CLIMATE CHANGE AUTHORITY

2025 Annual Progress Report

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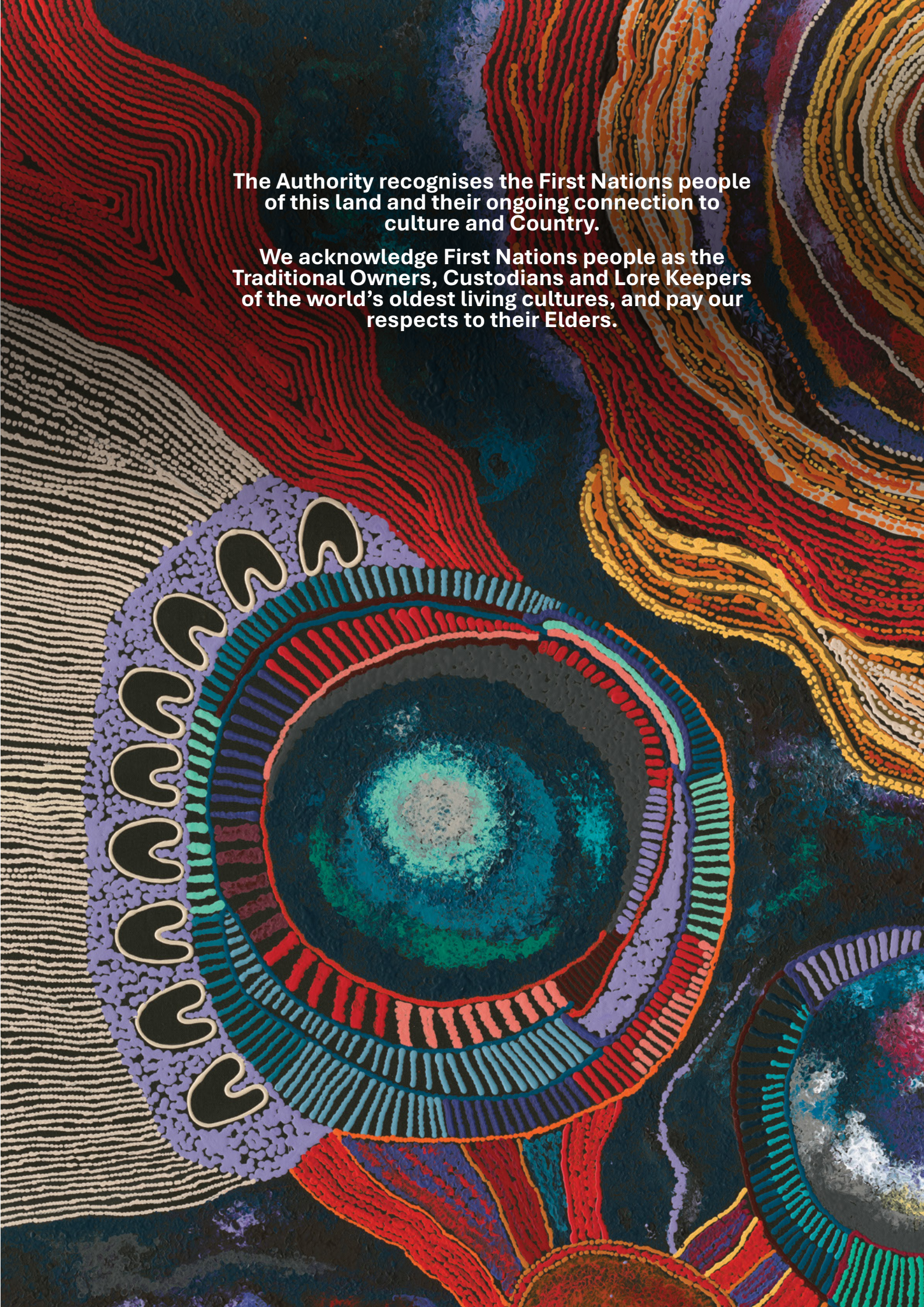

The Authority recognises the First Nations people of this land and their ongoing connection to culture and Country.

We acknowledge First Nations people as the Traditional Owners, Custodians and Lore Keepers of the world's oldest living cultures, and pay our respects to their Elders.

CLIMATE CHANGE AUTHORITY

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14 November 2025

The Hon Chris Bowen MP
Minister for Climate Change and Energy
Parliament House
CANBERRA ACT 2600

Dear Minister Bowen,

In response to your request of 25 June 2025, and in accordance with section 14 of the *Climate Change Act 2022*, we are pleased to submit to you the Climate Change Authority's advice, entitled *2025 Annual Progress Report,* to inform the fourth Annual Climate Change Statement to Parliament.

In accordance with section 14(6) of the *Climate Change Act 2022*, the Authority will proceed to publish a copy of the report on its website no later than the day you table your annual statement. The Authority is also required by the Act to cause its advice to be tabled within 15 sitting days after giving you the advice, and in any event no later than the day that you table your statement.

The Authority will work with your office to ensure these requirements are met.

Yours sincerely,

The Hon. Matt Kean
Chair

Brad Archer
Chief Executive Officer

Acknowledgements

The Climate Change Authority (The Authority) would like to thank the many individuals and organisations who contributed their time and expertise to the development of this report.

The Authority published a public consultation paper in August 2025 and received 93 formal submissions in response. The Authority also held more than 50 direct engagements with a wide range of stakeholders. These contributions have provided valuable evidence to help inform the Authority's analysis and recommendations.

Public submissions received by the Authority in response to the consultation paper have been published and can be viewed via the consultation page on the Authority's website.

A range of government agencies also provided technical expertise to the Authority in the preparation of this report.

The views expressed in the report are the Authority's own. They should not be taken as the views or positions of the entities mentioned above.

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Acronyms and abbreviations

Acronym	Meaning
ACCU	Australian Carbon Credit Unit
ACOSS	Australian Council of Social Service
AEIC	Australian Energy Infrastructure Commissioner
AEMO	Australian Energy Market Operator
AI	Artificial intelligence
APR	Annual Progress Report
ARC	Australian Research Council
BEV	Battery electric vehicle
BOM	Bureau of Meteorology
CCA	Climate Change Authority
CCS	Carbon capture and storage
CEDA	Committee for Economic Development of Australia
CER	Clean Energy Regulator
CIS	Capacity Investment Scheme
COAG	Council of Australian Governments
CRC	Cooperative Research Centre
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DCCEEW	Department of Climate Change, Energy, the Environment and Water (Commonwealth)
ECMC	Energy and Climate Change Ministerial Council
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
ESD	Ecologically sustainable development
ESEM	Electricity Services Entry Mechanism

Acronym	Meaning
ETEWG	Energy Transformation Enablers Working Group
EV	Electric vehicle
FMA	Future Made in Australia
FOGO	Food and garden organics
GBCA	Green Building Council of Australia
GDP	Gross Domestic Product
GW	Gigawatt
GWP	Global warming potential
ICA	Insurance Council of Australia
ICE	Internal combustion engine
IGCC	Investor Group on Climate Change
ILO	International Labour Organization
IPCC	Intergovernmental Panel on Climate Change
ISP	Integrated System Plan
LCLF	Low carbon liquid fuel
LNG	Liquified natural gas
MYMP	Multi-year monitoring period
NAP	National Adaptation Plan
NARCliM2.0	NSW and Australian Regional Climate Modelling 2.0
NCRA	National Climate Risk Assessment
NEM	National Electricity Market
NGER	National Greenhouse and Energy Reporting scheme
NOAA	National Ocean and Atmospheric Administration (United States)
NVES	New Vehicle Efficiency Standard

Acronym	Meaning
NWPAP	National Waste Policy Action Plan
OEM	Orderly Exit Management
PHEV	Plug-in hybrid electric vehicle
PV	Photovoltaic
QldFCP-2	Queensland Future Climate Projections 2
RD&D	Research, development and demonstration
REZ	Renewable energy zone
RFI	Request for information
SEO	Statement of environmental objectives
SMC	Safeguard Mechanism Credit
TEBA	Trade-exposed-baseline-adjusted facility
TNSP	Transmission network service provider
UNFCCC	United Nations Framework Convention on Climate Change
V2G	Vehicle-to-grid
VAM	Ventilation air methane
WMO	World Meteorological Organization

Legislation

All legislation cited in this report is Commonwealth legislation unless otherwise indicated. Commonwealth legislation can be found on the Federal Register of Legislation: www.legislation.gov.au. The following Commonwealth Acts are cited in this report:

Climate Change Act 2022

Environment Protection and Biodiversity Conservation Act 1999

Future Made in Australia Act 2024

National Greenhouse and Energy Reporting Act 2007

Executive summary

In September 2025, the Australian Government set a new 2035 emissions reduction target of 62–70% below 2005 levels, based on advice from the Climate Change Authority (the Authority). This target is ambitious, achievable, and firmly in Australia's national interest. But meeting it will require Australia to halve emissions within the next decade, a significant challenge that demands faster, coordinated action across all sectors.

Currently, Australia's emissions are declining, but too slowly. If the 2030 target is to be achieved, the pace of emissions reductions must at least double, compared with the average rate achieved in the past 5 years. To meet 70% emissions reduction by 2035, the pace must more than triple. While recent progress is encouraging, particularly in electricity and energy, resources, and industry, every sector must do more, and do it sooner.

The Capacity Investment Scheme (CIS) is central to delivering Australia's 82% renewable electricity target. To maintain momentum, the CIS should be extended beyond 2027 for as long as needed to provide investor certainty. While the CIS is in operation, the Government should refine its design. Lessons should be incorporated from initial implementation, other capacity schemes and the National Electricity Market (NEM) Review, while seeking to avoid any pause in the CIS and hence, investment.

Alongside the delivery of renewables, urgent investment is needed to ensure the power system remains stable as fossil fuel generators retire. The Government should ensure the delivery and deployment of the technologies required to support ongoing system security, such as synchronous condensers.

Reforms to the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) must also be implemented to speed up renewable project approvals, while balancing environmental protections. Without faster approvals, Australia risks falling short of its targets. Targeted changes – such as allowing the Minister to consider a project's emissions reduction potential, deploying a specialist 'strike team' to fast-track priority projects, and accelerating regional planning – can help unlock clean energy investment while balancing environmental and community priorities.

Community support is also critical. Local concerns and inconsistent benefit-sharing arrangements are slowing rollout of clean energy infrastructure in some regional areas. A national program for community engagement and benefit-sharing would help build trust, reduce complexity, and ensure regional communities share in the benefits of the energy transition.

Globally, energy and industrial systems are being rewired. Australia's future competitiveness will depend on how quickly it aligns its exports, infrastructure, and workforce with these shifting markets. The Authority welcomes the Government's Future Made in Australia package as a step toward capturing these economic opportunities. Developing decarbonisation deals – as proposed in the Authority's *2035 Targets Advice* – would add to Australia's leadership while reducing emissions in international supply chains and creating demand for Australia's green exports.

Domestically, the Safeguard Mechanism is helping reduce emissions, but its effectiveness will be limited if facilities rely too heavily on offsets rather than cutting emissions onsite. The Authority will closely monitor this issue ahead of key reviews in 2026–27.

Methane is a powerful short-term climate pollutant. Cutting methane emissions offers one of the fastest ways to slow warming and avoid crossing dangerous climate thresholds. Fossil methane made up around 7% of Australia's emissions last year and can be abated more readily than biogenic methane from livestock. The Authority will assess further opportunities to reduce fossil methane emissions in 2026.

Internationally, 2025 marked a turning point. Global pledges now suggest warming could be held to around 2 °C, down from over 5 °C projected when the Paris Agreement was adopted in 2015. But even if all current targets are met, the world remains off track for the Agreement's 1.5 °C goal, beyond which climate risks escalate sharply.

Australians are already experiencing the impacts of climate change (such as floods, fires, and heatwaves) and these will worsen. Governments cannot alone shoulder the cost of adaptation. The Government should lead a National Adaptation Finance Strategy to unlock private investment, including through tax reform, expanding the mandate of the Clean Energy Finance Corporation (CEFC), and leveraging Commonwealth payments to the states and territories. National leadership is also needed to reform land-use planning, strengthen infrastructure, and support planned relocations. These measures would help to ensure Australians are not locked into living and working in high-risk areas.

Report roadmap

This report advises the Minister on how Australia can progress toward a prosperous and resilient net zero economy in 6 parts:

Part 1: Introduction – summarises the climate challenge at hand, and how Australia is positioned to play a leading role in accelerating global clean energy investment and climate ambition.

Part 2: Australia's overall progress to net zero – provides a high-level assessment of how effectively Australia is reducing emissions nationally and by economic sector.

Part 3: Structural transformation – explores how broad, system-wide shifts beyond sector-by-sector emissions cuts can overcome transition barriers and drive a coordinated economic transformation. It focuses on boosting competitiveness, strengthening resilience, and supporting a just transition for workers and communities.

Part 4: Spotlight – Accelerating Commonwealth environmental approvals – investigates the potential impact of current challenges facing EBPC approvals on Australia's 82% renewable electricity target by 2030; and proposes additional actions the Australian Government could implement to complement current legislative reforms.

Part 5: Policy focus – Capacity Investment Scheme – examines the CIS and highlights the importance of maintaining investment momentum to meet Australia's emissions reduction targets.

Part 6: Policy focus – Safeguard Mechanism – presents the Authority's legislated assessment of the reformed Safeguard Mechanism's performance against its targets.

Recommendations

1. ACCELERATING PROJECT APPROVALS

Streamline approval processes for renewable energy projects to protect the environment from both climate change and development impacts.

Delays to approvals threaten Australia's renewable electricity and decarbonisation ambitions. Rapid deployment of renewable energy is the key to decarbonising the rest of the economy, and reducing emissions helps protect the environment from the impacts of climate change. Smarter, faster approvals are the way to rapidly reduce emissions and protect the environment at the same time.

To deliver smarter, faster approvals, the Government should:

A. amend the EPBC Act to expressly permit the Minister for the Environment to take into account emissions reductions supported by a proposed renewable energy generation, transmission or storage project when making environmental approval decisions, and to prioritise such considerations, except in designated 'no-go' zones

B. deploy a specialist 'strike team' to expedite planning and development processes for priority projects – broadly as previously proposed by the Productivity Commission

C. make better use of regional planning, bilateral agreements between the Commonwealth and states and territories, and digital approaches to the administration of environmental approvals.

See Part 4.3 for more details.

2. CAPACITY INVESTMENT SCHEME

Maintain momentum of the rollout of renewable electricity by extending the Capacity Investment Scheme until it is no longer needed.

A low-carbon electricity system is the backbone of a decarbonised Australia. Renewables are already generating more of Australia's electricity than ever before, but they need to be deployed faster for Australia to achieve its emissions reduction targets. The share of on-grid renewable electricity needs to roughly double over the next 5 years to achieve the 82% renewable electricity target that underpins Australia's emissions reduction goals.

The CIS is currently scheduled to conclude in 2027. While the NEM Review panel is expected to recommend a mechanism to replace the CIS by the end of this year, the timing of implementation is uncertain. Without extending the CIS, businesses will lack the policy certainty required to invest in renewable energy projects – the investments necessary for unlocking Australia's huge renewable energy potential.

The Government should refine the program to incorporate insights gained from its implementation, other capacity schemes and the NEM Review. The program should continue until it is no longer needed, rather than ending at an arbitrary point in time.

See Part 5.3 for more details.

3. ELECTRICITY SYSTEM SECURITY

Install the technologies needed to keep the power system secure while more renewable energy is deployed.

As fossil fuel generators retire, new sources of system security services are needed to support the entry of large amounts of wind and solar generation.

Synchronous condensers are a well-proven technology that can support power system security through the transition. Accelerating their deployment will enable more renewable electricity generation to connect to Australia's grids. To support both system security and reliability where required, gas-fired generators fitted with clutches can be deployed for their synchronous condenser functionality. A number of these dual-purpose installations should be deployed, to generate only when zero-emissions options are unavailable, and they should be run on low-carbon fuels in the future.

See Part 2.2 for more details.

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4. COMMUNITY ACCEPTANCE

Ensure regional communities share in the benefits of clean energy projects.

Recent delays and lost investments for clean energy projects reveal developers need guidance and support from government to help them earn community support. Projects that lack support face delays, threatening the pace of the renewables rollout.

The Government should establish a national program to guide community engagement and benefit-sharing for clean energy infrastructure projects. Rather than replacing existing state and territory approaches, this program would complement and strengthen place-based models while promoting greater consistency across jurisdictions. It should:

- adopt a principle-based approach including best practice principles such as Free, Prior and Informed Consent for First Nations communities
- be based on a robust framework for calculating mandatory benefit-sharing contribution amounts for clean energy projects and for distributing funds to align with the needs and goals of the impacted communities
- incorporate monitoring and evaluation of outcomes to improve transparency, hold all parties accountable, and ensure benefits are delivered as intended. Robust monitoring and evaluation should help to deliver better outcomes for communities and strengthen trust in the energy transition.

See Part 3.1 for more details.

5. FOSSIL METHANE

Note the Authority will take a deep look at the opportunities to radically reduce fossil methane emissions in Australia.

Methane is 80 times more potent than carbon dioxide when it comes to global warming over a 20-year period and reducing it can help to quickly slow climate change. Fossil methane made up around 7% of Australia's emissions last year and can be abated more readily than biogenic methane from livestock.

In 2026, the Authority will explore the opportunities to rapidly abate fossil methane. This will include a review of the latest developments in technological solutions and policy interventions, such as regulatory or market-based mechanisms and measures to leverage research, development and demonstration (RD&D) opportunities in Australia.

See Part 6.3 for more details.

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6. CLIMATE ADAPTATION

Ensure Australians are not locked into living and working in places exposed to dangerous climate risks.

The National Climate Risk Assessment shows that Australia will continue to experience increasingly severe and frequent climate impacts in the coming decades.

It is critical that the Government work with state, territory and local governments to:

- account for future climate risks in land-use planning and development rules
- provide better information, clear guidance materials and decision-making tools to support communities to actively prepare for and undertake planned relocations.

See Part 3.2 for more details.

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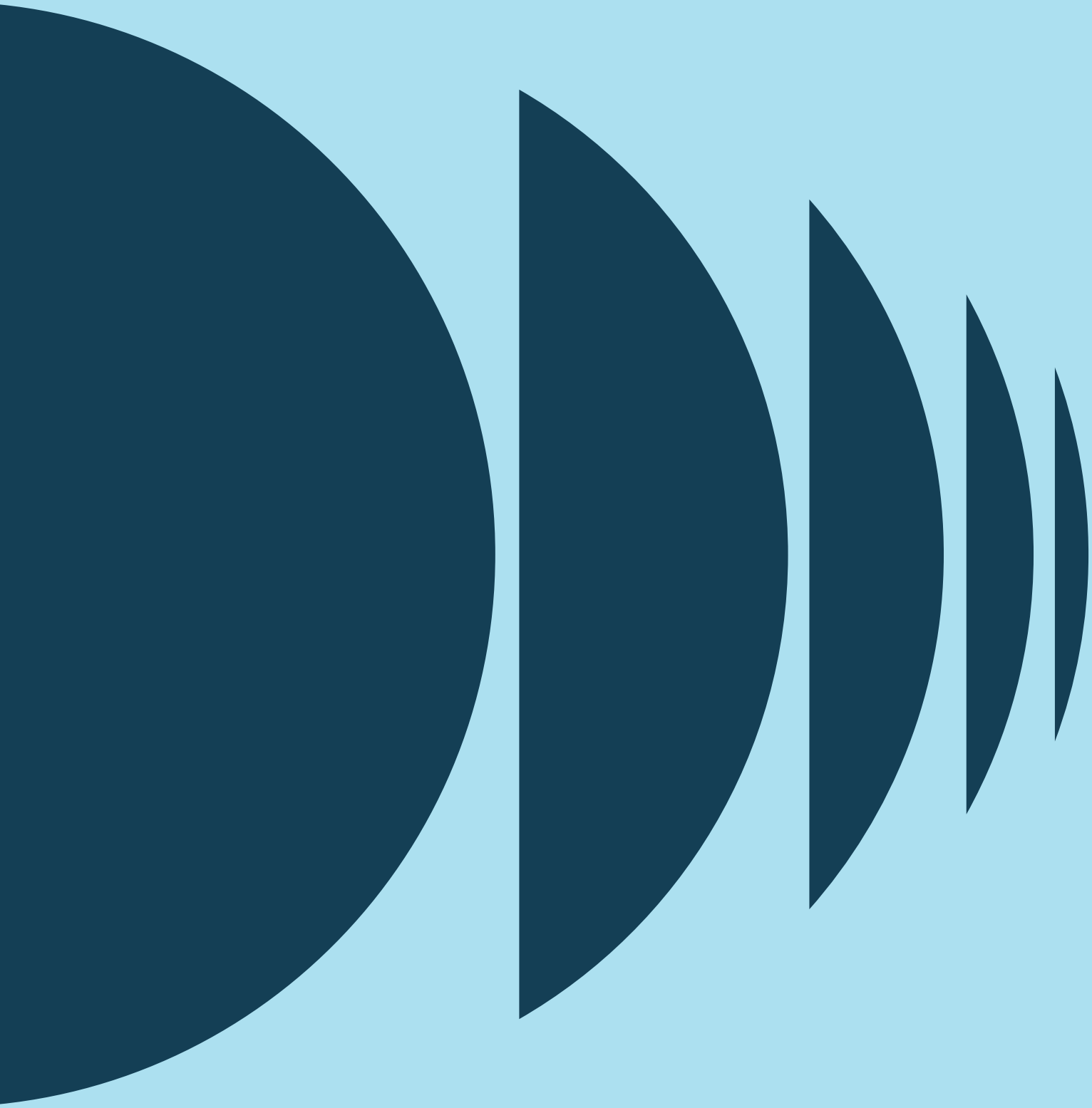
7. ADAPTATION FINANCE

Partner with investors to help communities and businesses build resilience to a range of climate-related impacts like floods, fires and heatwaves.

Governments can't alone cover all the costs of adapting to climate change, and investors and businesses need help to overcome barriers that stop the private sector from investing in adaptation.

The Government should prioritise developing a national adaptation finance strategy that considers opportunities to finance adaptation such as tax reform, adding adaptation to the Clean Energy Finance Corporation's investment mandate, and leveraging Commonwealth payments to states and territories to drive better adaptation and resilience outcomes.

See Part 3.2 for more details.



Part 1:
Introduction

Key points

- 2024 was the hottest year on record, with average global temperatures reaching 1.5 °C above pre-industrial levels for the ffrst time. 2024–25 was also Australia's warmest year on record.
- Meeting Australia's 2030 and 2035 emissions reduction targets and 2050 net zero target will take increased effort. Delays increase risks to Australia's economic productivity, environment and communities.
- Climate action is an economic opportunity. Cutting emissions and adapting to climate change can boost productivity and support jobs, businesses, and communities.
- Australia is well-placed to lead global and regional decarbonisation efforts, with the potential to export lower emissions products and its expertise.

The Climate Change Authority is a statutory agency established to provide independent, evidence-based advice to the Australian Government on climate change policy. This report – the Authority's 4th Annual Progress Report (APR) – provides advice to the Minister for Climate Change and Energy to inform his Annual Climate Change Statement to Parliament, as required under the *Climate Change Act 2022*.

