means these offsets are exacerbating the climate change problem by adding more emissions to the atmosphere than with otherwise it happened in their absence .

ACCUs vs SMCs: different things, different roles

The current discussion often blurs the distinction between ACCUs and SMCs. It is important to be clear:

SMCs are generated inside the capped system. Their use, generation and sale should be encouraged to optimise investment efficiency. They are not offsets. ACCUs are generated outside the capped system and are offsets. Their use should be phased out for compliance under the SGM..

Within a capped SGM with appropriate integrity and ambitious, 1.5° aligned targets, companies purchasing SMCs from others that have reduced emissions below their baselines is both legitimate and desirable—it delivers least-cost abatement within the cap. This is entirely different to reliance on ACCUs.

2. What changes could the Australian Government make to the mechanism to help achieve Australia's emissions reductions targets?

Transform the SGM into a proper emission trading system

As mentioned above, consideration needs to be given to reforming the Safeguard Mechanism (SGM) into a full emissions trading system (ETS) with an explicit, annually declining cap on gross emissions that is aligned with a 1.5°C pathway to zero emissions

by 2050. This would provide many benefits, including a carbon price for industrial facilities, potentially linking up with international trading systems, strengthen the legislative basis for climate action in Australia substantially and provide the opportunity for revenue generation by government should emission units ultimately be auctioned.

To ensure real emissions reductions, the government should use the opportunity of reforming the Safeguard Mechanism to establish a full emissions trading system (ETS), similar to the EU ETS. This will allow facilities to meet their baselines and allow future integration with other international emissions trading systems, such as the EU ETS. It is essential the trading system is well-regulated, has accurate data, with independent checks and comprehensive compliance measures.

Within the SGM structured as a emission trading system Companies that reduce their emissions lower than their cap can generate SMCs equivalent units and can trade their units with those have not reduced emissions below their legal cap for compliance purposes

There are several key initiatives that would need to be taken to undertake this transformation

Transparent baseline and emission reduction limits for covered facilities aligned with 1.5ºC

It is essential that reforms to the SGM introduce an effective legally binding annually-declining cap on gross emissions, both for individual facilities and in aggregate under the scheme.

The emission cap for the system as a whole needs to be aligned with 1.5° pathways to achieve zero emissions by 2050 at the latest.

This must be accompanied by reforms to new entrant criteria and other existing flexibility measures to ensure emissions from covered facilities emissions remain within this cap. Broadening of the scheme will also be required to create a price signal for the large number of commercial and smaller industrial facilities that are not currently covered by the scheme.

For the reasons mentioned in the consultation paper, the initial allocation of allowances for each facility - the baseline - should be based on grandfathering. This would help overcome a number of the complexities of any other alternative approach to dealing with Energy intensive trade exposed industries (EITI) issues and has been used effectively in the EU ETS to get the system going in its initial phase.

There should be no application of an industry average baselines, and rather each facility starts from its own absolutely missions in the first year of Phase 1 of the reformed SGM.

Much stronger compliance system is required to support ETS

A rigorous compliance system linked to penalties for non-compliance that are multiples of the market price SMC units would be appropriate to ensure that the market operates effectively and efficiently.

Phase in auctioning of emission allowance (SMCs)

If the safeguard mechanism is moved towards a emission trading model, then it would be possible for the government to structure it in and away that emission allowances could be auctioned and whole or part in the future generating revenue from carbon pricing for the economy as a whole.

Phase out offsets in the Safeguard Mechanism

Unfettered use of offsets under the Safeguard mechanism will likely allow real emission increases (as opposed to reductions) in Australia, and their use will have adverse implications for global emissions. As we move further into the critical decade for climate action, and ever closer to 2050, the year that many countries and companies have set as their net zero emissions target, policy makers need to confront the fundamental shortcomings of offsets in achieving real emission reductions, including from fossil fuel sources. Limiting global warming to safe levels and avoiding the worst of projected potential climate impacts is not consistent with the use of offsets.

This would also facilitate the Australian Safeguard Mechanism joining with high integrity systems such as that of the EU ETS.

Please refer to Climate Analytics detailed analysis on Why offsets are not a viable alternative to cutting emissions.

Reduce the Safeguard Mechanism's threshold to 25 ktCO2e/yr.

The Safeguard Mechanism currently applies to facilities that emit more than 100 ktCO2e emissions per year. Lowering this threshold to 25 ktCO2e/yr as recommended by the Productivity Commission will ensure the bulk of emissions from high emitting facilities are covered, Limit gaming of the system where facilities are kept under the 100 kt time limit which was much harder with the 25 kt limit. It would also avoid issues arising when the number of facilities that are under the 100kt/yr threshold increases (Climate Analytics 2022). Lowering the threshold to 25kt/yr would also align with the practice in the European Union emission trading system (EU ETS).

Increase the Safeguard Mechanism's to include all the registered corporations

The government should consider expanding beyond existing facilities to include all of the registered corporations that report their emissions to the Clean Energy Regulator. This would provide a deeper emissions trading market and would ultimately cover more than half of Australia's current emissions.

The government should also increase the Safeguard Mechanism's coverage overall as recommended in the recent Interim Report of the Productivity Commission.[3]

Heavy reliance on CCS should not be allowed in the Safeguard Mechanism

Any applications of carbon capture and storage under the safeguard mechanism should be allowed only under strict conditions where there is no other alternative available. A present this would appear to be restricted to the capture of reservoir CO2 with virtually all other sources of emissions being able to be reduced at source without resorting to CCS. There are large scale adverse consequences to the deployment of CCS outside of activities where there is no alternative. Please refer to Climate Analytics detailed analysis which finds reliance on carbon capture and storage globally could release an extra 86 billion tonnes of greenhouse gases into the atmosphere between 2020 and 2050.

[3] https://www.pc.gov.au/inquiries/current/net-zero/interim

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