This year's APR builds on the 5 reports the Authority has released since submitting its 2024 APR:

- *2035 Targets Advice*
- *Understanding climate threats to the Great Barrier Reef*
- *Unlocking Australia's clean energy potential*
- *Home safe: National leadership in adapting to a changing climate*
- *Assessing the impact of a nuclear pathway on Australia's emissions*.

The Authority's Climate Policy Tracker – now updated for 2025 – is a powerful tool to monitor climate policy implementation across all levels of government. It provides early insights into progress on climate commitments, well before outcomes appear in national emissions inventories, which often lag behind real-world action. Drawing on publicly available information, the tracker offers a comprehensive view of climate policies, categorised by jurisdiction, responsible agency, sector, objectives, implementation status, and key developments. It supports climate policy transparency, accountability, and more effective climate governance. The tracker is an essential resource for understanding how Australia is turning climate ambition into action. Explore it here: https://www.climatechangeauthority.gov.au/climate-policy-tracker

1.1 Framing Australia's decarbonisation challenge

Global markets are rapidly shifting to decarbonise. The EU is tightening carbon border rules and scaling clean industry; Japan and South Korea are building hydrogen, ammonia, and carbon capture supply chains; China leads in electric vehicle and battery manufacturing; and India is emerging as a cleantech hub.

While progress in the US has slowed, the global direction is clear: the world is rewiring its energy and industrial systems, and Australia's comparative advantage will increasingly depend on how quickly it can align its exports, infrastructure and workforce with these transforming markets.

In September 2025, the Government adopted the Authority's advice and set a 2035 target to cut emissions 62–70% below 2005 levels – a target that is ambitious, achievable and in Australia's national interest. Achieving this target will require Australia to at least halve its current emissions within the next decade – a significant undertaking with real challenges to overcome.

Nonetheless, this target is achievable with existing technologies and 4 strategic shifts:

1. continuing the transition to a renewables-based electricity system
2. electrifying and improving the efficiency of transport and buildings
3. improving the efficiency and emissions intensity of industry, mining and agriculture
4. increasing land sector carbon removals.

This year's APR contains advice to help Australia to meet its climate goals, minimise risks to people and the economy, and ensure Australians can thrive in a prosperous and resilient net zero future.

Box 1: The International Court of Justice's recent advisory opinion reinforces the need for greater global climate action

Earlier this year the International Court of Justice – in a landmark advisory opinion – affirmed all nation states have a legal obligation to prevent climate harm and protect the climate system. State obligations arise under climate treaties, such as the Paris Agreement, but also under environmental, human rights and international law (ICJ, 2025; Law Society Journal, 2025).

1.2 Climate change is amplifying risks and affecting Australia's people, environment and economy

2024 was the world's warmest year on record and the first calendar year where the average global temperature reached 1.5 °C above pre-industrial levels (WMO, 2025).[1] 2024–25 was also Australia's warmest year on record, as average surface temperatures reached 1.68 °C above the long-term average (BOM, 2025).

2025 also marked a critical milestone in global climate action, as countries were expected to submit updated national climate pledges – known as Nationally Determined Contributions – as signatories of the Paris Agreement. The United Nations Framework Convention on Climate Change's (UNFCCC) latest synthesis report shows that global climate pledges, if fully implemented, could limit warming to around 2 °C by the end of the century (UNFCCC, 2025). That's a major improvement from 2015, when the world was on track for more than 5 °C of warming. It reflects growing international momentum and the impact of coordinated global action since the Paris Agreement.

However, even if all current targets are met, global efforts still fall short of the 1.5 °C goal that countries committed to pursue under the Paris Agreement. This goal – to 'pursue efforts to limit the temperature increase to 1.5 °C' (UNFCCC, 2015) – was agreed because scientific evidence shows that staying below this threshold dramatically reduces the risks of extreme weather, sea-level rise, and irreversible harm to ecosystems and communities. Holding warming as close as possible to 1.5 °C – and returning to temperatures below that point after a temporary period above it (known as 'overshoot') – would significantly reduce the impacts and costs of climate change. But continuing to pursue 1.5 °C requires more than meeting existing pledges: it demands full implementation, readiness to strengthen future targets, and scaling up investment in adaptation to manage the impacts that are already unfolding.

Climate change is influencing extreme weather events in Australia and globally. Longer and increasingly dangerous fire seasons, more extreme rainfall, warming oceans, and extreme heat are increasing pressure on land and marine ecosystems (BOM, 2024), as well as people and the national economy. Insured losses from declared catastrophes have cost Australia approximately AUD4.5 billion[2] a year over the 5 years to 2023–24 (ICA, 2024). Under a 3.0 °C warming scenario, cumulative insured losses could reach AUD611 billion by 2050 (ACS, 2025a). The impacts of a changing climate are already affecting Australia's economic productivity and prosperity (CEDA, 2023; Productivity Commission, 2025; Treasury, 2023). As the climate warms, more extreme weather events mean businesses and communities are facing more disrupted operations, increased recovery costs, and reduced worker safety and productivity (AdaptNSW, 2025; IGCC, 2024a; ILO, 2024). The World Meteorological Organisation (WMO) estimates worker productivity drops by 2–3% for every degree above 20 °C (WMO & WHO, 2025).

Holding warming as close as possible to 1.5 °C would significantly reduce the impacts and costs of climate change. Compared to a 3 °C warming scenario, limiting warming to 2 °C could reduce the impacts on labour productivity, adding AUD155 billion in today's dollars to Australia's GDP to 2063 – an equivalent of 26–41 million more hours of work (Treasury, 2023). Successfully pursuing 1.5 °C would save even more.

Climate impacts are not felt equally across Australian environments and communities, and those experiencing pre-existing vulnerabilities are often hit the hardest (ACS, 2025a; CCA, 2025b). Low-income communities, renters, First Nations peoples, regional and remote communities, and those experiencing pre-existing health conditions or disabilities are particularly sensitive to the impacts of climate change (ACOSS, 2025; Caritas, 2024; IPCC, 2022). Reducing emissions and seizing new opportunities in a decarbonising world can enhance Australia's economic productivity and prosperity, while also reducing the environmental and social impacts of climate change.

1 In 2024, the global average surface temperature was 1.55 °C above the 1850–1900 average, based on consolidated analysis from the World Meteorological Organisation.

2 In this report, all currencies are shown in IBAN codes.

Box 2: Global climate information systems are at risk

High quality data are essential to make evidence-based decisions on emissions reductions and adaptation. Examples of improved data availability in Australia include new high-resolution datasets, such as the Queensland Future Climate Projections 2 (QldFCP–2) and the joint NSW and Australian Regional Climate Modelling 2.0 (NARCliM2.0) (NSW Government, 2024b; Queensland Government, 2024).

Recent reductions in science and research funding in the United States, particularly affecting the National Oceanic and Atmospheric Administration (NOAA), are expected to have global ramifications for climate science. While the full implications for Australia are yet to be determined, early signs of disruption are emerging. Australia depends significantly on NOAA-managed observational infrastructure to support cyclone tracking, climate modelling, weather forecasting, and broader disaster resilience efforts (Australian Academy of Science, 2025). Any degradation in these services may compromise Australia's capacity to prepare for and respond to natural disasters, underscoring the importance of monitoring these developments and assessing potential mitigation strategies.

Australia's climate science capability, which includes observations, process studies, and climate modelling is also important for developing new industries to support Australia's future in a net zero global economy (Australian Academy of Technological Sciences and Engineering submission, 2025; ARC 21st Century Weather submission, 2025). A reduction of peer-reviewed research available to Australia or conducted with US-collaborators would represent a significant loss for Australian science capability. Currently, around 40% of Australian physical science publications involve collaborators from the US (Australian Academy of Science, 2025).

Some philanthropic organisations, universities, and foreign governments have stepped in to partly fill the funding gaps left by US funding cuts (Rwandalla, 2025). Some stakeholders have suggested Australia should also help fill the gap by growing its sovereign science capability and continuing to expand its collaboration with other organisations and governments (ARC 21st Century Weather submission, 2025; IGCC submission, 2025).

1.3 Australia can play a leading role in accelerating global energy investment and climate ambition

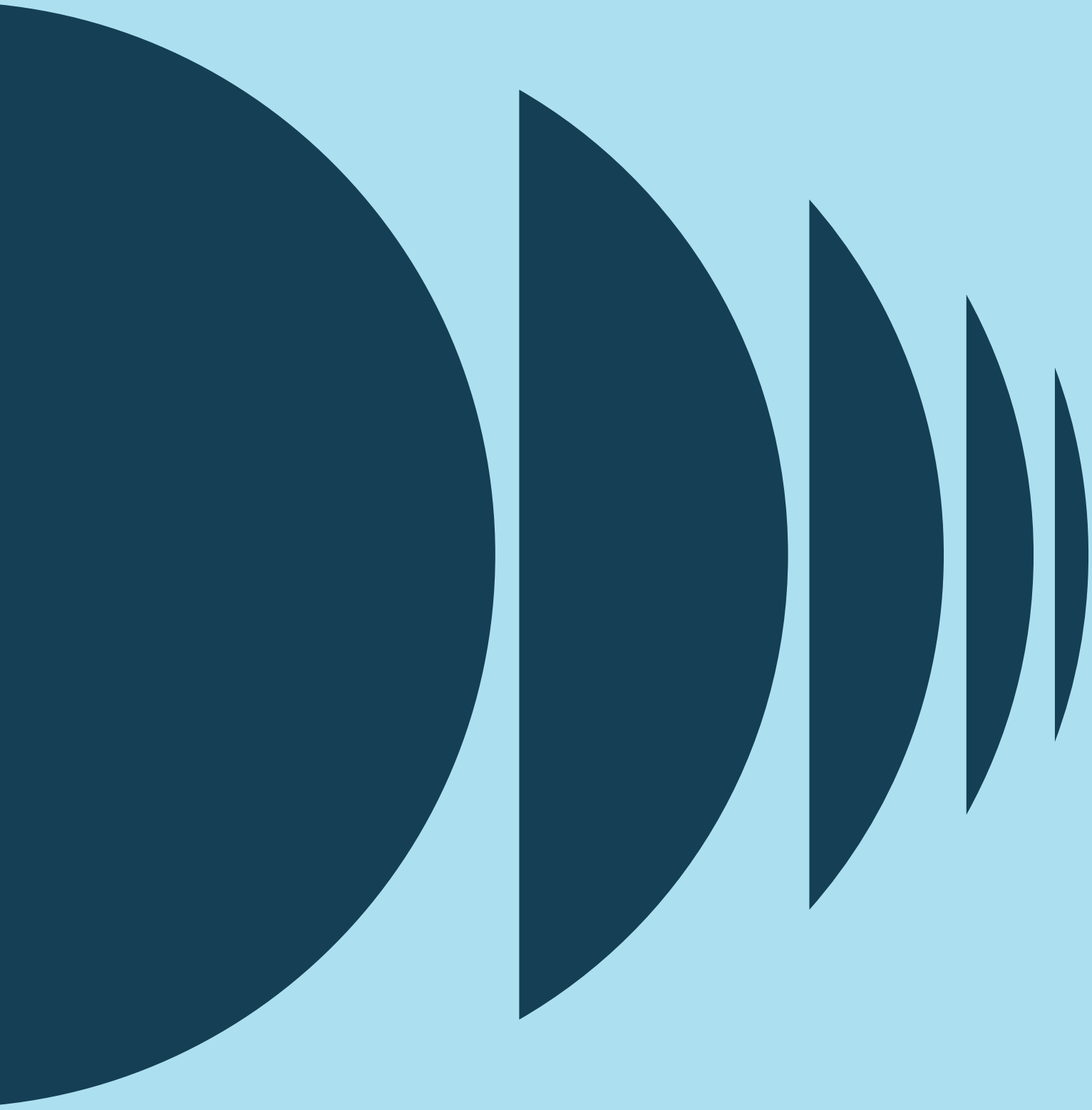
Global clean energy investment has surged 57% since 2022, reaching USD2.2 trillion in 2025 – twice the amount allocated to oil, gas, and coal. This global growth reflects continued strong investment in renewables, electricity grids and storage, low-emissions fuels, nuclear, efficiency and electrification (IEA, 2025c). China and India are leading this transformation: China invested over USD625 billion in clean energy in 2024, achieving its 2030 wind and solar targets 6 years early, while India directed 83% of its power sector investment to renewables (IEA, 2025c). Their motivations extend beyond climate goals to reducing air pollution, enhancing energy security, and capturing export opportunities, China's dominance in solar panel exports being a prime example.

This global shift presents a strategic opportunity for Australia. By acting decisively, Australia can position itself as a clean energy leader and benefit from emerging markets. But by moving slowly, it would risk losing competitiveness as its raw commodities are increasingly processed overseas using clean energy, driven by other nations' national interests. Australia must be proactive to remain relevant in a rapidly decarbonising global economy.

The rise in clean energy investment has been fuelled by reductions in the cost of technologies such as large-scale solar PV and batteries, which fell by 8% and 20% respectively in 2024–25 (CSIRO, 2025b). Costs for other technologies, such as low carbon liquid fuels created from certain feedstocks, require technology breakthroughs to potentially deliver structural price declines in the mid to long-term (CEFC, 2025).

Australia is well-placed to both attract investment in clean energy and to use it to accelerate emissions reduction both within and beyond its borders. Across Asia, emissions are projected to increase until 2035 due to rapid population and energy-demand growth that outpaces the spread of clean technology solutions (BNEF, 2025). Australia can support the region's emissions reduction and energy transition by exporting lower-emissions products (e.g. green iron) and displacing emissions-intensive energy sources (e.g. coal, LNG). Trade partners could harness trade arrangements, agreements and industry partnerships to drive deeper emissions cuts. Parties could then adjust their respective emissions reduction targets based on cooperative outcomes. Further information about such 'decarbonisation deals' can be found in the Authority's *2035 Targets Advice* report (CCA, 2025a).

Australia can also promote emissions reduction and sustainable development in the Asia-Pacific. Pacific Island countries are among the most vulnerable to climate change effects, and often due to geographical isolation, they can lack the funding, capacity, and resources to address these challenges (CSIRO, 2025a; Pacific Community, 2024). Achieving climate goals such as reduced reliance on fossil fuels can improve economic and domestic security for the region amidst a shifting geopolitical landscape. The Pacific islands spend between 10–25% of their GDP on importing fossil fuels (Smart Energy Council, 2025). Australia has responded by deploying renewable technologies, improving energy efficiency and adaptation infrastructure to help Pacific countries meet their climate goals (AIFFP, 2025; DFAT, 2025a; DFAT, 2025b).



Part 2:

Australia’s decarbonisation progress

Key points

- Australia's emissions are falling, but not yet fast enough to meet its 2030 or 2035 targets. However, there are policies the Government has put in place that have yet to take full effect, and there are further opportunities to accelerate progress.
- While the country remains on track to stay within its 2030 emissions budget – thanks to early progress made before 2020 – accelerating the pace of reductions is now critical to achieving future goals.
- Over the past five years, emissions have declined at an average rate of 8 Mt CO_2-e per year. In 2024–25, the drop was 10 Mt CO_2-e. To meet the 2030 target of reducing emissions by 43% compared with 2005 levels, the average annual reduction needs to more than double to 18 Mt CO_2-e. To reach the top of the 62–70% 2035 target, the rate must triple – requiring sustained cuts of 20–25 Mt CO_2-e per year over the next decade. Each year that emissions reductions fall short of these required rates compounds the challenge, requiring even steeper cuts in subsequent years to stay on track.
- All sectors need to reduce emissions as fast as possible for Australia to meet its targets.
    - The electricity and energy, resources, and industry and waste sectors contributed most of Australia's emissions reductions in 2024–25.
    - Continuing the decarbonisation of the electricity and energy sector remains an immediate priority. It remains Australia's largest emission source and its transition to clean energy is vital for unlocking decarbonisation throughout the rest of the economy.
    - The rate of renewable energy deployment needs to rapidly accelerate to meet emissions and renewable energy targets.
- Current policies are insufficient to deliver the emissions reductions necessary to meet Australia's targets. Further, policy gaps remain that are inhibiting broad sectoral and economy-wide decarbonisation. Part 3 of this report examines the structural shifts needed to speed up emissions reductions and facilitate progress towards a prosperous and resilient net zero economy.

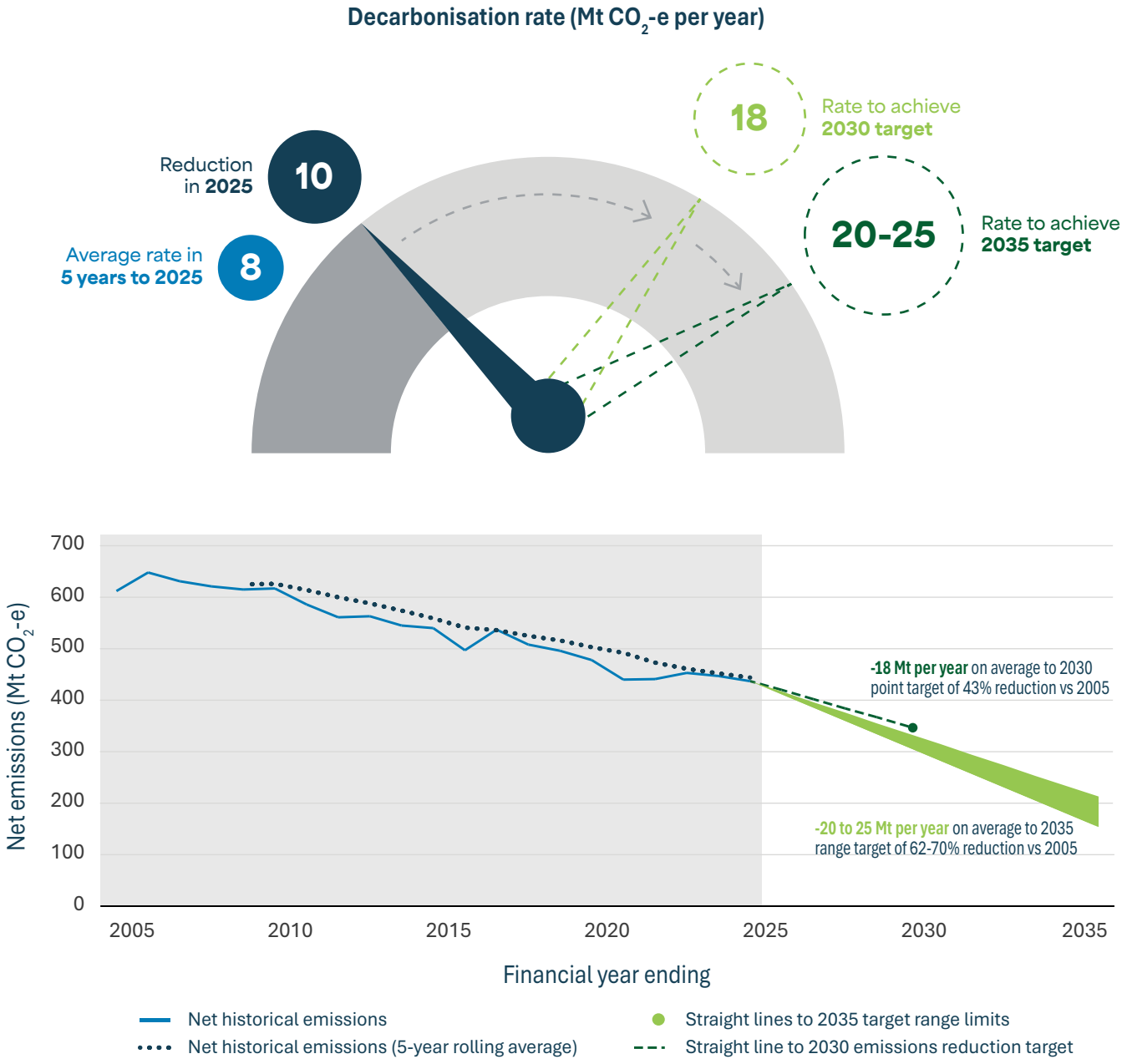
2.1 Australia's emissions are falling, but not fast enough

Current rates of emissions reductions are too slow to meet Australia's 2030 or 2035 emissions targets. Australia's emissions fell by 10 Mt CO_2-e in 2025[3] and by an average of 8 Mt CO_2-e per year in the 5 years to 2025 (see Figure 1)[4]. To meet Australia's 2030 target of cutting emissions by 43% from 2005 levels, emissions must fall by an average of at least 18 Mt CO_2-e per year over the next 5 years. To achieve Australia's 2035 target of a 62–70% decrease in emissions, the annual rate of emissions reductions needs to increase to an average of 20–25 Mt CO_2-e over the next decade, starting now. Delaying action means the average annual rate will need to accelerate even further in later years, making the task harder and more costly.

3 In this part years refer to the financial year end for emissions data, unless otherwise specified.

4 Emissions data is based on *June 2025 Quarterly Update of Australia's National Greenhouse Gas Inventory*, updating the figure previously used in the Authority's *2035 Targets Advice*.

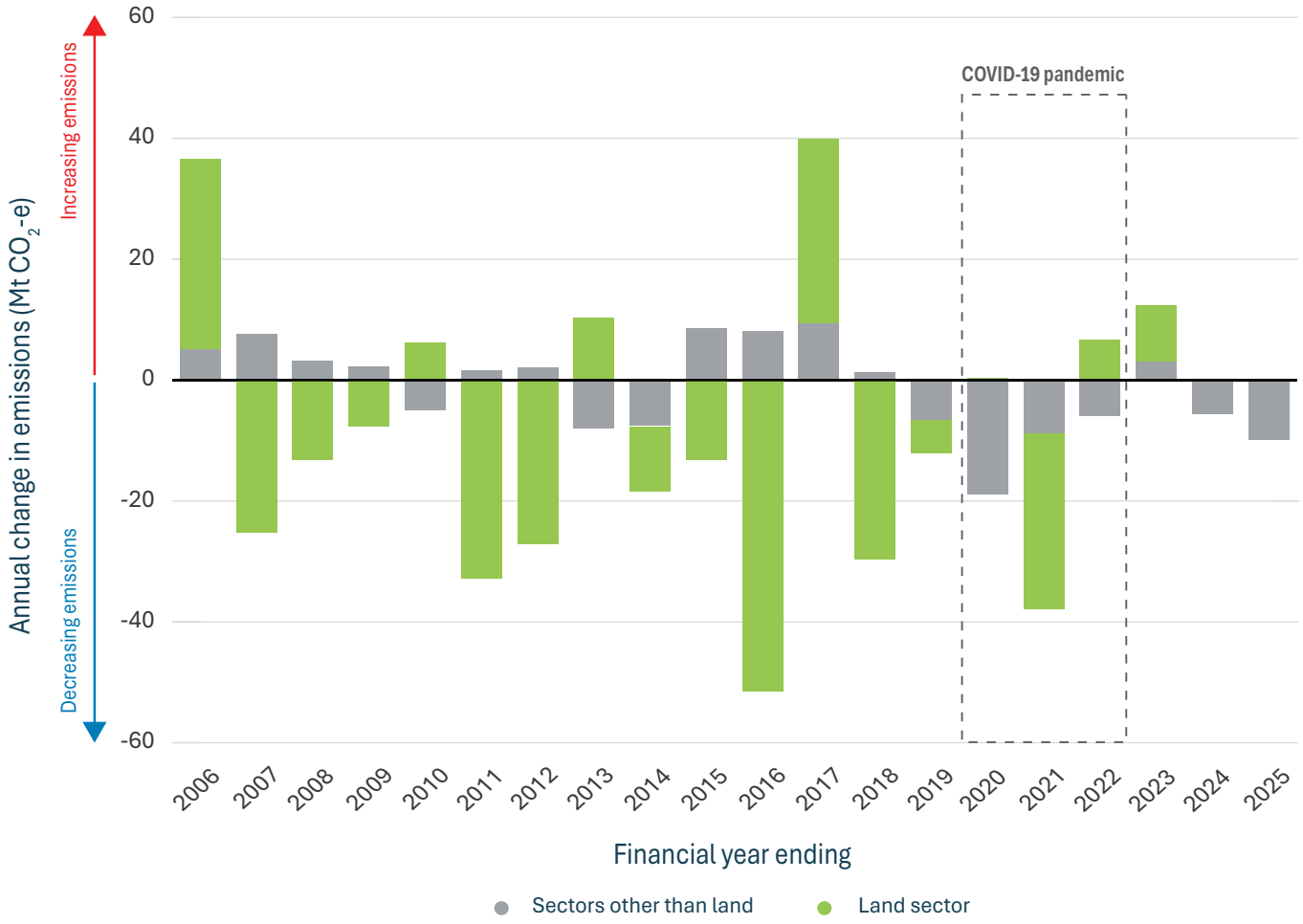
Figure 1: Australia's historical decarbonisation rate compared to the decarbonisation rates required to meet its 2030 and 2035 targets



Source: Authority analysis of DCCEEW (2025a; 2025b).

Australia's year-to-year emissions outcomes are highly variable, driven in large part by fluctuations in land sector emissions influenced by weather conditions like rainfall (Figure 2). This volatility makes it harder to assess long-term progress toward national targets. To provide a clearer picture of Australia's transition, this report examines both economy-wide trends and sector-specific progress. Sectoral analysis helps identify where emissions reductions are on track – and where further effort is needed to meet Australia's climate goals.

Figure 2: Annual change in emissions from land and non-land sectors, 2006–2025



Source: Authority analysis of DCCEEW (2025u).

Notes:

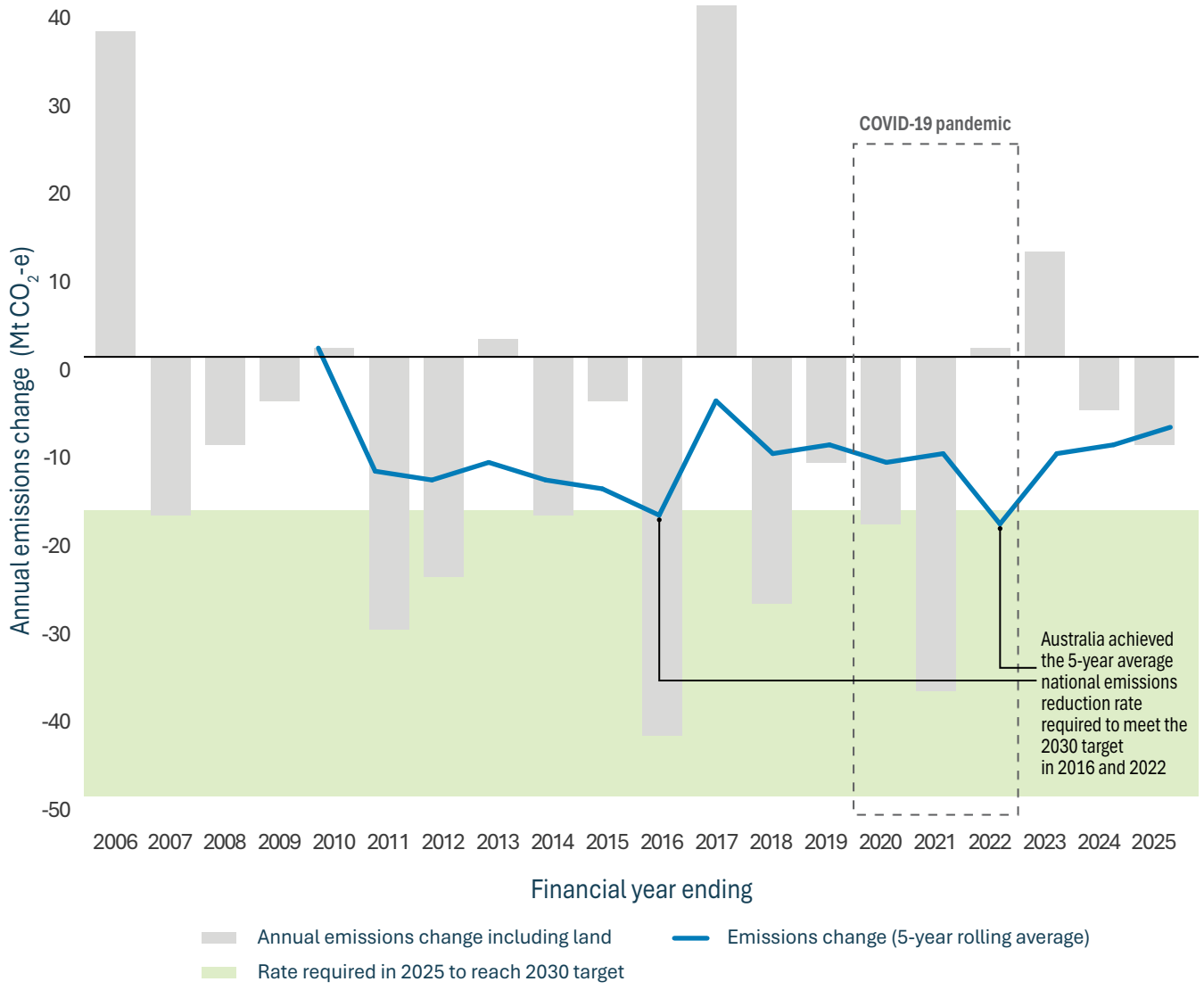
(1) The latest Quarterly Updates to *Australia's National Greenhouse Gas Inventory* hold land sector emissions constant at the levels in the most recent *National Inventory Report* (DCCEEW, 2025w).

(2) Transport emissions remained below pre-COVID levels in 2023, continuing to recover.

The volatility of Australia's annual emissions outcomes makes it difficult to distinguish short-term fluctuations from lasting structural change. To provide a clearer picture of progress, this report uses a 5-year rolling average to smooth out year-to-year changes and highlight longer-term trends.

Australia has only achieved a 5-year average emissions reduction rate consistent with its 2030 target in two periods: those ending in June 2016 and June 2022 (Figure 3). Both were shaped by significant land sector reductions and the 2022 reduction was also shaped by a temporary drop in transport emissions during the COVID-19 pandemic. Australia has not previously reached a 5-year average reduction rate commensurate with what is required from this point on to meet its 2035 target. However, the Government has introduced some policies that are yet to take full effect, and there are further opportunities to accelerate progress.

Figure 3: Australia's 5-year rolling average of emissions change, 2006–2025



Source: Authority analysis of DCCEEW (2025a; 2025b).

Why is there a lag between policy implementation and results?

Delays occur for many reasons including:

- the time required to finalise and implement policies after announcement
- long lead times for new projects, including financing, approvals, and construction
- asset replacement cycles for vehicles, industrial equipment, and infrastructure.

Leading indicators that measure the necessary pre-conditions for decarbonisation can help show how well Australia is set up for success for emissions reductions in the future.

Emissions data reflect the past, so leading indicators provide insights into whether foundations for future reductions are being laid. The sectoral summaries set out in Part 2.2 draw on historical data and a selection of leading indicators to show progress and an outlook at the sector level. They also include the illustrative linear pathways from the Authority's *2035 Targets Advice* (CCA, 2025a) and a preliminary review of the Government's sector plans. The Authority's 2026 Annual Progress Report will include a deeper analysis of the Government's sector plans and other benchmarks to assess whether progress across the economy is consistent with achieving Australia's targets.

2.2 Emissions fell in most sectors in 2024–25, but momentum must continue to build

In 2025, the electricity and energy, resources, and industry and waste sectors accounted for 92% of Australia's emissions reductions (Figure 4).[5] This was largely due to:

- Electricity and energy – Increased renewable generation reducing emissions from the electricity grid.
- Resources – Reduced fugitive emissions through lower methane venting and increased carbon capture and storage (CCS), and a decline in coal mining activity.
- Industry and waste – Reduced steel production and abatement in chemicals manufacturing (DCCEEW, 2025u).

Emissions also decreased in the agriculture and built environment sectors. There was a small increase in transport sector emissions, and land sector emissions are assumed to have remained constant to the period.[6]

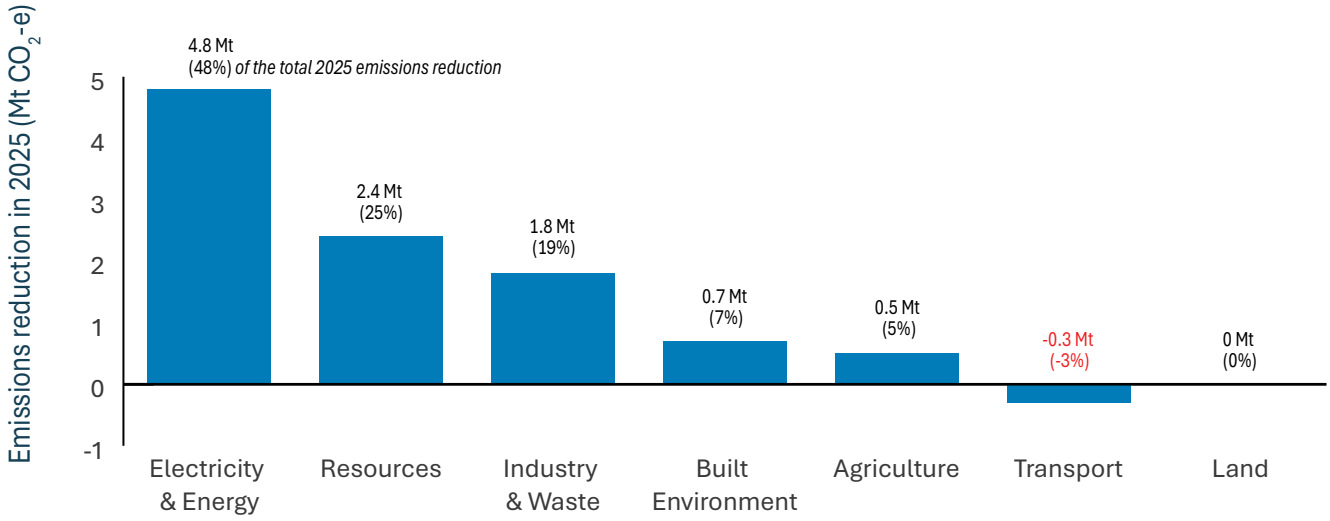
Why is reducing emissions outside of the land sector important?

The *Net Zero Plan* shows that an efficient pathway to net zero by 2050 involves reductions across sectors (DCCEEW, 2025g). Australia cannot rely on the land sector for emissions reduction indefinitely. The land sink is finite and currently higher than average due to above average rainfall and La Niña. A return to average climatic conditions could mean the sink will return to more normal levels (DCCEEW, 2024).

5 For the 2025 Annual Progress Report, the Authority has allocated emissions to different sectors based on a methodology consistent with the *Sector Pathways Review* (CCA, 2024).

6 In Quarterly Updates to Australia's National Greenhouse Gas Inventory, in the absence of more up to date indicators, land sector estimates are assumed to remain constant for the period beyond the last official reporting year (2022–23).

Figure 4: Sectoral emissions reductions in 2025



Source: Authority analysis of DCCEEW (2025v).

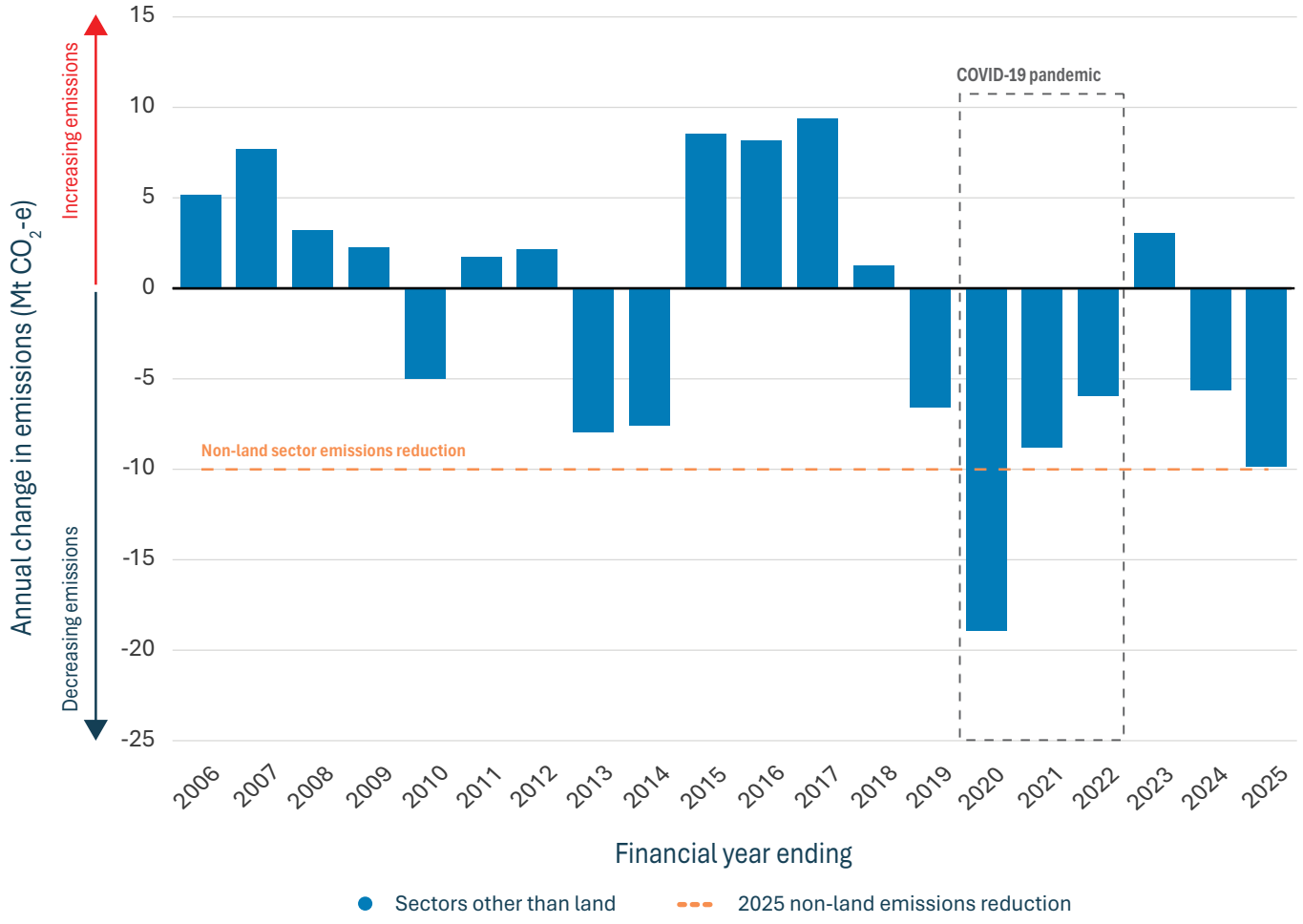
Notes:

(1) The latest *Quarterly Updates to Australia's National Greenhouse Gas Inventory* hold land sector emissions constant at the levels in the most recent *National Inventory Report* (DCCEEW, 2025w).

(2) Negative values indicate an increase in annual emissions.

These reductions made 2025 the year with the largest fall in non-land sector emissions except for 2020, where COVID-19 restrictions also contributed to the drop (Figure 5). Given the finite land sink and importance of all sectors reaching net zero, this is a promising sign, but all sectors need to continue to decarbonise at a much faster pace.

Figure 5: Annual change in emissions from non-land sectors, 2006–2025

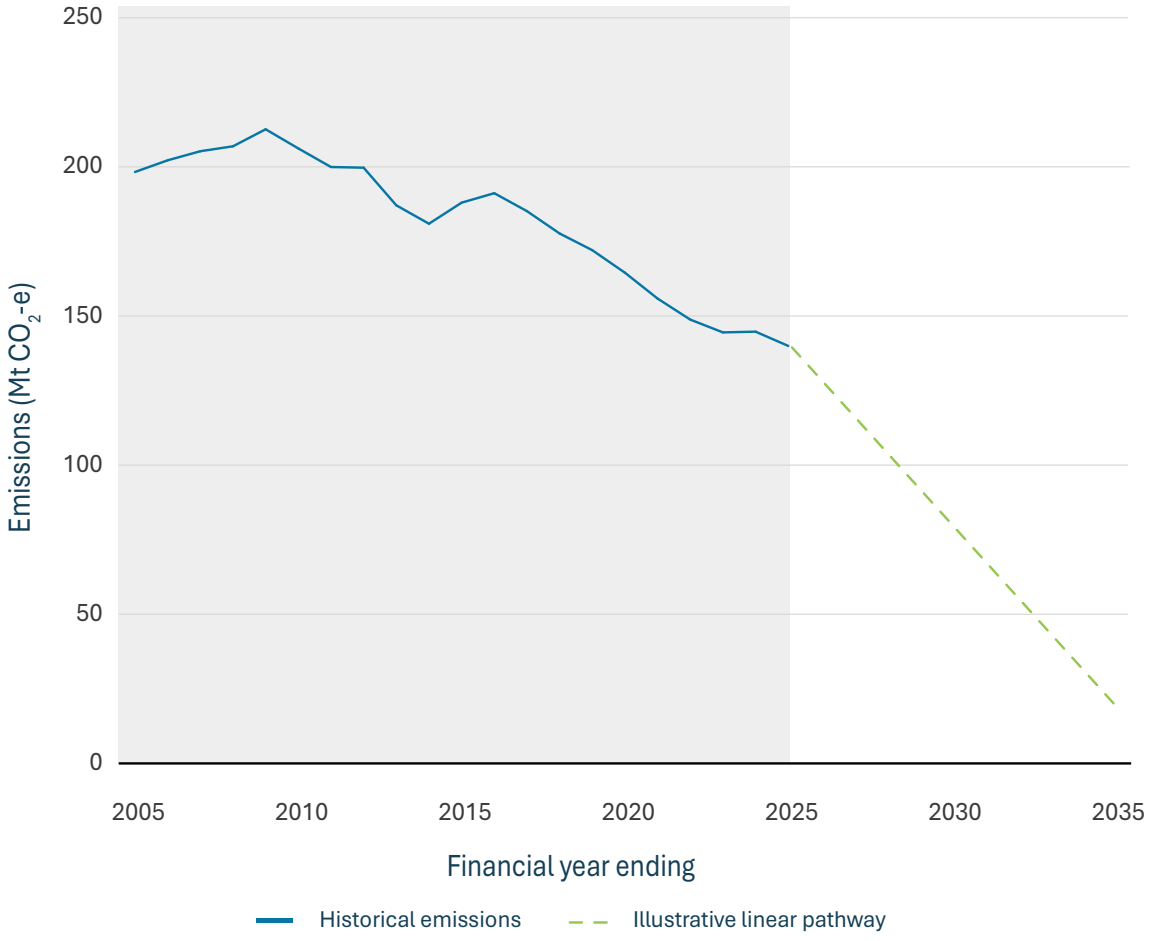


Source: Authority analysis of DCCEEW (2025u).

Electricity & energy

Priorities outlined in the Government's *Electricity and Energy Sector Plan* from 2030 to 2035 include achieving an 82% renewable share of electricity by 2030 and the orderly exit of coal-powered generation through the 2030s (DCCEEW, 2025m). To achieve these goals, emissions will need to decline more rapidly than in any other sector over the next five years.

Figure 6: Electricity and energy sector emissions over time



Source: Authority analysis of DCCEEW (2025u).

2025 saw emissions from the electricity and energy sector continue to fall since they peaked in 2009 (Figure 6). The rate of decline remains comparable to the sector's average of 4.9 Mt CO_2-e per year over the 5 years from 2021 to 2025 (DCCEEW, 2025u) but will need to accelerate significantly if Australia is to meet its 2030 and 2035 targets.

Some of the policies driving the transition in this sector include the CIS, the Renewable Energy Target scheme and Rewiring the Nation, which aim to achieve the 82% renewable electricity target by 2030.

On-grid renewable generation now supplies around 40% of electricity – growing steadily by about 3 percentage points per year over the past 5 years (DCCEEW, 2025e; OpenElectricity, 2025). To reach the 82% renewable electricity target, this growth rate must accelerate to approximately 8 percentage points per year – more than twice the current rate.

The rate of deployment of large-scale renewables is improving but must accelerate. In 2024-25, 1.5 GW of solar and 1.4 GW of wind generation were fully commissioned in the National Electricity Market (NEM) (AEMO, 2025h) – an improvement on previous years.[7] This puts solar on track to meet the capacity in 2030 outlined in AEMO's 2024 *Integrated System Plan* (ISP) Step Change scenario (Authority analysis of ISP, AEMO, 2024; AEMO, 2025a). However, deployment of wind generation remains well below the required pace and will need to almost quadruple to 5.2 GW per year – to stay aligned with the ISP trajectory (AEMO, 2025h).

The amount of fully commissioned utility-scale battery storage capacity increased by 1.2 GW in 2024–25 (AEMO, 2025g). This is lower than the rate of additions anticipated in the ISP Step Change scenario (2.6 GW), but the rate is expected to grow due to falling costs and the growth in construction rates since 2023 (AEMO, 2024a; BNEF, 2024; IEA, 2025a; The Energy, 2025).

Progress on the closure of coal-fired generators is mixed, partly due to the necessary substitutes not yet being in place. Rio Tinto notified AEMO of the potential early retirement of its Gladstone coal-fired power station by 2029 – 6 years ahead of schedule (Rio Tinto, 2025). However, the Queensland Government announced in 2025 that it is deferring the closure of its Callide B power station to at least 2031 (AEMO, 2025e) and is not pursuing efforts to accelerate the retirement of other coal-fired generators in the state (Queensland Treasury, 2025). In August 2025, AEMO reduced from 2 to 1 the minimum number of fossil generators required to operate in South Australia at any given time (in most circumstances), reflecting the growing confidence in grid stability supported by 4 synchronous condensers in operation (AEMO, 2025j). Given the 42-month notice period required for generator closures in the NEM, any closure decisions made after 2026 will not impact emissions before the end of the 2029-30 financial year – underscoring the urgency of action now to meet national targets.

Strong growth in rooftop solar continues to play a critical role in Australia's clean energy transition, contributing significantly to decarbonisation and energy resilience at the local level. This momentum is being reinforced by the early success of the Government's Cheaper Home Batteries Program, which is helping households and communities store and use solar energy more effectively. Building on this progress, the recommended actions in the Authority's Unlocking Australia's Clean Energy Potential report outline practical steps to maximise the contribution of local generation and storage – ensuring that consumer energy resources are better integrated into the grid and contribute meaningfully to national targets.

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7 During commissioning a plant is tested incrementally at increasing outputs to ensure compliance with performance standards before reaching full capacity. A 'fully commissioned' facility is one that is operating at full capacity. An alternative way of calculating additions in 2024–25 would be to look at the utility-scale capacity that reached first generation, which was approximately 1.8 GW solar and 2.9 GW wind (CER, 2025c; CER, 2025b).

Maintaining system security through the renewable transition

Alongside the delivery of renewables, investment is needed to ensure the power system remains stable (AEMO, 2024b; AEMO, 2025c). As fossil fuel generators retire, system security is critical to support the entry of large amounts of wind and solar generation.[8] For example, AEMO currently requires the equivalent of approximately 25 large synchronous units[9] to be online at all times across the NEM to meet system strength requirements (AEMO, 2025c).

To ensure the grid remains stable through the transition, these system security services need to be replaced before fossil fuel generators can retire (AEMO, 2025c). AEMO has stated that meeting minimum fault level requirements[10] is likely to be the most onerous security need across the NEM (AEMO, 2025c). AEMO has identified 13 locations, across 4 separate regions 'with existing or expected shortfalls against minimum system strength (fault current) requirements within the next five years', demonstrating the urgency of this issue (AEMO, 2025a; AEMO, 2025c).

> *'The impending retirement of thermal synchronous generators will materially reduce the availability of the critical services that ensure the power system remains within its technical operating envelope.*
>
> *Proven and emerging technologies (such as synchronous condensers or grid-forming inverters, respectively) can deliver the required system needs. However, the deployment of proven technologies has been slow in practice, while that of emerging technologies is limited by performance uncertainty and insufficient operational experience, in the NEM and worldwide.'*
>
> AEMC submission, 2025

Synchronous condensers[11] are a proven technology that can meet system strength requirements. Grid-forming inverters, typically installed as part of battery projects, are another technology that is expected to provide some system services in the future, although they are not currently able to provide all such services (AEMO, 2025c; CCA, 2025c). More detail can be found in the Authority's report *Unlocking Australia's clean energy potential* (CCA, 2025c).

Gas-fired generators are expected to play an important, ongoing role for reliability, by firming renewables during the transition. The role of gas will shift to back-up for reliability, reducing the overall emissions intensity of electricity production. They will remain particularly important during 'renewable droughts'[12] and times of extreme peak demand (AEMO, 2024a). New gas-fired generation is not being built at the rate needed to replace ageing gas plants (CCA, 2025c). Based on

8 These resources are not physically coupled to the grid and use electronics (computers and inverters) to couple with the grid (AEMC, 2025).
9 These include synchronous generators, like coal, gas and hydro plants, and other synchronous machines such as synchronous condensers, capable of providing a synchronous inertial response (AEMO, 2025f).
10 The 'minimum fault level' requirement ensures 'the correct operation of network protection systems, appropriate operation of voltage control devices and overall system stability' (AEMO, 2025a).
11 Rotating machines connected to the power system in the same way as synchronous generators but without the ability to feed new power into the grid.
12 Where wind and solar resources remain low over a large area for long periods of time.

anticipated retirements, around 2.8 GW of new gas-fired generation will be needed by 2035 (CCA, 2025c). A relatively low-cost option to bring both reliability and system security services to the grid is to purchase equipment that can service both needs, where required. Gas-fired generators fitted with clutches can operate as generators or in synchronous condenser-only mode.

> *'There is a timing mismatch between the notification of a generator's retirement and the time it takes to replace the system services that it provides.*
>
> *Around the world, countries are investing heavily in renewable energy and seeking alternative sources of system security, and this is creating significant supply chain pressures for equipment like synchronous condensers.*
>
> *These gas turbines that Australia needs may only burn gas 5% of the time, as the ultimate backstop for reliability when it's cold, dark and still, but they can help keep our system secure 100% of the time, just by spinning.'*
>
> AEMO (2025d)

Global demand has increased in recent years for both synchronous condensers and gas-fired generators (AEMO, 2025d; S&P Global, 2025). This demand has seen delivery times increase substantially, particularly for gas-fired generators, where there are delays of up to 7 years (S&P Global, 2025). Due to the increased wait time for this equipment, the Authority is reiterating its recommendation that the Government enable the deployment of equipment capable of supporting a renewable grid. Deploying synchronous generators with back-up generation capability where needed would solve both short-term system security needs, and medium-term reliability needs. Installing synchronous condensers is a significant cost[13] and requires a lengthy procurement process. Given the urgent need for system security, the Government should prioritise their delivery.

The Authority has previously recommended that AEMO would be best placed to plan and procure this equipment, which would then be owned and operated by market participants (CCA, 2024a; CCA, 2025c). This could include giving AEMO the power to direct that dual functionality be required in gas turbine procurement, where it would be beneficial for system strength. For example, this could be applied to the gas-fired generators proposed by Queensland in its recent *Energy Roadmap* (Queensland Treasury, 2025). The Energy and Climate Change Ministerial Council (ECMC) should work with state and territory governments, market bodies and transmission network service providers to ensure sufficient levels of these services are delivered in a timely manner.

13 These can range from AUD126 million to AUD219 million, depending on the size. The prices are somewhat volatile and are listed as ±50% (AEMO, 2025b). A further approximately AUD9 million may be required in some instances to add flywheels for inertia.

Recommendation 3: Install the technologies needed to keep the power system secure while more renewable energy is deployed

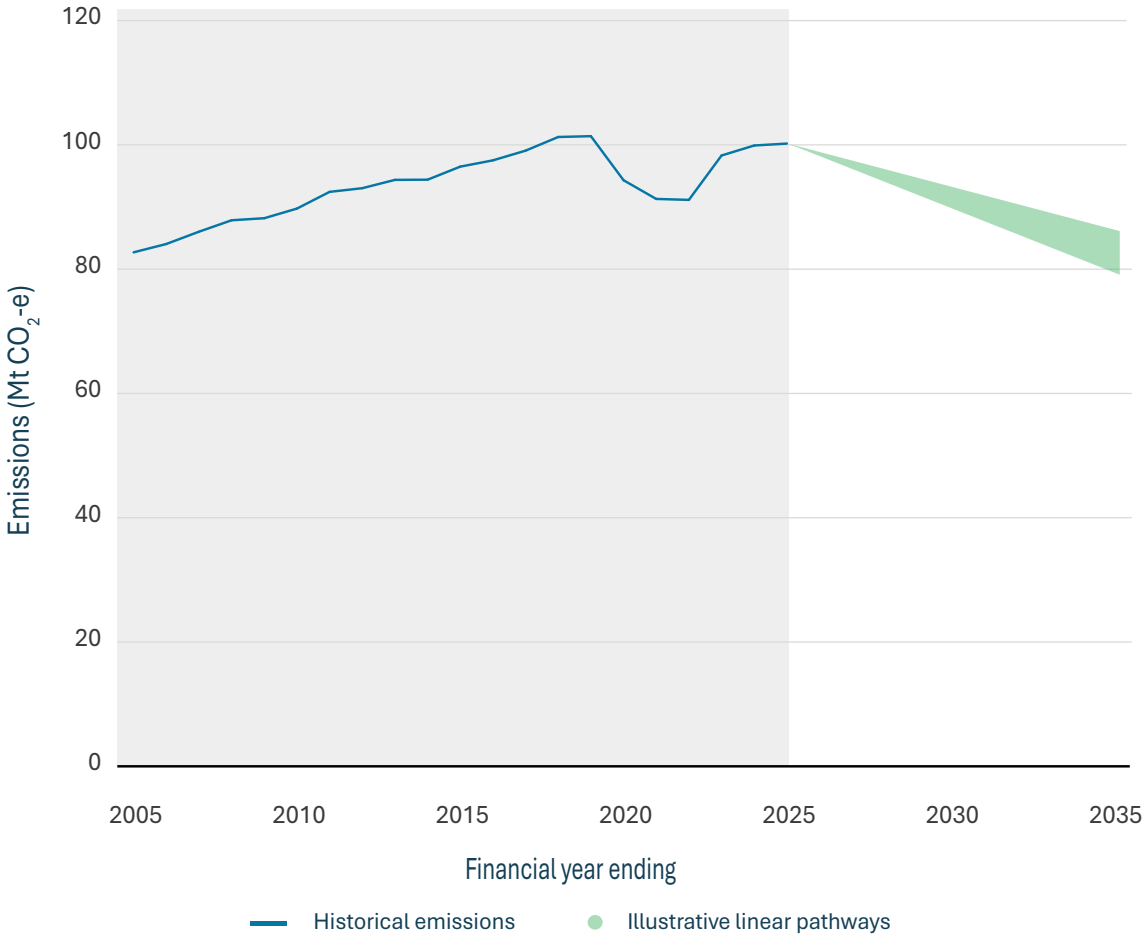
As fossil fuel generators retire, new sources of system security services are needed to support the entry of large amounts of wind and solar generation.

Synchronous condensers are a well-proven technology that can support power system security through the transition. Accelerating their deployment will enable more renewable electricity generation to connect to Australia's grids. To support both system security and reliability where required, gas-fired generators fitted with clutches can be deployed for their synchronous condenser functionality. A number of these dual-purpose installations should be deployed, to generate only when zero-emissions options are unavailable, and they should be run on low-carbon fuels in the future.

Transport

Priorities in the Government's *Transport Sector Plan* from 2025 to 2035 include accelerating electrification and improving energy efficiency as the main drivers of emissions reductions for light vehicles, supported by the New Vehicle Efficiency Standard (NVES) and the expansion of EV charging infrastructure. For heavy vehicles, aviation, maritime and rail, low-carbon liquid fuels, such as renewable diesel and sustainable aviation fuel, can complement electrification (DITRDCSA, 2025c).

Figure 7: Transport sector emissions over time



Source: Authority analysis of DCCEEW (2025u).

Transport emissions remained mostly flat in 2025 after a 5-year upward trend (Figure 7). While emissions have increased by an average of 1.2 Mt CO_2-e per year since 2021, they plateaued in 2025. This marks a potential turning point following the rebound in emissions after the temporary dip during the COVID-19 pandemic (DCCEEW, 2025u).

Some of the policies driving transition in the sector include the NVES and the Cleaner Fuels Program. Decarbonisation of Australia's light vehicle fleet is gaining momentum. The NVES, introduced in 2025, is beginning to shift the market. More battery electric and plug-in hybrid vehicle models (BEVs and PHEVs) are becoming available and EVs make up 13% of new car sales (Authority analysis of ABS, 2025; AAA, 2025). The rollout of public charging infrastructure must accelerate to accommodate the shift in the market. From 2023 to 2024, the number of charge points per 1,000 BEVs has fallen from 36 to 31, highlighting a growing gap that could slow uptake (Authority analysis of Plugshare data, 2025; AAA, 2025; DITRDCSA, 2024b; DITRDCSA, 2024c).

Vehicle-to-grid (V2G) technology is in its early stages, and addressing the complexity and inconsistency of equipment standards will be critical to accelerate its deployment. ARENA's *National Roadmap for Bidirectional EV Charging* outlines a pathway to reach 300,000 V2G capable vehicles by 2030 to reduce power bills, support the grid and accelerate emissions reduction (ARENA, 2025a). The Government should take further action to align infrastructure and technology deployment with rising EV demand.

For heavy vehicles and aviation, the uptake of zero-emission trucks and low carbon liquid fuels (LCLFs) has begun but faces significant transition costs and regulatory barriers. The Government's Cleaner Fuels Program will help overcome LCLF supply side barriers (DCCEEW, 2025r), but demand side incentives may also be needed to support increased production and uptake.

New Vehicle Efficiency Standard

The NVES began in 2025, bringing Australia's light vehicle decarbonisation efforts in line with other advanced economies. Fuel economy and emissions standards have long been in place across most major economies[14], covering the vast majority of the global light vehicle market (DITRDCSA, 2025a). The NVES is one of the Government's main policy drivers for EV uptake.

The NVES sets a declining CO_2 emissions target averaged across all new passenger and light commercial vehicles up to 3.5 tonnes supplied to the Australian market. It applies emissions limits when vehicles first enter Australia, with each manufacturer and importer required to meet the target across their fleet each year (DITRDCSA, 2025b). Light commercial vehicles (including utes, vans and large 4WDs) are subject to higher fleet-average emissions limits than passenger vehicles, and their reduction targets are phased in more gradually. This reflects industry concerns about the limited current availability of lower-emissions models in these categories (DITRDCSA, 2024a).

While the first compliance period (2025-26) is still underway, early signs suggest the NVES is starting to work as intended. Importers and manufacturers have been preparing and adjusting their fleets well in advance, with more BEVs and PHEVs becoming available to consumers (Toyota submission, 2025; The Driven, 2025). There are also signs that the proportions of BEV and PHEV sales are increasing in most vehicle categories (AAA, 2025; FCAI, 2025). As the NVES increases the number of EVs on Australian roads, revenue from the fuel tax scheme will decrease. The current fuel tax scheme, charged per litre of fuel sold, does not capture EVs. It effectively increases the cost of driving fuel inefficient vehicles compared to more fuel-efficient internal combustion engines (ICE) or EV options.

The Government announced its intention to work with states and territories to develop a road user charge for electric vehicles (Treasury, 2025c). A model for the reforms has not been determined, but they may interact with the current fuel tax scheme. The changes are an opportunity to align federal road charges with the sector decarbonisation plan (DITRDCSA, 2025d) and incentivise low carbon technologies. Depending on its design, a road user charge for electric vehicles could slow their uptake by adding to the cost of ownership relative to petrol and diesel vehicles. Changes to the fuel tax scheme, or additional road user charges, are an opportunity to include a carbon component for petrol and diesel. This arrangement would create a sector-wide charge for emissions and provide a decarbonisation incentive for almost all transport fuel use (Productivity Commission, 2025).

Watch points for the Authority as the NVES progresses include:

- monitoring any barriers to BEV and PHEV uptake as data becomes available ahead of the Government's legislated review of the scheme, which will commence in 2026.
- monitoring interactions with any changes to the fuel tax scheme and road user charging, including whether any changes support the transition to electric vehicles and achieving the Government's emissions reduction targets.

14 This includes the four biggest light vehicle markets: the European Union, the USA, Japan and China.

Box 3: Accelerating EV uptake to meet Australia's emissions reduction targets

The illustrative pathways for the transport sector in the Authority's *2035 Targets Advice* have BEVs making up half of all light vehicles sold to 2035 (CCA, 2025a). This means over 5 million new BEVs would need to displace new internal combustion engine (ICE) vehicle sales. In addition to these BEVs, hybrid vehicles and plug-in hybrids will likely play a part in meeting the 2035 target. Then, to achieve net zero by 2050, it is likely that new car sales will need to be 100% EVs by around 2040 (CCA, 2024b).

In Australia, EVs currently account for 13% of new car sales, so uptake must grow to meet the Government's emissions reduction targets. Fortunately, progress has been made on key barriers, making it easier for consumers to choose EVs over ICE vehicles:

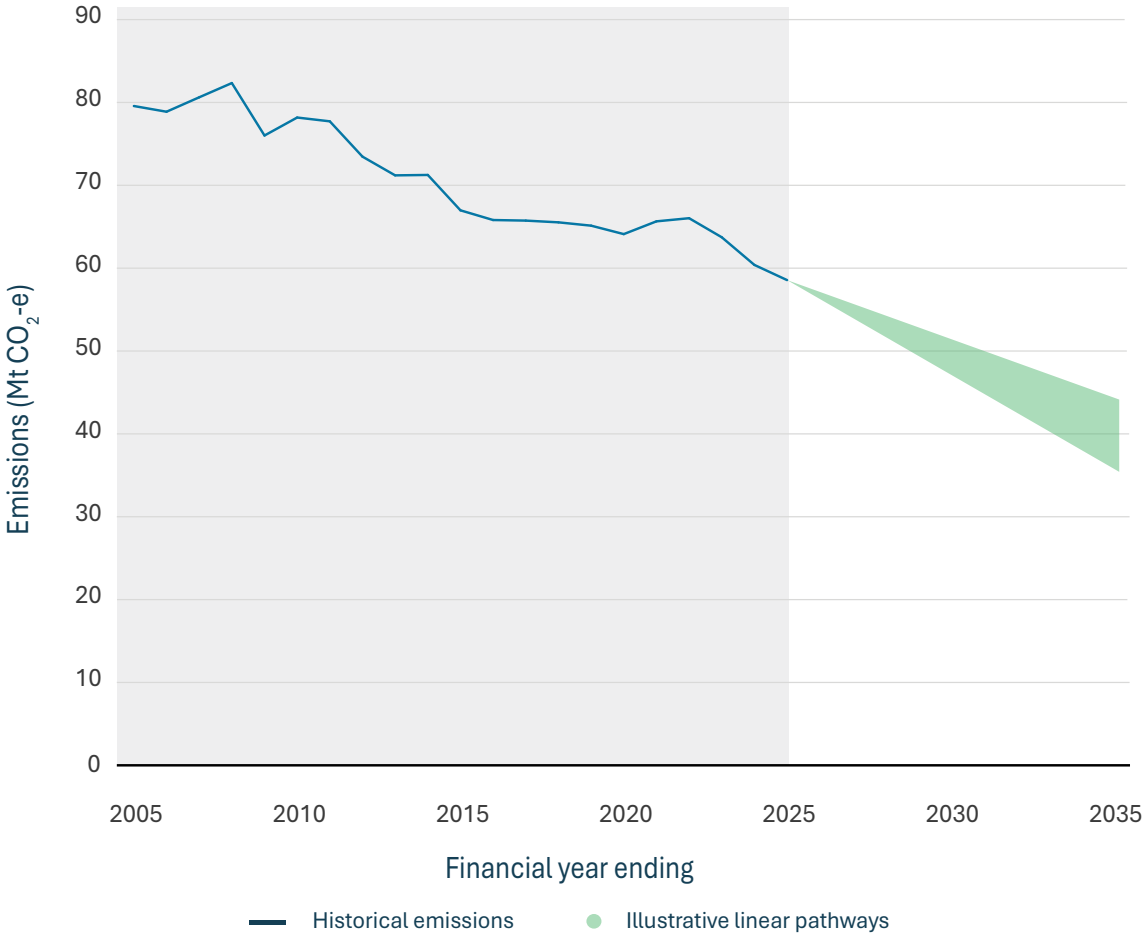
1. **Choice in EV models is expanding** – Market data shows early indications the NVES scheme is effectively increasing the models available.
2. **The cost of EVs is coming down** – Prices are decreasing globally, driven by declining battery prices, and analysts expect the upfront price of EVs to be equal to ICE vehicles in Australia before 2030 (EVC, 2023; IEA, 2025b). The estimated running cost savings of an EV in Australia are AUD1,500 per year (CSIRO, 2023).
3. **Charging infrastructure is improving** – the Government has invested in developing more public fast-chargers and kerbside charging. It is also working to enable charger installations in multi-residence buildings (DITRDCSA, 2025d).

The emerging area of V2G integration will unlock even more value from EVs and further support uptake. ARENA is supporting trials of V2G and a report commissioned by ARENA projects that BEVs could be larger than any other form of energy storage in the NEM by the early 2030s (ARENA, 2023; ARENA, 2025a).

Industry & waste

Priorities in the Government's *Industry Sector Plan* from 2025 to 2035 include deployment of technologies to increase energy efficiency, electrification and switching from coal to gas and alternative fuels (DISR, 2025a). The plan anticipates some emissions reduction in large facilities and the Future Made in Australia agenda supporting emissions reductions in the iron and steel, and alumina subsectors.

Figure 8: Industry and waste sector emissions over time



Source Authority analysis of DCCEEW (2025u).

Industry and waste emissions are trending down, and momentum must be sustained (Figure 8). Emissions from the sector fell by 1.8 Mt CO_2-e (3%) in 2025, continuing a downward trend which has seen emissions decline by an average of 1.1 Mt CO_2-e per year over the past 5 years.[15] However, part of the 2025 reduction was due to lower steel production, which may rebound in future years. Accelerating the rollout of cost-competitive renewable electricity is critical to locking in long-term emissions reductions from the sector and ensuring it contributes its share to national targets and Australia's prosperity.

Some of the policies driving transition in the sector include the Safeguard Mechanism, which applies to Australia's highest emitting industrial facilities and is complemented by the Government's financial measures such as the Future Made in Australia package, the National Reconstruction Fund, the Clean Energy Finance Corporation and the Australian Renewable Energy Agency. The Australian Carbon Credit Unit (ACCU) Scheme supports the destruction of methane from landfill in the waste sector and provides a source of units that Safeguard facilities can use to manage excess emissions (see Part 6).

Within the sector, electricity and renewable fuels as a share of total final energy use have increased slightly over the last decade, while the share of fossil fuel use has declined (DCCEEW, 2025b). By partnering with industry to develop low-emissions industrial precincts and co-investing in shared infrastructure, governments can help accelerate electrification, and the uptake of alternative fuels and feedstocks across the sector.

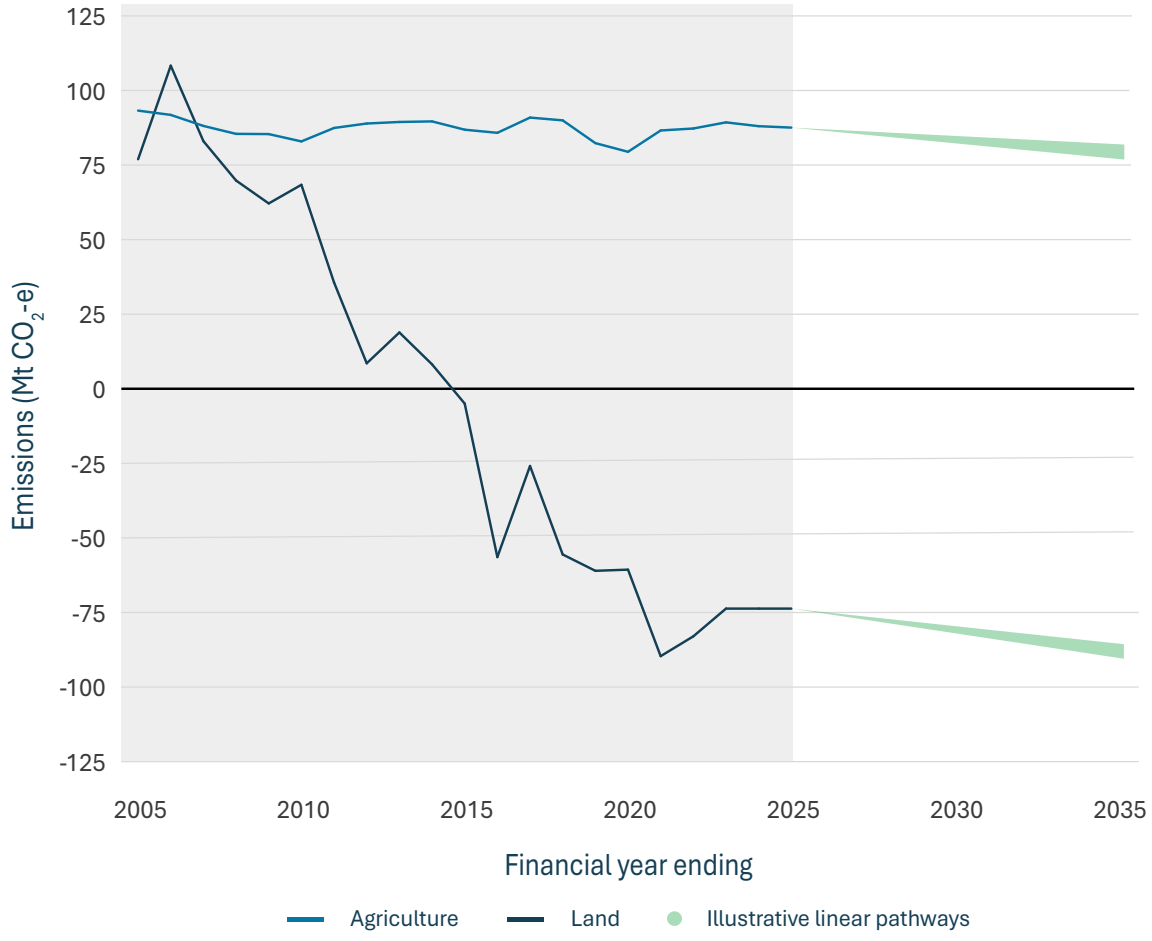
Emissions from waste can be reduced by diverting food and garden organics (FOGO) from landfill (NSW EPA, 2023). The Government has committed to halving organic waste to landfill by 2030 through the *National Waste Policy Action Plan* (NWPAP). Current FOGO diversion rates are falling short of the NWPAP targets (DCCEEW, 2025y).

15 In *Quarterly Updates to Australia's National Greenhouse Gas Inventory*, in the absence of more up to date indicators, waste emissions are assumed to remain constant.

Agriculture & land

Priorities in the Government's *Agriculture and Land Sector Plan* for 2025 to 2035 include improving knowledge and information on greenhouse gas emissions profiles, supporting innovation, strengthening on-ground action and enhancing the role of Australia's land in a net zero economy (DAFF, 2025). The plan does not anticipate immediate emissions reductions, with emissions largely stable to 2030. After 2030, emissions intensity for agriculture declines through to 2035 as land-based sequestration practices such as reforestation start to play a larger role.

Figure 9: Agriculture and land sector emissions over time



Source Authority analysis of DCCEEW (2025u).

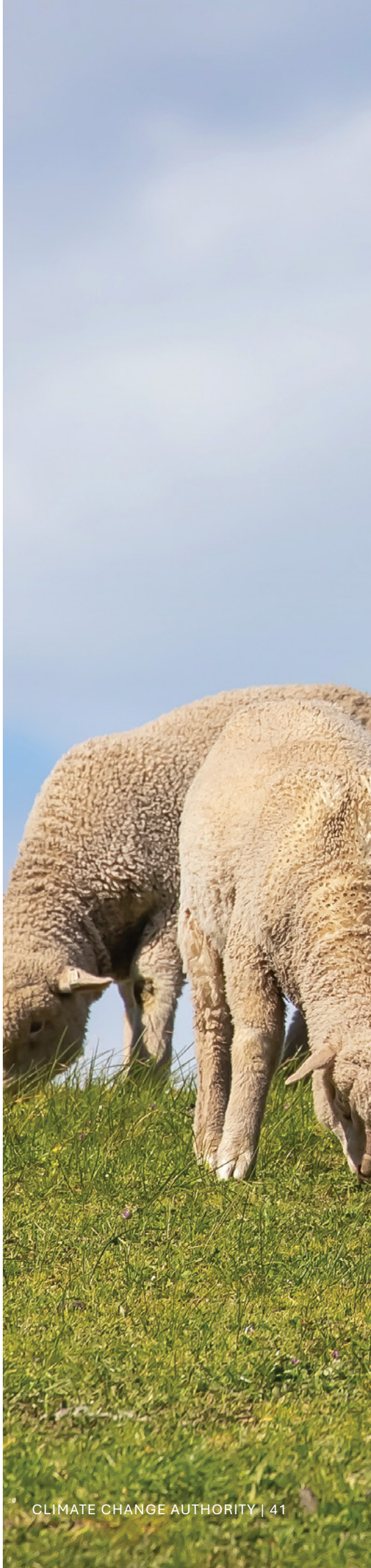
Emissions from agriculture fell slightly in 2025, but progress is slowing (Figure 9). The sector recorded a 0.5 Mt CO_2-e (1%) reduction – this is a minor improvement on the average annual *increase* of 1.6 Mt CO_2-e over the past 5 years since 2021 (DCCEEW, 2025u). The rate of progress is currently slow but there is potential for the pace to pick up as commercially viable abatement technologies become more widely available.

Some of the policies driving transition in the sector include the ACCU Scheme, Government measures supporting methane reduction technologies, and the expansion of the Carbon Farming Outreach Program.

The share of agriculture emissions attributable to livestock is approximately 80% (DCCEEW, 2025f). The size of Australia's cattle herd has remained relatively stable over the decade to 2023, while emissions intensity shows a slight but consistent decline (Authority analysis of ABS, 2025; DCCEEW, 2025f). Currently, farmers can achieve modest emissions reductions at little cost through technologies and practices such as herd and pasture management. While emerging technologies such as feed supplements and improved genetics could deliver larger reductions, widespread adoption requires cost reductions and increased outreach (CCA, 2024b).

Fertiliser emissions have fluctuated in line with cropping activity, while emissions intensity remained relatively stable over the decade to 2023 (Authority analysis of ABARES, 2025; DCCEEW, 2025f). More support for uptake of practices and technologies is needed to reduce nitrogen fertiliser use including promoting precision agriculture and reducing the cost of enhanced efficiency fertilisers.

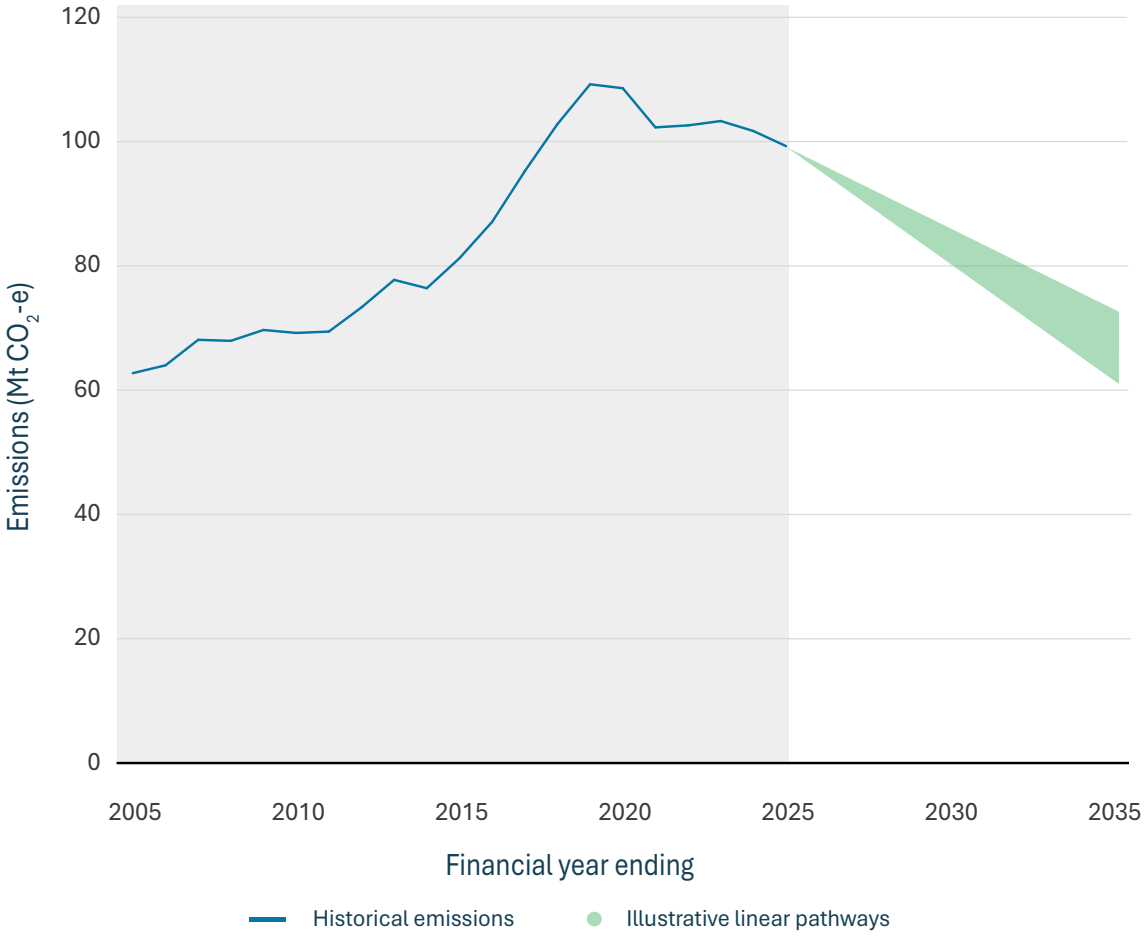
The ACCU Scheme carbon and environmental planting project registrations are experiencing a period of steady growth (CER, 2025a). This will need to continue. New ACCU methods for covering multiple farm and landscape practices could increase project registrations and the supply of vegetation-based offsets. While abatement under the scheme occurs primarily in the land and agriculture sector, the resulting offsets can be used to compensate for emissions in other sectors. By purchasing these offsets, buyers play a direct role in financing emissions reduction projects across the land and agriculture sector. The Authority is currently reviewing the ACCU Scheme and will submit its findings in 2026.



Resources

Priorities in the Government's *Resources Sector Plan* from 2025 to 2035 include reducing fuel combustion and fugitive emissions across mining, oil, gas and coal operations, underpinned by the Safeguard Mechanism (DISR, 2025b). Important technology pathways include greater electrification and uptake of low-carbon fuels, reducing venting and flaring from oil and gas facilities, advancing methane abatement technologies for coal mines and scaling up CCS. The plan anticipates substantial emissions reductions, particularly in the coal and liquified natural gas (LNG) subsectors.

Figure 10: Resources sector emissions over time



Source Authority analysis of DCCEEW (2025u).

Resources sector emissions fell by 2.4 Mt CO_2-e (2%) in 2025 (Figure 10), partially driven by increased use of CCS[16], a reduction in venting of fugitive emissions, and a small decline in coal production (DCCEEW, 2025u). This annual reduction is an improvement on an emissions reduction trend of 1.9 Mt CO_2-e per year over the 5 years from 2021 to 2025, with resources emissions having peaked in 2019 (DCCEEW, 2025u). The key policy measure driving transition in the sector is the Safeguard Mechanism, which covers around 87% of the sector's emissions in 2023–24 (DISR, 2025b).

Electricity use as a share of total final energy consumption in mining has been relatively flat from 2015–16 to 2023–24 at around 26–28% (DCCEEW, 2025b). As the resources sector electrifies, this share should start to increase, displacing combustion of fossil fuels. However, as in other sectors, electrification in the resources sector is unlikely to progress at a consistent pace year-on-year. This reflects factors such as the long operational lifespans of existing assets, the limited commercial availability of key technologies – such as large-scale electric haulage – and challenges including access to firmed renewable electricity (CCA, 2024b).

Fugitive methane emissions from the sector's facilities covered by the Safeguard Mechanism have remained relatively steady at around 22–23 Mt CO_2-e since 2021–22 (Authority analysis of unpublished CER data, 2025). Part 6 discusses this issue further.

New and expanding resources projects are adding to the sector's emissions. Over half of the 58 new or expanded facilities that could enter the Safeguard by 2029–30 are in the fossil fuel sector (see Authority analysis in Part 6.2). These fossil fuel facilities are projected to cumulatively add up to 19 Mt CO_2-e of emissions in Australia between 2024 and 2030 (see Authority analysis in Appendix A).

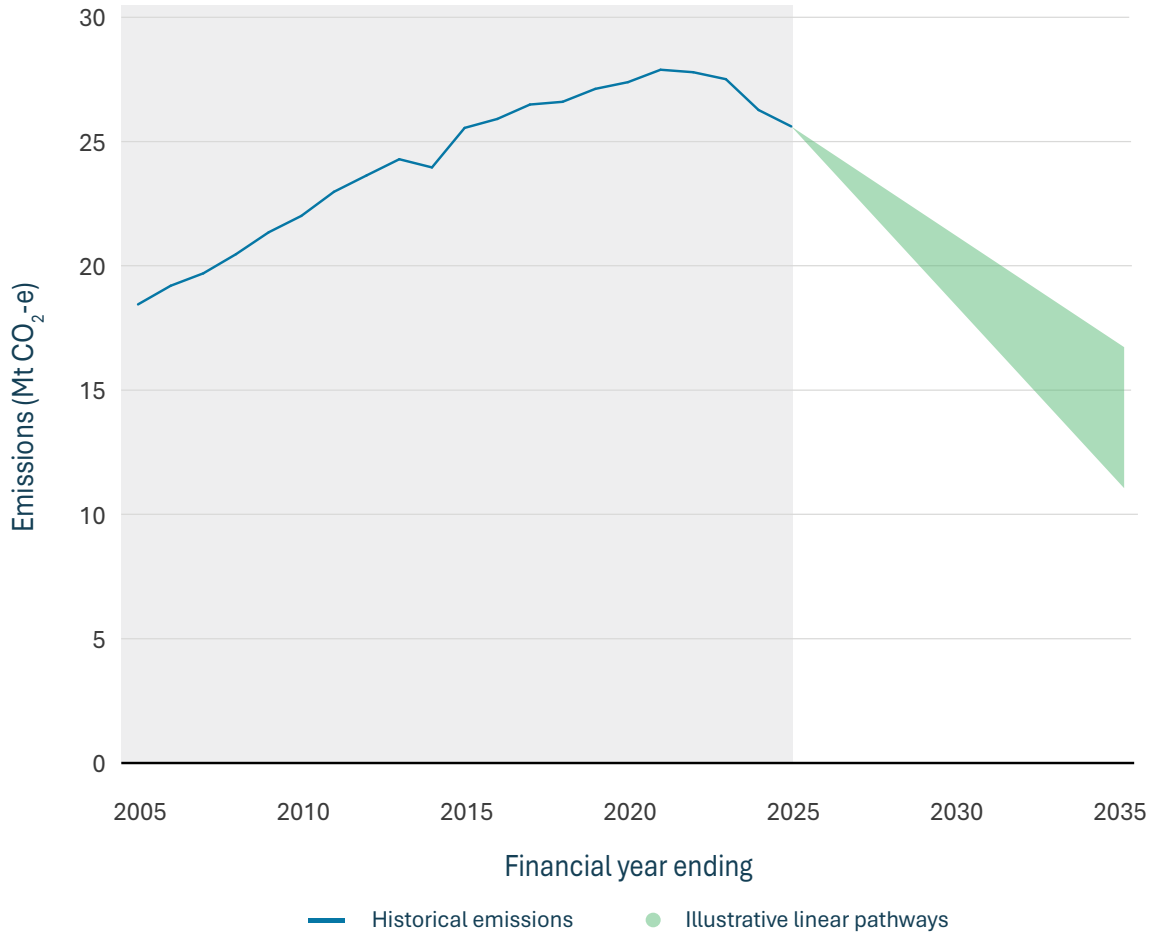
The net global impact of fossil fuel projects depends not only on their domestic emissions, but also on the extent to which they displace more carbon-intensive offshore alternatives. For example, Australian gas used to firm renewable energy in other countries could displace coal-fired generation, resulting in lower global emissions compared to a business-as-usual scenario. Domestically, most emissions from these projects would be subject to Safeguard Mechanism obligations. As a result, the net additions to Australia's emissions profile are constrained. The overall global impact hinges on the emissions – or abatement – these projects may displace or reduce overseas.

16 Emissions reductions in 2025 from CCS included sequestration from the Moomba CCS project which first began CO_2 injection in September 2024 (DCCEEW, 2025v). As outlined in Part 6.4, as part of the 2026-27 review of the Safeguard Mechanism, the Authority will have a role in examining the extent to which the scheme is incentivising onsite abatement including the role of CCS.

Built environment

Priorities in the Government's *Built Environment Sector Plan* for 2025 to 2030 include accelerating efficiency upgrades, electrification and demand flexibility; continuing to improve standards; implementing and mainstreaming adaptation; and advancing the reduction of embodied carbon (Treasury, 2025). The plan anticipates emissions to decline significantly for residential buildings and modestly for commercial buildings.

Figure 11: Built environment sector emissions over time



Source Authority analysis of DCCEEW (2025u).

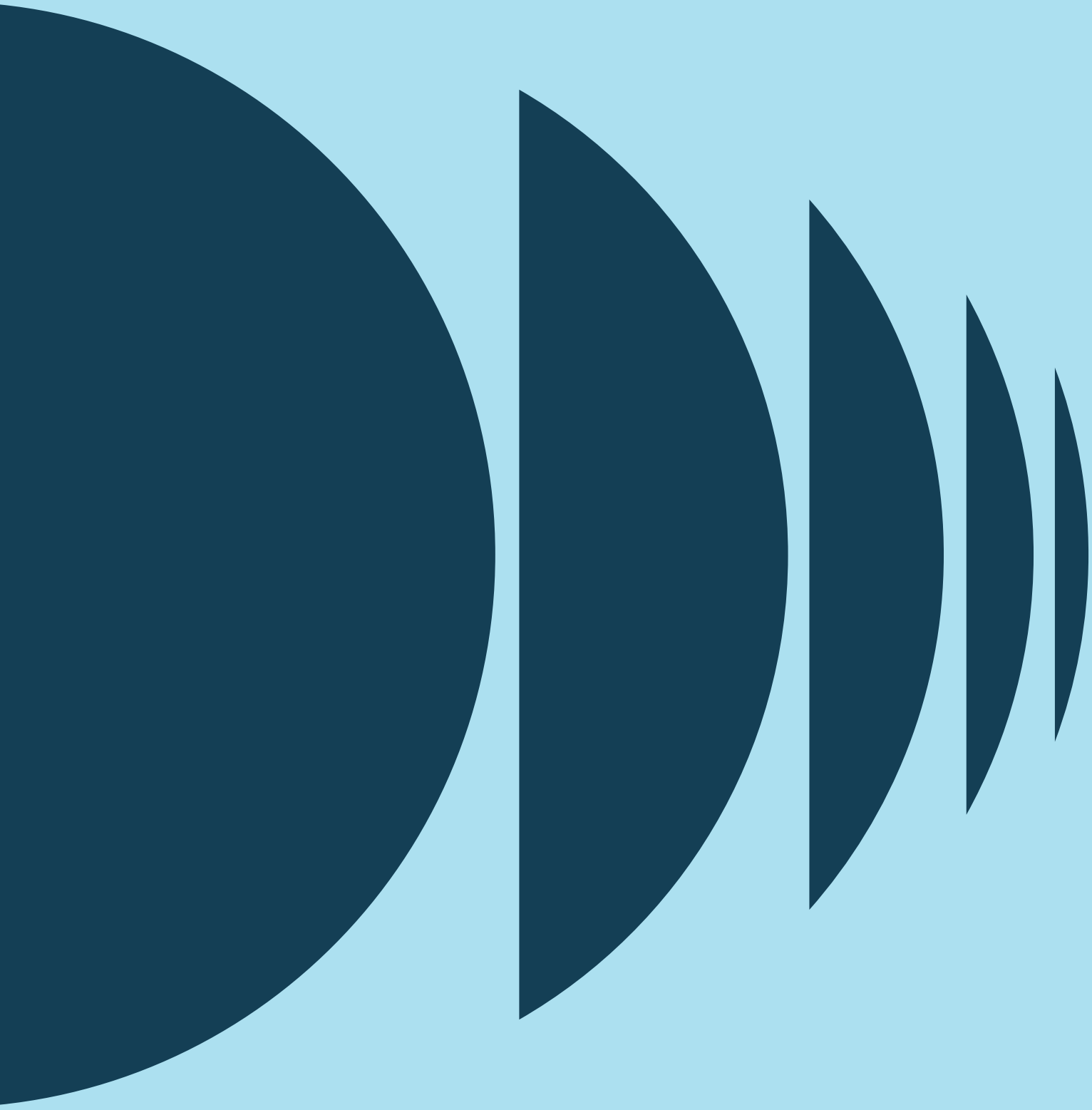
Built environment emissions fell by 0.7 Mt CO_2-e (3%) in 2025 (Figure 11). This builds on an average declining trend in emissions of approximately 0.4 Mt CO_2-e per year over the 5 years since 2021 (DCCEEW, 2025u). Although the sector is moving in the right direction, policy progress has not yet translated into substantial emissions reductions. Authority analysis and consultation show that faster progress can and should be made to support achievement of Australia's 2030 and 2035 emissions reduction targets (GBCA submission, 2025).

Some of the policies driving transition in the sector include the Household Energy Upgrades Fund, the Social Housing Energy Performance Initiative, the Ozone Protection and Synthetic Greenhouse Gas program, and recent updates to the National Australian Built Environment Rating System (NABERS) and Nationwide House Energy Rating Scheme (NatHERS).

Electrification of residential and commercial buildings could drive accelerated decarbonisation in the sector. The Government could proactively manage risks of transitioning gas networks (especially for households or industries that cannot electrify) by working with state and territory governments to coordinate a national phase-out of new and existing gas connections (CCA, 2023a; Climateworks Centre submission, 2025). Other incentives could include encouraging the use of electric appliances for space heating, water heating, and cooking.

Embodied emissions remain a significant decarbonisation opportunity (SmartCrete CRC submission, 2025; GBCA submission, 2025). The Government could reduce embodied emissions by setting embodied carbon limits in the National Construction Code and establishing nationally consistent reporting frameworks (Australian Institute of Architects submission, 2025). Reducing embodied emissions in buildings supports decarbonisation by minimising the industrial emissions associated with the production of building materials.

The combined amount of reclaimed refrigerants reached record levels in 2025 (Refrigerant Reclaim Australia, 2025 unpublished). To build on this progress, the Government could place further limits on the global warming potential (GWP) of refrigerant gases and appliances to accelerate the transition to low GWP alternatives. This approach is similar to comparable jurisdictions such as the European Union, the United States and Japan, in areas such as commercial refrigeration and stationary air-conditioning (European Commission, 2024; Ministry for the Environment, 2015; US EPA, 2016).



Part 3:

Economic and structural transformation

Key points

- The Authority welcomes the release of Australia's first detailed Net Zero Plan and the 6 associated Sector Plans in September 2025.
- The Authority also welcomes the National Climate Risk Assessment (NCRA) and National Adaptation Plan (NAP), which highlight the need for urgent, coordinated government action to address climate risks. Priorities for action should include adaptation finance, reforming land use planning, strengthening the resilience of buildings and infrastructure, and supporting planned relocation.
- The Authority notes the Government's latest efforts to capture economic opportunities from global decarbonisation through the Future Made in Australia (FMA) package. The Authority will monitor progress on investment and application of the National Interest Framework and community benefit principles.
- Current policies will not be sufficient to meet Australia's targets, and a wait-and-see approach will only put Australia further behind. Urgent attention is needed to overcome critical barriers including the lack of social licence, supply chain constraints, the pace of environmental approvals, the green premium, and persistent skills shortages. Targeted, timely policies must be deployed to drive the structural transformation required.
- Although regional communities broadly support the energy transition, local opposition to new clean energy infrastructure is delaying deployment. A national program to uplift community engagement and benefit-sharing would accelerate project acceptance and enable faster emissions reductions.

3.1 Fostering community acceptance is critical for a successful and timely energy transition

‘The biggest barriers to the rapid deployment of solar and wind electricity are not financial, they are not technological. They are societal, the so-called social licence issues that lead to a plethora of objections that delay or kill projects.’

Alan Finkel, 2024

Despite general support for the energy transition across regional Australia, community opposition continues to delay deployment of renewable infrastructure and delivery of emissions reductions (Ipsos, 2024; RAI, 2025). While many project proponents undertake engagement and benefit-sharing, securing community acceptance remains a challenge. Stakeholder and community pressure is one of the leading causes of all infrastructure project delays and cancellations in the last 5 years (ANU, 2024). For example:

- Modelling by an Australian energy company, Windlab, found that risks arising from poor community relationships translate into calculable risks for wind turbine projects, including costing projects more than AUD5 per MWh and 3 years of time (CEC, 2019; ECMC, 2024).
- The Victoria to New South Wales Interconnector West (VNI West) transmission project has been met with strong community opposition from landholders, farmers and local councils since 2022 (Buloke Shire Council, 2025; Gannawarra Shire Council, 2025; RAI, 2025; VFF, 2025). The expected completion date of the project has been delayed by 2 years, with negotiations with landholders a contributing factor (Transmission Company Victoria, 2025). If the project does not proceed, Victoria may face energy shortages, increased risk of outages and substantial increases to residential electricity bills (Nexa Advisory, 2024).

The Government has taken some welcome steps to provide guidance on community engagement and benefit-sharing, such as:

- The *National Guidelines for Community Engagement and Benefits for Electricity Transmission Projects* (ECMC, 2024).
- The *Future Made in Australia Act 2024*, which includes community benefit principles for projects supported under the Act (Australian Government, 2024).
- The Australian Energy Infrastructure Commissioner (AEIC), a role which handles complaints and enquiries about clean energy infrastructure projects. The AEIC engages with impacted communities and shares insights and advice on best practice approaches (for example, the 2023 AEIC Community Engagement Review). The AEIC also works to make information about the energy transition and specific projects more accessible and easier to find (AEIC, 2025).
- The Capacity Investment Scheme’s tender processes, which includes merit criteria assessing community engagement and benefit-sharing. The tender guidelines also provide guidance about best-practice approaches for these criteria, for example, co-designing benefit-sharing approaches with impacted communities (DCCEEW, 2024b).

However, current policies and practices are not yet achieving satisfactory outcomes for some host communities (AEIC, 2024; Dyer, 2023; RAI, 2025). Community benefits from renewable energy and transmission infrastructure are sometimes criticised as insufficient when compared to the size and value of the projects (Dyer, 2023; NSW DPHI, 2024). State and territory governments have also taken different approaches to benefit-sharing to date, with some states and territories more progressed than others (CPA, 2025; NSW DPHI, 2024; QLD DSDIP, 2025; RAI, 2025; VicGrid, 2024).

Place-based approaches to benefit-sharing that deliver outcomes aligning with the specific needs and goals of communities can help to build community acceptance (RAI, 2025). Host communities want a range of long-term benefits from the transition including improvements to social services, local infrastructure and housing (Dyer, 2023; Latrobe Valley Authority, 2023; RAI, 2025).

A national program to strengthen community engagement and benefit-sharing would help to improve community acceptance of projects

A national program for benefit-sharing and community engagement could play an important role in lifting standards across jurisdictions. While Australian states and territories have taken the lead on developing their own benefit-sharing practices, there is a role for the Australian Government to ensure all jurisdictions are adopting best-practice principles and approaches.

‘Nationally consistent benefit sharing frameworks will help to ensure that equity is achieved across the country … addressing these concerns is essential to sustain acceptance and ensure a successful clean energy transition.’

WWF Australia submission, 2025

The Australian Government can lead the development of a national program for community engagement and benefit-sharing in partnership with sub-national governments, industry and communities. A national program could also incorporate place-based approaches to respond to the needs of different communities. Overseas and Australian examples show how governments can implement successful benefit-sharing mechanisms, with flexibility to accommodate different approaches, experiences and barriers across different regional communities:

- **Scotland's voluntary initiative** sets a voluntary standard of GBP5,000 (over AUD10,000) in community value per MW of installed capacity per year (LES, 2025b). Community Action Plans and funding agreements between the community and proponents govern how the voluntary package of benefits is delivered (LES, 2025a). The scheme has helped to establish positive relationships between project proponents and local communities (Scottish Government, 2024).
- **Ireland's Renewable Electricity Support Scheme** requires all renewable electricity generation projects to establish a Community Benefit Fund. Projects must contribute EUR2.00 (AUD3.50) per MW hour of generation to the fund, managed by Ireland's Sustainable Energy Authority (SEAI, 2025). Community groups can then apply to receive funding for purposes aligned with the UN Sustainable Development Goals.
- **Denmark's Green Fund** requires wind project proponents make a lump sum payment to the local municipality, calculated at a level of DKK88,000 (AUD21,000 approx) per MW (le Maitre, 2024). In addition, project owners must pay an annual bonus to those living within a set distance of the project and offer local communities 20% ownership (CANE, 2025). Co-ownership has also helped to establish community acceptance and facilitate approvals for developers (CPA, 2024).
- **NSW's Community and Employment Benefit Program** is funded by access fees payable by generators in renewable energy zones (REZs), with payments from different projects streamlined into a central fund. The fund is used to support a range of immediate and long-term initiatives that foster regional prosperity. The program is also informed by ongoing, tailored consultation with the community to understand local needs and priorities (EnergyCo, 2024). Coordination of the program at the REZ scale enables it to address the cumulative impacts of new renewable energy projects in these areas.

A national program could provide best-practice principles for benefit-sharing, flexibility for states and territories to implement their own policies, and a federal 'backstop' where state and territory policies do not meet certain benchmarks. *The Pan-Canadian Approach to Carbon Pollution Pricing* provides an example of how federal policy mechanisms can allow flexibility while incentivising desired outcomes across sub-national jurisdictions. The Canadian Government's national standards for carbon pricing aim to ensure that industrial carbon pricing systems across provinces and territories are equitable, comparable and effective. It includes a federal pricing system, or backstop, for provinces and territories that do not implement a local system to meet the benchmark (Government of Canada, 2025).

For the national program to be successful, federal, state and territory governments will need to lead benefit-sharing efforts on the ground. This includes coordinating across government portfolios to improve services and infrastructure and manage the cumulative impacts of new energy infrastructure projects on regional communities.

The Authority suggests 6 best practice principles for the Government to consider as part of the proposed program, in addition to the principles outlined in the *National Guidelines for Community Engagement* and *Benefits for Electricity Transmission Projects*:

1. **Enabling communities to co-design benefit-sharing outcomes.** Benefits come in many forms. Co-designing benefit-sharing outcomes with communities will ensure that the benefits delivered by a project align with the specific needs and goals of the local community. Regions are seeking genuine collaboration on decision-making with government and industry to seize the transition's opportunity to create positive, lasting and meaningful changes for their local community (CEC, 2019; RAI, 2024). Effective co-design of benefit-sharing arrangements will also require communities to be adequately supported and resourced to ensure they can meaningfully participate in the process (RAI, 2025).
2. **Prioritise long-term benefits that will foster regional prosperity.** Many regional communities have higher relative socio-economic disadvantage compared to urban centres (RAI, 2025). As such, host communities want benefits from the transition that can help address these issues, such as improvements to social services, local infrastructure, and housing (Dyer, 2023; Latrobe Valley Authority, 2023; RAI, 2025). When developing a benefit-sharing approach, priority should be given to benefits that will target entrenched issues or foster regional prosperity. Benefits should also be long-term and provided from at least the start of construction and throughout the operational phase. One-off initiatives do not provide ongoing sustainability or support for impacted communities (CEC, 2019).
3. **Proportionate benefits**. Community benefits should reflect the scale and impact of the project (RAI, 2025). Distribution of benefits within a community should also be proportionate such that stakeholders who experience greater impacts (for example, due to closer proximity to a project) receive a proportionately larger benefit compared to those who are less impacted (CEC, 2019). Incorporating a framework for mandatory benefit-sharing payment amounts into a national benefit-sharing mechanism could help ensure that communities receive fair, long-term benefits that are proportionate to the scale of the projects being hosted.
4. **Pooled regional funds.** Streamlining mandatory benefit-sharing contributions into a pooled regional fund for each host region would help resolve the complexity that some communities face when hosting multiple renewable energy projects. This complexity can include multiple streams of benefit funds, and multiple layers of funding governance (RAI, 2025).
5. **Transparency and accountability.** Community trust can be maintained through transparency and accountability of how benefit-sharing funding is received, determined and distributed (CPA, 2025). One way to achieve this is through monitoring and evaluation, discussed further below.
6. **Free, Prior and Informed Consent (FPIC) for First Nations communities.** The Government should include appropriate mechanisms and resources to support best practice engagement and benefit sharing with First Nations, with a focus on FPIC. FPIC is an internationally recognised human right that aims to ensure any decisions made by First Nations communities are free from coercion and produced with adequate time to consider all available information (CCA, 2024b; UN, 2007; UN, 2016). First Nations leaders have identified improved engagement and greater resourcing and support for First Nations representation in climate solutions as a priority for communities (FNCEN, 2024; FNCEN, 2025; NFPPCC, 2024). FPIC can be achieved when communities are sufficiently resourced and empowered to engage, negotiate, and lead on decarbonisation projects (Kimberley Land Council submission, 2025; (CEC, 2024; NFPPCC, 2024; O'Neill & Thorburn, 2025; Quail et al., 2025). Conversely, poor engagement can increase project costs, delay approval timelines, pose cultural, environmental and financial risks, and threaten project viability (ACSI, 2021; ANTAR, 2024; Australian Parliament, 2021). First Nations leaders have identified improved engagement and greater resourcing and support for First Nations representation in climate solutions as a priority for communities (FNCEN, 2024; FNCEN, 2025).

Monitoring and evaluation of community engagement and benefit-sharing outcomes will help ensure the national program is working as intended

Monitoring and evaluation of community engagement and benefit-sharing outcomes for communities creates transparency and accountability which in turn builds community trust. Tracking engagement and benefit-sharing outcomes for different communities over time may also provide useful evidence about which engagement and benefit-sharing techniques yield better outcomes, and impacts on project timelines and costs. It may also generate useful data to demonstrate which states and territories are leading with respect to engagement and benefit-sharing outcomes and incentivise lagging states to implement more effective approaches.

To further enhance proponent accountability, Government could consider incorporating outcomes from the benefit-sharing monitoring and evaluation into scores for the clean energy Developer Rating Scheme that is currently under development. The scheme will deliver an independent, voluntary, scorecard-based assessment of proponents using objective measures. It aims to provide communities with greater transparency and confidence about the capability and performance of companies that propose new energy infrastructure in their area (DCCEEW, 2025k).

Recommendation 4: Ensure regional communities share in the benefits of clean energy projects

Recent delays and lost investments for clean energy projects reveal developers need guidance and support from government to help them earn community support. Projects that lack support face delays, threatening the pace of the renewables roll out.

The Government should establish a national program to guide community engagement and benefit-sharing for clean energy infrastructure projects. Rather than replacing existing state and territory approaches, this program would complement and strengthen place-based models while promoting greater consistency across jurisdictions. It should:

- adopt a principle-based approach including best practice principles such as Free, Prior and Informed Consent for First Nations communities
- be based on a robust framework for calculating mandatory benefit sharing contribution amounts for clean energy projects and distributing funds to align with the needs and goals of the impacted communities
- incorporate monitoring and evaluation of outcomes to improve transparency, hold all parties accountable, and ensure benefits are delivered as intended. Robust monitoring and evaluation should help to deliver better outcomes for communities and strengthen trust in the energy transition.

3.2 Strengthening adaptation to protect Australia's communities, businesses and environment

Climate adaptation is critical for maintaining Australia's productivity, reducing long-term economic costs, and securing better social and environmental outcomes (IGCC, 2024b; Productivity Commission, 2025; Treasury, 2023). The National Climate Risk Assessment (NCRA) highlighted the serious risks Australia is facing and the National Adaptation Plan (NAP) sets a foundation for action by embedding adaptation across government and prioritising communities experiencing vulnerability (ACS, 2025a; DCCEEW, 2025s).

The next step is implementation. Through the NAP, the Government has committed to creating an action agenda by the end of 2026. It will develop this with states, territories and local governments to implement priority actions identified across Australia. The Government needs to ensure the action agenda is an implementable plan with clear, proportionate and appropriately funded actions. This will also require a monitoring and evaluation framework to assess the effectiveness of adaptation interventions (DCCEEW, 2024; IGCC, 2024c; Nalau & Howden, 2025; NSW Government, 2024a; Productivity Commission, 2025).

Box 4: Legislating regular updates to the NAP and the NCRA

Updating the NCRA and the NAP regularly will help Australia understand and respond to evolving climate risks. The Authority reiterates recommendations from its 2023 and 2024 Annual Progress Reports, that the NCRA and NAP should be enshrined in the *Climate Change Act 2022*, updated at regular intervals, and supported by a monitoring and evaluation framework (CCA, 2023a; CCA, 2024a; IGCC submission, 2025)[17]. The Government should implement these recommendations to align Australia's adaptation policy framework with international best practice; and strengthen institutional arrangements to support better outcomes for future generations.[18]

17 The Productivity Commission has also recommended: 'The Australian Government should legislate for the Climate Change Authority to take responsibility for monitoring, evaluating and learning to inform governments and the public about progress in adapting to climate change, and whether policies are effective.' (Productivity Commission, 2025).

18 International counterparts, including New Zealand, Canada and the UK have all legislated to develop regular risk assessments and adaptation plans (He Pou a Rangi Climate Change Commission, 2022; UK CCC, 2025).

Prioritising resilience in urban planning and buildings

To ensure Australians are not locked into living and working in places exposed to dangerous climate risks, Australia must embed climate considerations into how towns and cities are planned and built. This means ensuring new developments aren't placed in high-risk areas, upgrading existing buildings and infrastructure, and supporting communities that may need to relocate.

Limiting development in high-risk areas is essential to reduce future climate-related harm, especially as the Government has committed to building 1.2 million new homes over 5 years from 2024 (Adedokun, 2024; CCA, 2025b; GBCA submission, 2025; ICA, 2022; ICA, 2025; Treasury, 2022). Factoring climate risk into planning and development decisions is critical to ensure homes are well-located and resilient to climate hazards. The Government has committed in the NAP to develop a framework for nationally agreed principles for natural hazard and climate risk considerations in land-use planning at all levels of government (DCCEEW, 2025s). While planning decisions occur at subnational levels, national principles are an important step towards much-needed reform. These principles should address both current and emerging risks (IGCC submission, 2025). They should also apply to both 'zombie'[19] and future land-use planning and development decisions. These principles will only be effective if states and territories have the information and resourcing to fully implement them.

The Authority's Home Safe report showed that Australia's built environment is increasingly at risk from climate-related hazards, with most buildings not designed to withstand current or future hazards (CCA, 2025b). A targeted resilience uplift program could protect Australia's existing buildings and infrastructure from climate-related hazards (AIA submission, 2025; GBCA submission, 2025; The Justice and Equity Centre submission, 2025). The Authority strongly endorses the Productivity Commission's interim recommendations, that 'Governments should agree on a series of actions to improve housing resilience over time' and 'develop a nationally consistent climate resilience rating system for housing' (Productivity Commission, 2025).

With climate change making parts of some regions unsafe or uninsurable, planned relocation is increasingly considered an appropriate adaptation option (AHURI, 2025; Hay et al., 2024; ICA, 2025a). However, relocation is often deeply distressing and can have serious implications, especially for First Nations communities with strong connection to Country (Canadian Climate Institute, 2022; NHRA, 2023). Furthermore, planned relocation in Australia has been largely reactive and lacked national leadership (Prinsley & Hay, 2024). Lismore's Home Buyback Program, for example, lacked sufficient forward planning, community consultation and effective communication, leading to many community members rejecting the program or being left behind (Adams & Ross, 2025; Buckley, 2025). Best-practice national guidance materials, tools, and information can help ensure past mistakes are avoided while promoting more equitable and cost-effective outcomes for communities (Hay et al., 2024; IAG, 2023; NHRA, 2023).

19 Zombie approvals are approvals that were previously granted, but may no longer comply with updated standards (EDO, 2024).

Recommendation 6: Ensure Australians are not locked into living and working in places exposed to dangerous climate risks

The National Climate Risk Assessment shows that Australia will continue to experience increasingly severe and frequent climate impacts in the coming decades.

It is critical that the Government work with state, territory and local governments to:

- account for future climate risks in land-use planning and development rules
- provide better information, clear guidance materials and decision-making tools to support communities to actively prepare for and undertake planned relocations.

Supporting adaptation with governance, information and finance

Improving the governance and quality of climate risk data and information is important for helping decision-makers and communities make better-informed choices and develop place-based solutions (DCCEEW, 2025ad; DCCEEW, 2025s; Productivity Commission, 2025). The Government is responsible for generating and coordinating the high quality national and regional climate projections necessary to support effective adaptation (COAG, 2012). Despite the release of the NCRA and the associated online Data Explorer, Australia's climate risk information and data is currently uncoordinated and inconsistent across jurisdictions (ACS, 2025b; DCCEEW, 2025ad; IGCC submission, 2025).

The Authority endorses the Productivity Commission's recommendation from its interim report, for the Government to 'set up a climate risk information database covering all climate hazards' for the public (Productivity Commission, 2025). This database should provide local and regional information targeted towards non-technical audiences via an easy-to-use centralised online database would help support all Australians in responding to climate risks (ARC 21st Century Weather submission, 2025; Doctors for the Environment Australia submission, 2025; IGCC submission, 2025; Kimberley Land Council submission, 2025; Productivity Commission, 2025).

Refreshing the outdated Council of Australian Governments (COAG) 2012 *Roles and Responsibilities for Climate Change Adaptation in Australia* agreement could clarify adaptation roles and responsibilities nationally, and recalibrate the balance of shared and individual responsibility (Johanna Nalau, 2025; COAG, 2012; DCCEEW, 2024c). The current agreement places too much onus and financial burden of risk management on the affected party. Clarifying the financing role in the COAG agreement and the NAP could address this inequity and facilitate finance for implementing local and bottom-up adaptation measures (WWF Australia submission, 2025). Strengthening the Government's adaptation responsibilities, increasing resourcing and better coordinating adaptation policy across government and with relevant ministerial councils would help the Government fulfil its leadership role.

Insufficient finance is a key barrier to the implementation of adaptation measures (Brullo et al., 2025; GBCA submission, 2025; IGCC submission, 2025; National Farmers Federation submission, 2025; PLF Accelerator submission, 2025). Mobilising private finance is critical to delivering the Government's action agenda (IGCC submission, 2025). A national adaptation finance strategy could help prioritise, coordinate and deploy public and private adaptation investment. This finance strategy could support investment by:

- outlining an adaptation investment roadmap with a list of priority adaptation projects (IGCC submission, 2025)
- expanding the Australian Sustainable Finance Taxonomy to include adaptation and resilience (ASFI submission, 2025; IGCC, 2024d)
- reforming the tax system to collect revenue and incentivise private finance for adaptation
- coordinating public-private partnerships to invest in resilience measures
- providing decision-making tools which comprehensively value the benefits of adaptation
- identifying priority sectoral adaptation investment needs (IGCC submission, 2025)
- adding adaptation and resilience to the mandates of existing specialist investment vehicles, for example the Clean Energy Finance Corporation (ASFI submission, 2025; IGCC submission, 2025)
- setting up funding mechanisms to enable communities and local institutions to access funding to support community-led resilience and adaptation solutions (ALGA, 2025; ALGA submission, 2025; Bushfire Survivors for Climate Action submission, 2025; ICA, 2025b; Monash Business School Green Lab submission, 2025)
- factoring climate risk and adaptation into the implementation of all policies and programs across government.

‘Natural disasters (and their associated recovery spending) are going to keep happening, but appropriate adaptation investment can lower the costs of these disasters … the expected cost of future natural disasters should show up in the fiscal aggregates rather than be treated as an unquantified contingent liability.’

Centre for Policy Development submission, 2025

Stakeholders have made a strong case for improving budgeting for the costs of future disasters and investing more in adaptation (Bushfire Survivors for Climate Action submission, 2025; CPD, 2025; WWF Australia submission, 2025). Public spending could include leveraging existing finance flows to state and territory governments by requiring programs to account for future climate risks, for example co-funded infrastructure projects. By increasing its direct investment and leveraging innovative sources of finance, the Government can implement the action agenda to manage risks identified in the NCRA (CCA, 2025b; CPD, 2025; IGCC, 2024b; Neal et al., 2025).

‘… the Federal budget should include the costs of future disasters. Economists are certain that ‘The aggregate costs of natural disasters can be forecast reliably.’ Estimated future disaster costs should be budgeted not only to improve accuracy and transparency, but also to improve decision-making and provide greater incentives to invest in emissions mitigation and disaster resilience to save lives … and reduce long-term costs.’

Bushfire Survivors for Climate Action submission, 2025

Recommendation 7: Partner with investors to help communities and businesses build resilience to a range of climate-related impacts like floods, fires and heatwaves

Governments can't alone cover all the costs of adapting to climate change, and investors and businesses need help to overcome barriers that stop the private sector from investing in adaptation.

The Government should prioritise developing a national adaptation finance strategy that considers opportunities to finance adaptation such as tax reform, adding adaptation to the Clean Energy Finance Corporation's investment mandate, and leveraging Commonwealth payments to states and territories to drive better adaptation and resilience outcomes.

3.3 Progressing the Future Made in Australia agenda is essential to capture economic opportunities from global decarbonisation

The Government has made progress towards implementing the Future Made in Australia (FMA) package since it was introduced in 2024. The FMA package is designed to maximise the economic and industrial benefits of the global transition to net zero. It has a broad range of measures intended to help Australia invest in areas of comparative advantage, strengthen economic security, and develop the skills, workforce, and communities needed to achieve its policy goals.

The FMA agenda is underpinned by the *Future Made in Australia Act 2024*. The Act establishes a framework to guide major public investments. This includes the National Interest Framework[20], sector assessment process[21], and community benefit principles.[22] To streamline processes and fast-track major projects, the Government has created an Investor Front Door. The pilot phase commenced in September 2025 and will focus on a few projects of national significance (Treasury, 2025).

The FMA package includes over AUD47 billion of announced funding to 2040-41 (Table 1). Most of this is tied to production incentives for renewable hydrogen, critical minerals and green metals. In addition to the programs centred on the priority areas, the Government has also announced AUD1 billion of funding to support the broader FMA agenda through programs focusing on workforce planning and development, working with trade partners, First Nations, approvals processes, and innovation. To date, AUD1.3 billion of funding has been allocated across the Hydrogen Headstart and Solar Sunshot programs (ARENA, 2025b). Production incentives will only start to flow once production commences in the coming years.

Watch points for the Authority as the FMA package is rolled out include monitoring:

1. The level of funding spent under the announced programs.
2. Whether the National Interest Framework and the community benefit principles are implemented in a way that is consistent with their objectives and aligned with Australia's national interests.
3. Whether the pace and scale of investment is consistent with Australia capitalising on the economic opportunities of global decarbonisation.

20 The National Interest Framework supports alignment of economic incentives with Australia's national interests. It has two streams under which an industry may be identified, the Net Zero Transformation Stream and the Economic Resilience and Security Stream.

21 A sector assessment will consider the extent to which a particular sector aligns with the National Interest Framework and opportunities to address barriers to private investment in the national interest.

22 Decision makers must have regard to the community benefit principles. These principles are intended to ensure projects benefiting from government support deliver community benefits.

Table 1: Announced FMA programs and funding

Program	Funding period	Announced funding ($ bn)	Committed funding to date
Hydrogen		**18.73**	
Hydrogen Production Tax Incentive	2027-28 to 2040-41	14.4[23]	-
Hydrogen Headstart[24]	2026-27 to 2038-39	4	1.2
H2Global Program	2024-25 to 2037-38	0.33[25]	-
Critical Minerals		**17.5**	
Critical Minerals Production Tax Incentive	2027-28 to 2040-41	17.5[26]	-
Green Metals		**3.75**	
Green Aluminium Production Credit	From 2028-29	2	-
Green Iron Investment Fund	2024-25 to 2030-31	1	-
FMA Innovation Fund	Expected from 2025	0.75	-
Clean Energy Manufacturing		**2.0**	
Solar Sunshot	2024-25 to 2033-34	1	0.1
Battery Breakthrough	2024-25 to 2030-31	0.5	-
FMA Innovation Fund	Expected from 2025	0.5	-
Low Carbon Liquid Fuels		**1.35**	
Cleaner Fuels Program	Expected from 2026	1.1	-
FMA Innovation Fund	Expected from 2025	0.25	-
Other (including workforce, First Nations, approvals processes, support packages and Investor Front Door)		**3.9**	
TOTAL		**47.23**	**1.3**

Source: CCA analysis of unpublished ARENA data (2025), CCA analysis of unpublished DISR data (2025), Treasury (2024), and Treasury (2025b).

23 Estimated cost with the final funding being driven by demand.
24 Includes Round 1 and Round 2 of the Hydrogen Headstart program.
25 Commitment was EUR 200 million.
26 Estimated cost with the final funding being driven by demand.

Part 4:

Accelerating environmental approvals to support the net zero transition

Key points

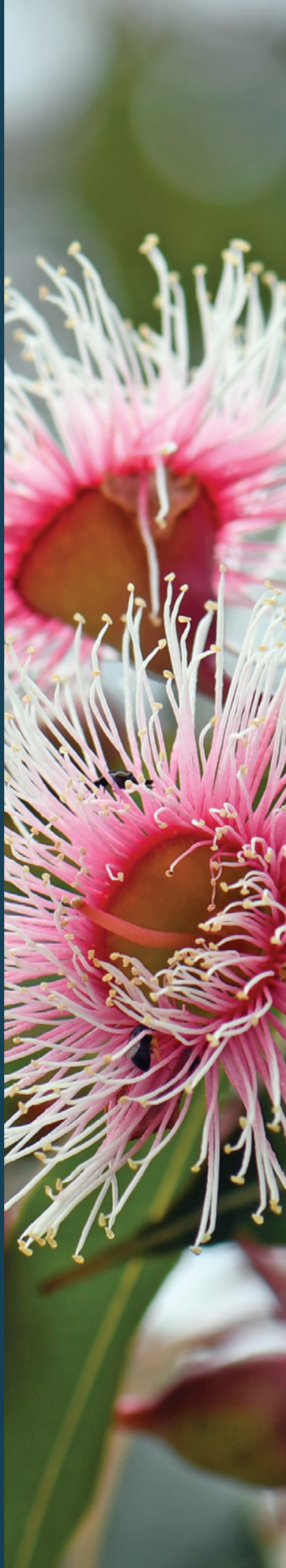
Reducing emissions helps protect the environment from the impacts of climate change, and rapid deployment of renewable energy is a key to decarbonising the rest of the economy.

Environmental approval processes at the national, state and territory levels are delaying the rollout of clean energy infrastructure. These delays are hindering progress towards the Government's 82% renewable electricity target and putting Australia's 2030 and 2035 emissions reduction targets at risk.

The 82% renewable electricity target remains achievable. However, the current rate of environmental approvals is more consistent with reaching around 76% renewables by 2030.

Smarter, faster approvals are essential to accelerate emissions reductions and protect the environment at the same time. The following actions would help achieve these objectives:

- The Minister for the Environment should be expressly permitted to take into account the emissions reductions attributable to a proposed renewable energy generation, transmission or energy storage project when making environmental approval decisions, and to prioritise such considerations under the EPBC Act, except in designated 'no-go' zones.
- A specialist 'strike team' to fast-track environmental, planning and other approval processes should be put in place to support existing measures like the National Renewable Energy Priority List to get project applications 'faster to yes' and 'faster to no'.
- Smarter and faster renewables EPBC approvals should extensively use proposed regional planning processes (including 'go' and 'no-go zones' within regions), be supported by robust bilateral agreements between the Commonwealth and states and territories, and be facilitated by end-to end digital process enhancements.



4.1 Without faster environmental approvals, Australia risks falling short of its targets

Australia faces a dual challenge: meeting growing renewable electricity demand while protecting and restoring nature. Biodiversity is in decline, and the number of threatened species continues to rise. Without stronger environmental management, these trends are projected to persist.

The scale of renewable energy development required to support decarbonisation is significant, with the number of projects requiring environmental approval growing by more than 100% since 2022[27] (CCA, 2025a; CCA analysis, 2025). This surge reinforces the need to reform environmental protection laws and streamline approval processes to enable rapid, large-scale deployment of renewable energy infrastructure while delivering better environmental outcomes.

Decarbonising Australia's economy depends on rapidly increasing renewable energy, storage and network capacity. Achieving this goal requires projects to be approved, built, and operational without unnecessary delay (CCA, 2024b). However, environmental approval processes at the national, state and territory levels continue to slow the rollout of clean energy infrastructure, hindering progress towards the Government's 82% renewable electricity target and broader decarbonisation of the economy.

As outlined further below, the Government has committed to reform the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)[28] to deliver stronger environmental protection, more efficient and robust project assessments, and greater accountability and transparency in decision-making.

The following sections of this report examine how delays in Commonwealth environmental approvals are affecting the rollout of renewable energy projects, through two key questions:

1. What are the potential consequences for achieving the Government's target of 82% renewable electricity by 2030 (see Part 4.2)?
2. What additional actions could the Government take – beyond current legislative reforms – to accelerate environmental approvals for renewable energy projects (see Part 4.3)?

4.2 Delays to environmental approvals threaten Australia's renewable electricity and decarbonisation ambitions

While the 82% renewable electricity target remains achievable, the current rate of environmental approvals is more consistent with reaching around 76%[29] renewables by 2030. If approval and installation rates remain unchanged, the NEM could face a shortfall of around 5 GW of the wind capacity needed to meet the 2030 renewables target – representing more than enough capacity to power all the houses in New South Wales. The Authority has focused on approval rates for wind projects (Figure 12 below) because they are expected to make up almost half (47%) of electricity generation in the NEM in 2029-30 (AEMO, 2024a); and tend to experience the longest approval delays. EPBC approvals for onshore wind projects currently average 2.8 years for controlled actions, and 25% of them take significantly longer (between 3.9 and 7.8 years).

27 Of the renewable energy projects referred before 1 July 2025, there are 153 pending approval under the EPBC Act, as of 14 October 2025 (see Figure 7). The number of projects seeking approval has gone from 21 projects in financial year 2022 to 54 in financial year 2025 (CCA analysis of RenewMap, 2025).

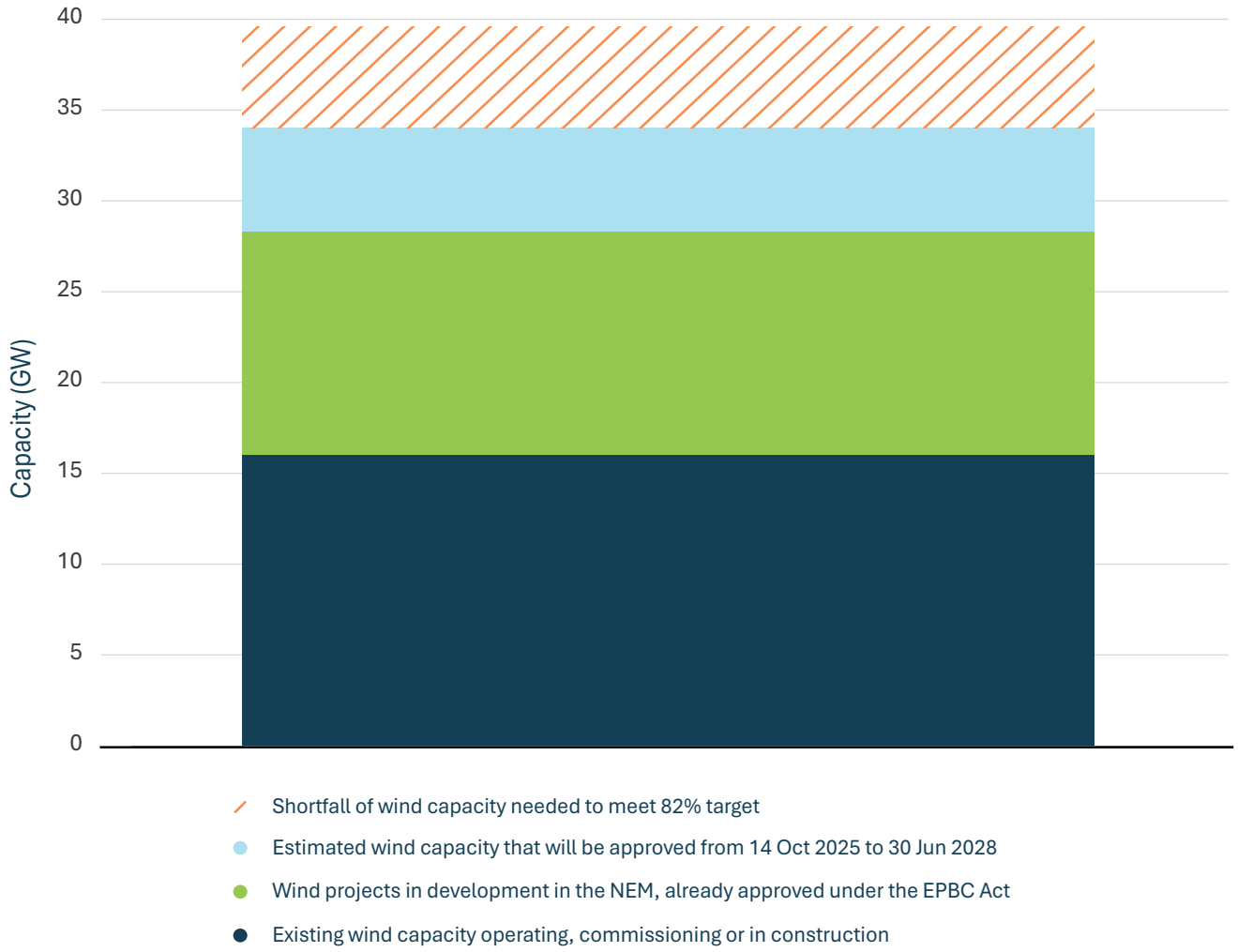
28 The EPBC Act is Australia's primary legislation governing environmental impact assessments. It aims to protect the environment, enable ecologically sustainable development, and incorporate First Nations peoples' knowledge with their permission and cooperation. Projects requiring EPBC Act approval are those likely to have a significant impact on Matters of National Environmental Significance, such as threatened and migratory species, and world heritage areas (DCCEEW, 2025o). Developers must refer such projects to the Minister for the Environment for assessment to determine if they are a 'controlled action', meaning they require Government approval and often conditions to manage impacts (DCCEEW, 2025ab). In addition to EPBC approval, renewable energy projects must often seek approval under other Commonwealth, state/territory, and local government processes. Some of the approvals required include planning licences; building licences; construction management plans; and addressing heritage, biodiversity and other impacts (DCCEEW, 2025l).

29 Authority analysis based on the average annual amount of wind capacity approved under the EPBC Act in the last 3 financial years, the Authority estimates that Australia could fall short of the wind capacity AEMO estimates is needed in the NEM to achieve the 2030 target by 5 GW (AEMO, 2024a). The Authority estimates this is equivalent to around 16 TWh, and if this is replaced by fossil fuel generation, could result in a 6-percentage point shortfall from the 82% target. The Authority's analysis does not consider other development challenges and is not a forecast for what renewable electricity percentage Australia is on track to achieve by 2030 (see notes in Figure 12 for further details). The purpose of this analysis is to show that EPBC approval timeframes alone are enough to put the 82% target at significant risk.

This approval timeframe, combined with post-approval steps (which can add a further 2.5 years before a project is fully operational), means that in recent years onshore wind projects have taken an average of 10.6 years from application to commercial operation (CCA analysis of RenewMap, 2025).[30]

Since 2023, 94% of onshore wind referrals made under the EPBC Act have been deemed by the Minister for the Environment as controlled actions, which is well above the historical average of 57% (CCA analysis of RenewMap, 2025). This growing proportion is likely caused by many interrelated factors including reduced supply of suitable low-impact sites, increased environmental concern[31], the increased scale of wind farms, and community opposition to wind projects.

Figure 12: Projection of onshore wind capacity in the NEM by 2030



Sources: CCA analysis based on data from RenewMap (2025) and AEMO (2024a).

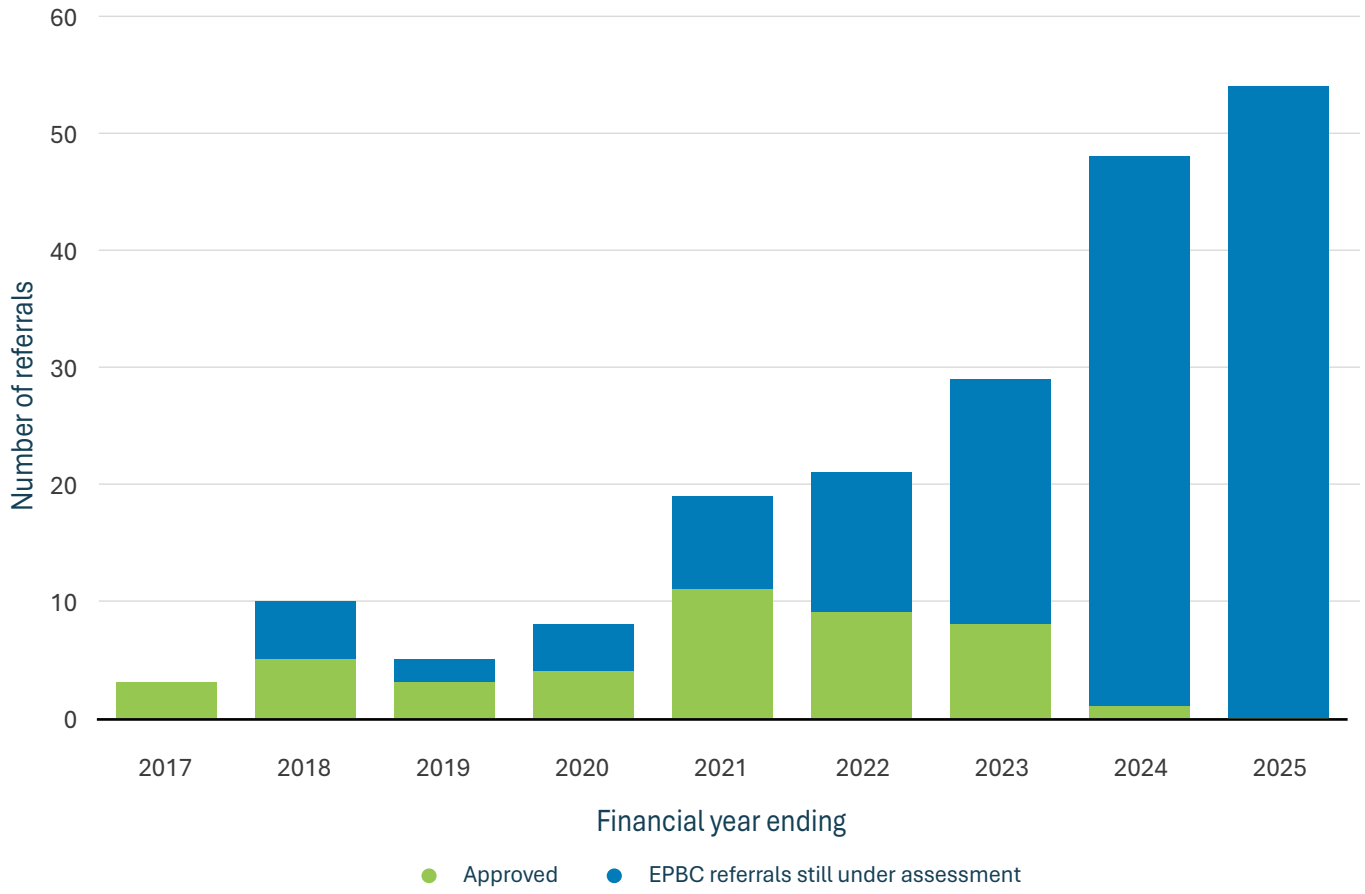
Note: The Authority has looked at environmental approval times in isolation as a demonstration of the impact of slow regulatory approvals. In reality, many factors impact the time from receiving EPBC approval to full operation, such as obtaining a grid connection agreement, construction, and commissioning. If these factors are not also addressed, the actual share of renewable generation in 2030 could be lower than 76%. To determine the average annual rate of approvals under the EPBC Act, the Authority considered the capacity approved in NEM states over the last 3 full financial years (2022-23 to 2024-25). Onshore wind projects typically take a minimum of 2 years following approval to reach full operation and often this can take much longer. The Authority assumed that projects would need to be approved by 2027-28 to be built in time to contribute to the 82% renewable electricity target by 2029-30.

30 This is based on 25 onshore wind projects that reached commercial operations after 2020 and have a publicly announced commercial operations date.

31 Longer timeframes for wind projects, relative to other renewable energy projects, are likely a result of their potential impacts on local biodiversity (DCCEEW, 2024c). Authority analysis of 381 onshore wind projects shows that only about 4% of these projects were able to proceed without triggering the requirements for referral under the EPBC Act. For comparison, analysis of 445 solar PV projects shows that about 39% of these projects were able to proceed without triggering the requirements for referral. Solar PV projects that are referred are also less likely to be deemed as controlled actions, compared to wind projects. Historically, 36% of referred solar PV projects have been deemed controlled actions (CCA analysis of RenewMap, 2025).

Only one of the renewable energy projects (i.e. wind, solar, batteries, and hydro) that have been referred under the EPBC Act in the last 2 financial years has been approved, as of 14 October 2025 (Figure 13). In the coming decades, Australia's electricity grids will need an increasing amount of generation from diverse sources. Diverse generation provides greater energy security as ageing coal-fired power infrastructure approaches the end of its economic life and exits the grid (AEMO, 2024a). To achieve a more diverse energy mix, the backlog in wind project environmental approvals must be addressed.

Figure 13: EPBC referrals are growing but approvals are not keeping pace, based on the status of renewable energy project referrals under the EPBC Act each year from 2017–2025



Source: CCA analysis of RenewMap (2025).

Note: This figure shows projects that have been assessed as a 'controlled action' which require approval under the EPBC Act. Technologies analysed are onshore and offshore wind, solar PV, batteries, and hydro and pumped hydro. Only standalone batteries are included in the count (not batteries that are co-located with renewable generation), to avoid double counting hybrid projects. This figure excludes 11 projects that have been abandoned, meaning they are no longer in development. Three of those projects were approved under the EPBC Act.

Achieving Australia's targets and delivering initiatives like the CIS and FMA rely on attracting private capital. Across many Australian jurisdictions, slow planning and environmental approvals are impeding investment in renewable energy projects (CEIG, 2025). Delays and uncertainty can impact the ability of developers to purchase equipment and lead to renegotiation of workforce contracts. Ultimately, delays increase costs and threaten projects' deliverability (HSF and CEIG, 2024).

Improving Commonwealth environmental laws and streamlining approval processes would help create the right conditions to mobilise private capital for the energy transition. The Investor Group on Climate Change notes in its submission that uncertainty around project timeframes is a key factor in international capital allocation decisions.

‘Many IGCC members invest in renewable energy (63%), but most of them invest in foreign jurisdictions, with uncertainty around project timeframes being a key factor in where capital is allocated.’

IGCC submission, 2025

According to Clean Energy Investor Group members, planning assessments and environmental assessments rank as the first and fourth most significant challenges to renewable energy development in Australia (CEIG, 2025).

4.3 Streamline approval processes to protect the environment from both climate change and development impacts

Recent reviews of Commonwealth environmental approval processes have found current arrangements to be unfit for purpose, ineffective at protecting the environment, and inefficient for assessing and approving development such as renewable energy projects (Productivity Commission, 2025; Samuel, 2020). There is overwhelming agreement from industry, state/territory and local governments, and community groups that reforming environmental approval regulation and processes is essential.

In response the Government committed to implementing a suite of reforms, leading to the introduction of the Environment Protection Reform Bill 2025 in the House of Representatives on 30 October 2025. This bill is the centrepiece of a broader legislative package that aims to:

- establish National Environmental Standards to define unacceptable impacts, improve environmental protection, guide decision making and improve certainty
- establish a National Environmental Protection Agency to bring together regulatory functions of Australia’s national environmental laws, and establish Environment Information Australia to oversee environmental data
- create a streamlined assessment pathway and use regional planning to reduce duplication and support better and faster decision making
- enhance transparency and accountability through clearer decision-making frameworks
- reform offsets and restoration contributions to ensure they deliver real gains for the environment and reduce delays for project developers, and introduce higher penalties for breaches
- work with First Nations peoples to embed knowledge and perspectives in environmental approvals processes (DCCEEW, 2025p).

The Government aims to pass the legislation before the end of the 2025 Parliamentary sitting year. The Authority welcomes any amendments to the EPBC Act that speed up renewable project approvals while continuing to protect the environment.

The Australian Government has collaborated with states and territories to establish a National Renewable Energy Priority List to identify projects for coordinated support, including for environmental approvals processes. While projects on the Priority List receive additional support, they will still have the same scrutiny applied as any other project and will still be required to meet all statutory requirements (DCCEEW, 2025x). The Priority List was established in March 2025 and, as of 14 October, 13 projects have received approval (CCA consultation with DCCEEW, 2025) and 30 projects are under active assessment. The Priority List sits alongside the broader Investor Front Door initiative to support proponents by providing a single point of entry to address coordination challenges and streamline approvals processes (Investor Front Door, 2025).

While existing initiatives like the Priority List, Investor Front Door and larger scale changes to Commonwealth environmental law are being implemented, there are other reform opportunities that will accelerate environmental approval rates and improve the industry and community experience to 2030 and beyond.

Considering emissions reduction benefits of renewable energy projects

The 25-year-old EPBC Act has a broad and complex remit: to simultaneously protect the environment, heritage, biodiversity and other Matters of National Environmental Significance (MNES) while supporting ecologically sustainable development (ESD) (DCCEEW, 2025v). To meet Australia's targets, it is essential to modernise the Act so that it better meets the dual challenge of supplying a growing electricity demand while protecting and restoring nature. Expressly permitting the Minister to consider and prioritise emissions reductions gives the Minister discretion in how such projects progress through the assessment process. The Minister could, for example, recommend that projects with significant emissions reduction potential be assessed ahead of other projects.

The Authority supports the Productivity Commission's draft recommendation 2.4 from the *Net Zero Interim Report* which states that the EPBC Act 'should be amended to require the Minister to consider the needs of the energy transition when deciding whether to approve an energy project that will have a significant impact on a matter of national environmental significance' (Productivity Commission, 2025). As of August 2025, ESD principles and social benefits are taken into account alongside MNES when making approvals under the EPBC Act. Currently, the Minister is not expressly permitted or required to consider the climate benefits of proposed renewable energy projects in the assessment of EPBC controlled actions (Productivity Commission, 2025). Explicit consideration of the energy transition in approval decisions could meaningfully reduce the time it takes to approve renewable energy projects.

Building on the Productivity Commission's recommendation, the Authority proposes the Government go further with its reforms to materially accelerate assessments and permit the Minister to prioritise emissions reductions associated with renewable energy projects under the Act. By doing this, the Minister could better consider trade-offs and the assumption of appropriate levels of ecological risk in approval decisions.

Currently, it is hard to predict the time it may take for proponents to gather sufficient information about potential environmental impacts. At the same time, Government assurance of this information is also necessarily time-consuming.

The Authority has heard in consultation that project proponents are often required to demonstrate, in great detail, that their projects present close to zero environmental risk. Assessments do not give substantial weight to climate benefits associated with emissions reductions – which are also environmental benefits – even when they are clear and significant. Climate benefits should be able to be considered alongside more immediate and direct environmental impacts through more holistic risk assessments, and prioritised where appropriate.

In some cases, it will be evident that the most environmentally responsible decision – despite some uncertainty – is to approve a renewable energy project that poses a minor, localised risk to biodiversity. Implementing this recommendation would empower the Minister to make such decisions, while enabling assessors to focus their efforts on evaluating this specific risk trade-off. To support this approach, the Government could establish clearly defined 'no-go' zones – areas of high conservation value where development is prohibited – thereby saving time and resources for both project proponents and environmental regulators (see further discussion under regional planning below). However, no-go zones should not unduly delay the rollout of renewable energy. Planning should focus on high-quality biodiversity data and proportional impact assessments, ensuring that approvals reflect the relatively low ecological footprint of well-sited renewable projects. No-go zones could evolve over time as technology to prevent risks and understanding of biodiversity impacts improves.

Outside no-go zones, a new mechanism is needed to facilitate a more holistic assessment of renewable energy projects, one that accounts not only for environmental risks but also for the broader environmental, social, and economic benefits. This would help accelerate the assessment process and support the timely delivery of renewable energy infrastructure.

Recent public discussions have focused on the potential inclusion of a 'climate trigger' in the EPBC Act, which would require an assessment of the climate change impacts of major projects. The Government has indicated it does not intend to introduce a climate trigger at this time. Instead, the Government intends to require major projects to disclose their estimated emissions, and provide a plan to reduce emissions to net zero by 2050. Emissions from those projects, once they are operational, would likely be covered by the emissions reduction requirements of the Safeguard Mechanism. Under the *Climate Change Act 2022*, the estimated emissions for such projects would need to be reported to the Authority at the time of EPBC Act approval, for the purposes of analysing the effectiveness of the Safeguard Mechanism.

The Authority's recommendation to permit consideration of emissions reductions in EPBC decisions is distinct from a climate trigger. It is focused on enabling faster approvals for renewable energy projects by recognising their climate benefits. This approach supports both accelerating Australia's energy transition and conserving biodiversity.

Recommendation 1A: Amend the EPBC Act to expressly permit the Minister for the Environment to take into account emissions reductions supported by a proposed renewable energy generation, transmission or storage project when making environmental approval decisions, and to prioritise such considerations, except in designated 'no-go' zones

Increasing approval assessment efficiency

Improving information flows and communication for environmental assessments can reduce delays, increase transparency, and support Australia's decarbonisation goals. Industry proponents have highlighted that a lack of consistent information has contributed to delays and uncertainty in assessment processes. This issue has been highlighted in multiple reviews of the EPBC Act (HSF and CEIG, 2024; Samuel, 2020). Industry proponents report:

- a lack of guidance on what 'good' referral documentation looks like
- unclear and excessive use of requests for information (RFIs), which 'stops the clock' on statutory approval timeframes and extends the overall approval duration
- frequent turnover of staff assigned to the project
- a lack of transparency and consistency regarding the conditions placed on projects upon approval
- fragmented and rudimentary digital systems.

EPBC assessments currently require the Government to collect environmental and business information from proponents to conduct environmental assessments. This can sometimes mean that multiple RFIs are issued to a project. The current assessment process does not require the reason for issuing an RFI to be specified, resulting in less transparency for proponents (Herbert Smith Freehills Kramer, 2025). Industry has identified repeated RFIs and the lack of transparency throughout EPBC assessments as a pain point. There are opportunities for the Government to improve how it engages with industry at the critical early stages of a project's lifespan. Industry provided feedback to the Authority that current guidance on what the information proponents must provide about the project, site, environmental and community considerations is unclear. Further, proponents have observed that guidance is not applied consistently where two projects may share similar characteristics in terms of environmental, biodiversity, and heritage impacts.

The Government is developing a set of National Environmental Standards, which aim to standardise the application of assessment requirements for environmental approvals (DCCEEW, 2025p). The Government should also immediately address the issues related to information flows between regulators and industry, to support getting as many renewable energy projects online as soon as possible.

The Authority supports the Productivity Commission's interim recommendation to appoint both an EPBC Coordinator-General to monitor and progress priority projects, as well as a specialist 'strike team' specifically to assess priority renewable projects. The Authority recommends building on the Productivity Commission's proposed 'strike team' by expanding this 'strike team's' scope and functions (Table 2 below). Piloting new ways of engaging with industry and other regulators to improve information flows could meaningfully accelerate renewable energy assessments. Once progress is underway with priority projects, the 'strike team' model could be deployed to all renewable energy projects.

Table 2: How the Authority's recommended 'strike team' can build on the Productivity Commission's interim recommendations

	Productivity Commission Coordinator-General	Productivity Commission 'Strike team'*	CCA Recommended 'Strike team'
Scope & focus	Work exclusively on priority list projects	Work exclusively on priority list projects	Start with these priority list projects, then **broaden to all renewable energy projects if 'strike team' model is successful**
Resource capabilities	Coordinator General should be empowered to escalate a halted project to the Departmental Secretary or Environment Minister	Be adequately resourced to assess projects in a timely manner	No change
	Not applicable	Assessors in the 'strike team' should have strong capability in clean energy projects and environmental expertise	No change
Delivery approaches	Recommend updates to the priority list	Apply a risk-based approach	No change
	Should sit within a central agency and work across the Australian Government and state and territory counterparts	Should provide greater transparency on progress	No change
	Work with relevant government bodies to assist Aboriginal and Torres Strait Islander communities to engage with project proponents	Work collaboratively with state and territory colleagues	No change
	Not applicable	Not applicable	**Convene face-to-face meetings among all relevant stakeholders, such as project developers, state or territory planning bodies, and local government**
	Not applicable	Not applicable	**Facilitate ongoing communication with all stakeholders**

Table 3: Matters on which project proponents may need to engage different Commonwealth, state, territory, or local agencies

Project Stage	Commonwealth	State/Territory	Local	Other
Pre-development	Environmental monitoring (for Matters of National Environmental Significance)	Environmental monitoring	Land access discussions with landholders and Traditional Owners	Grid connection inquiry with Transmission Network Service Provider (TNSP)
			Community consultation	
Development	Environmental assessment under EPBC	Development/ planning application, planning licences and building licences	Planning licences and building licences	Connection agreement with TNSP and relevant energy market operator (e.g. AEMO)
		Environmental assessment under State/Territory laws		Offtake agreement with energy buyers
	Project financing (e.g. CIS funding)	Construction and traffic management plans	Construction and traffic management plans	Project financing with investors or banks
		Project financing (e.g. state revenue-underwriting schemes)		
Construction	Environmental compliance according to EPBC approval	Environmental compliance according to state/ territory approval	Environmental compliance	Engineering, procurement and construction contract

Source: DCCEEW (2025l).

There are multiple points throughout the development of a project at which a project developer may be required to engage with regulatory processes across multiple layers of government (see Table 3). To support developers to navigate this regulatory maze, the 'strike team' could coordinate face-to-face meetings between relevant stakeholders, such as project developers, state or territory planning bodies, and local government. Convening in this way will ensure the necessary technical experts are able to work with each other to take a risk-based approach and that all parties have the same information and can understand concurrent requirements. Face to face meetings also create a forum for discussion where issues can be resolved directly. The 'strike team' could then support project proponents through the remainder of the assessment, including by helping to coordinate further communication with assessors or convening further meetings if needed.

This approach has a proven track record in South Australia, which has a well-established 'one window to government' approach (Box 5 below).

Box 5: South Australia's one window to government

The South Australian Government has a 'one window to government' approach (South Australia Department for Energy and Mining, 2025). The South Australian Department for Energy and Mining is the licensing agency that plays a central coordinating role while still heeding the requirements of other regulators. A project-specific 'statement of environmental objectives' (SEO) encompasses all regulatory requirements. Relevant agencies provide input into the SEO.

South Australia's approach recognises that not all regulating agencies have the relevant technical expertise which can sometimes result in a misinterpretation or overstatement of the risks of a project. In this 'one window' model, the lead technical regulator engages with other agencies to ensure project conditions are appropriate and accurately informed by risk. This means proponents receive a single, coordinated response without conflicting or overly conservative requirements.

South Australia is the second fastest state at processing development approvals, behind Western Australia. On average, development approvals in South Australia take 6 months. In half of Australia's states, development approval takes over 12 months on average (CCA analysis of RenewMap, 2025). A particular strength of South Australia's one window to government approach is having technically knowledgeable industry focused regulators. To achieve a similar result, the specialist 'strike team' should focus specifically on renewable energy projects and should be made up of staff who have expertise in renewable energy development and environmental protection.

To deliver lasting solutions to issues about information flows, there are further actions the Government can take alongside establishing the 'strike team'. The following suggestions would complement the implementation of current reforms to EPBC guidance (and National Environmental Standards):

- **Provide tailored environmental assessment requirements to industry** based on region, relevant biodiversity types and renewable energy technology. Tailored assessment requirements will ensure the relevance of information provided by industry to the Government and reduce instances of multiple RFIs and associated delay.
- **Provide real-time communication to industry** about changes to Government regulatory posture and standard operating procedures, to reduce incorrect responses to RFIs.
- **Introduce quarterly status updates on the assessment progress of referrals** to provide greater transparency about government processing timelines, reasons for additional RFIs and final justifications for environmental assessment approval and rejections.

Recommendation 1B: Deploy a specialist 'strike team' to expedite planning and development processes for priority projects – broadly as previously proposed by the Productivity Commission

Other enhancements to improve environmental approval processing

The Authority is supportive of many of the Government's planned reforms to the EPBC Act and its processes. This part of the report discusses the reforms with significant potential to accelerate approvals while strengthening environmental protection.

Pilot regional planning under the EPBC Act within an existing renewable energy zone to test for impacts on speed of approvals and efficacy of environmental protection

The Authority encourages the Government to continue – and build on – work underway on regional planning to support faster deployment of renewable energy. The Minister has highlighted the benefits of regional planning and the designation of 'go zones' and 'no-go zones' to provide certainty to industry about where development can happen, and 'simply shouldn't happen' (DCCEEW, 2025aa).

'Go zones' would designate areas where environmental impact risk can be appropriately mitigated via standard conditions, thereby streamlining project approvals by removing the need to assess each project individually. Conversely, declaring 'no-go zones' wherein any project would make a very significant impact on the environment will be just as valuable (such as impacts on Ramsar wetlands and world or national heritage sites). 'No-go zones' will guide site selection and investment, allowing proponents to focus on projects that have a greater chance of going ahead.

For areas not in 'go' or 'no-go' zones, more involved evidence-based assessment processes would apply to consider climate benefits and environmental risks from a proposed renewable energy project. However, the Minister should be expressly permitted to prioritise emissions reductions under the Act (see recommendation 1A).

By implementing the Authority's recommendations together, the Government will relieve proponents of the burden to prove projects have low-to-no environmental impact. These actions will reduce risk for the Government, industry and the environment.

While regional planning is permitted under the EPBC Act, it has not been frequently used to date.

There are currently pilot regional planning projects underway in Queensland, South Australia and Victoria, focused on renewable energy (DCCEEW, 2025ac).

To maximise the potential benefits of regional planning, the Authority recommends the Government prioritise a regional planning pilot within a REZ.[32] The Government could consider piloting regional environmental plans in REZs with the greatest capacity of projects awaiting approval. Pilots within REZs could unlock the extra capacity needed to achieve the 82% target and accelerate the energy transition to 2030 and beyond. Strong options to consider are the 'South West NSW' REZ that has 17 wind and solar projects totalling over 14 GW of capacity pending EPBC approval. The 'Darling Downs' REZ in Queensland has 8 projects totalling over 4 GW pending approval. Of the onshore wind projects pending EPBC approval, 86% are planned to sit within a REZ, representing an opportunity to 'batch approve' a significant amount of capacity (CCA analysis of RenewMap, 2025).

Having detailed and reliable environmental data will be critical to give decision-makers confidence to declare 'go' or 'no-go zones', including within REZs. Many stakeholders have noted that the data needed to enable efficient approvals are not readily available (Productivity Commission, 2025). But there is some evidence that regional planning could be effective – research has shown that protecting 30% of land in Australia would protect up to 90% of habitat for threatened species (Rogers et al., 2025). A rapid review of Australia's environmental data may be needed to understand whether regional planning can help to urgently streamline approvals decisions for renewable energy.

Designating go and no-go zones requires integration of complex environmental data from across Commonwealth and state or territory government and industry. Work is underway at the Commonwealth Department of Climate Change, Energy, Environment and Water (DCCEEW), and Environment Information Australia (DCCEEW, 2025n) could play a key role in coordinating the environmental data needed to support faster, more effective regional planning in REZs. Given the potential of regional planning to accelerate renewable project assessments, it is critical that the Government evaluates its policy effectiveness as soon as possible.

32 REZs are locations where multiple renewable energy projects can be developed using economies of scale and proximity to suitable network infrastructure.

A key barrier to rapid implementation may be the integration of high-quality data. The Government has an opportunity to leverage Environment Information Australia to assess whether suitable data can be sourced quickly to support regional planning efforts.

For example, accelerating wind project approvals will require regional planning to go beyond land mapping and incorporate data on the flight paths of threatened and migratory birds and bats – species often subject to EPBC conditions (DCCEEW, 2024e). Unlike housing developments, REZ planning must account for these ecological considerations. Testing whether regional planning can adequately protect these species should be a priority in pilot programs. Early insights into its effectiveness could be pivotal for the energy transition.

Streamline environmental assessments between jurisdictions by strengthening bilateral agreements

Bilateral assessment agreements are a proven way to streamline EPBC approvals. They allow environmental assessments performed by the states or territories to be recognised by the Commonwealth under the EPBC Act. With a bilateral assessment agreement in place, there is no need for the Commonwealth to do its own assessment of the same information. The reduced duplication and administrative burden benefits both government and industry, by speeding up processes while achieving sound environmental outcomes.

The Authority recommends the Government implement reforms to make bilateral assessment agreements more resilient to changes at the state or territory level and thereby reduce duplication in assessments. Small changes to state or territory laws often render bilateral assessments inoperative (CCA consultation, 2025). Despite all states and territories having bilateral assessment agreements in place at times since 2015, as of September 2025 only NSW's is still operational (CCA consultation, 2025) and in October 2025, Western Australia and the Commonwealth committed to establish a bilateral agreement. Legislative reform presents a prime opportunity to prioritise making bilateral assessment agreements more robust, and to implement them with more states and territories. Where the Government can quickly re-establish bilateral agreements, this could deliver a 'quick win' in the interim while major legislative reforms take time to achieve outcomes. Robust bilateral assessment agreements can streamline and increase the efficiency of environmental assessments, by reducing proponents' touch points with government across the state or territory and Commonwealth levels.

Invest in digital enhancements to current environmental approvals processes from start-to-end, so that assessments are faster and more cost-effective; can meet growing demand for green developments; and provide better user-experiences for assessors and proponents

Digital technologies can streamline and accelerate government administrative processes by automating routine tasks, improving data sharing and transparency and enabling faster, more efficient interactions between regulators and those they regulate. The Government can benefit from an end-to-end digitally enabled environmental approvals process by saving time and cost, without sacrificing environmental protection outcomes.

DCCEEW is currently investigating opportunities for digitally automating government processes and possible Artificial Intelligence use cases. The Authority recommends expanding these opportunities to the end-to-end process over time.

Other countries such as Denmark have accelerated environmental approvals with digital enablement, without undermining environmental protections (Box 6 below). There are three main actions the Government can take to upgrade the approvals process to a digitally enabled system and support more effective guidance, information requests and case management:

- **Leveraging the Digital Transformation Agency's *Data and Digital Government Strategy* to guide and develop design principles for digital enhancements to environmental approvals processes (Table 4 below).** The Government's *Data and Digital Government Strategy 2024* outlines the whole-of-government ambition for implementing trusted and secure digitally enabled services (DTA, 2024). Comprehensive digital government service delivery is an important investment that will support future renewable energy capacity and emerging green industries. More transparency through digital platforms will increase trust and social licence for the transition. Better data collection and use to inform decision making will improve environmental outcomes.
- **Creating an environmental approvals platform that integrates Commonwealth, state/territory and local requirements.** Benefits of digitally enabled environmental approvals include a streamlined industry experience, reduced manual processing times through automation, and increased opportunity for data transparency. This may reduce delays attributable to Commonwealth approvals processes, by streamlining industry-to-government touchpoints.
- **Tasking the Energy Transformation Enablers Working Group (ETEWG) within the Energy and Climate Change Ministerial Council to conduct initial stocktake and discovery work.** The ETEWG should work with the Department and DTA to develop a roadmap to digitally enabling state/territory and Commonwealth environmental approvals services. The Government should consider making immediate improvements to the user experience of the environmental approvals processes across jurisdictions by leveraging and sharing existing technology platforms and tools across states and territories and the Commonwealth. The NSW Planning Portal's two-year technology roadmap plans to embed an AI-powered front end for users, as well as digital document assurance are underpinned by rapid legislative updates to enable technology and streamline approvals processes (NSW Government, 2025a). In September 2025, the NSW Government announced its plan to implement an AI solution that conducts an intelligent review of documentation and assesses applications against key criteria, to reduce overall assessment timeframes and accelerate finalisation (NSW Government, 2025b). The Commonwealth and NSW governments should collaborate to identify opportunities for digital enhancements for assessments and conditions for projects under EPBC Act.

Recommendation 1C: Make better use of regional planning, bilateral agreements between the Commonwealth and states and territories, and digital approaches to the administration of environmental approvals

Box 6: Denmark's digitalised environmental approvals

Denmark has the world's most digitalised government (UN, 2024). The country explores the use of robotics and AI to enhance public services and promote green transitions (UN, 2024). Benefits of digitalisation have been seen in Denmark, which reduced environmental approvals timeframes while enhancing the rate of environmental protection. For example, a heat pump installation project approval process going from a response time of 6 months to minutes thanks to automation and AI use, with 52% of cases handled automatically (CCA stakeholder meeting, 2025). Digitalising, creating templates, and receiving data in a structured format all speeds up processing. Denmark's digital portal has step-by-step approvals guidance and a status dashboard for live updates. With better quality data capture, management, and sharing, Denmark supports industry and investment by providing accurate timeframes for case-specific and administrative processes relating to **environmental** approvals (Danish EPA, 2025b; Danish EPA, 2025a). Its government is publicly held to account to support the efficient approval of renewable energy projects and effectively protecting the environment.

Table 4: Summary of Data and Digital Government Strategy 2023

Vision	**Deliver simple, secure and connected public services, for all people and business, through world class data and digital capabilities**				
Missions	**Delivering for all people and business**	**Simple and seamless services**	**Government for the future**	**Trusted and secure**	**Data and digital foundations**
Outcomes	• Embed co-design • Embed inclusion and accessibility • Strengthen partnerships • Maximise value from data	• Be digital by design • Deploy scalable and secure digital architecture • Tell us once	• Adopt emerging technologies • Modernise investment approaches	• Build and maintain trust • Modernise legislation • Connect data, digital and cyber security	• Manage data as a valuable national asset • Build data and digital capable APS • Grow APS maturity

Source: DTA (2023).

Part 5:

Policy focus – Capacity Investment Scheme

Key points

- Successful delivery of the Capacity Investment Scheme (CIS) is critical to rapidly decarbonising electricity production and to reaching renewable electricity and emissions reduction targets.
- Renewables are generating an increasing amount of Australia's electricity, but their pace of deployment needs to be stepped up. The Government should closely monitor whether enough renewable projects are going ahead to achieve the 82% target.
- While recent changes to the CIS are welcome, sustaining the renewables rollout requires investment certainty beyond 2027 when CIS tenders are scheduled to end. To maintain investment momentum the CIS should be extended until it is no longer needed, with any enhancements to the scheme incorporated as appropriate along the way.

5.1 The CIS is the main instrument for driving renewables and reducing electricity emissions

The CIS is the Australian Government's main instrument for driving investment in utility-scale renewables and storage. The successful delivery of the CIS is critical to rapidly decarbonising Australia's electricity production – Australia's largest source of current emissions – and to reaching Australia's renewable electricity and emissions reduction targets. Decarbonising Australia's electricity production is integral to cutting emissions in other sectors such as transport and industry, which will increasingly electrify.

The Government's recent and welcome changes to the CIS include:

- increasing CIS targets from 23 GW to 26 GW for renewable generation capacity and from 9 GW to 14 GW for clean dispatchable capacity (DCCEEW, 2025h)
- changing the tender process by moving to a single round application process, and creating a new reserve list for 'next best' projects that may receive support if selected projects do not all execute contracts (DCCEEW, 2025i)
- updating guidance for First Nations and Social Licence Criteria (ASL, 2024b).

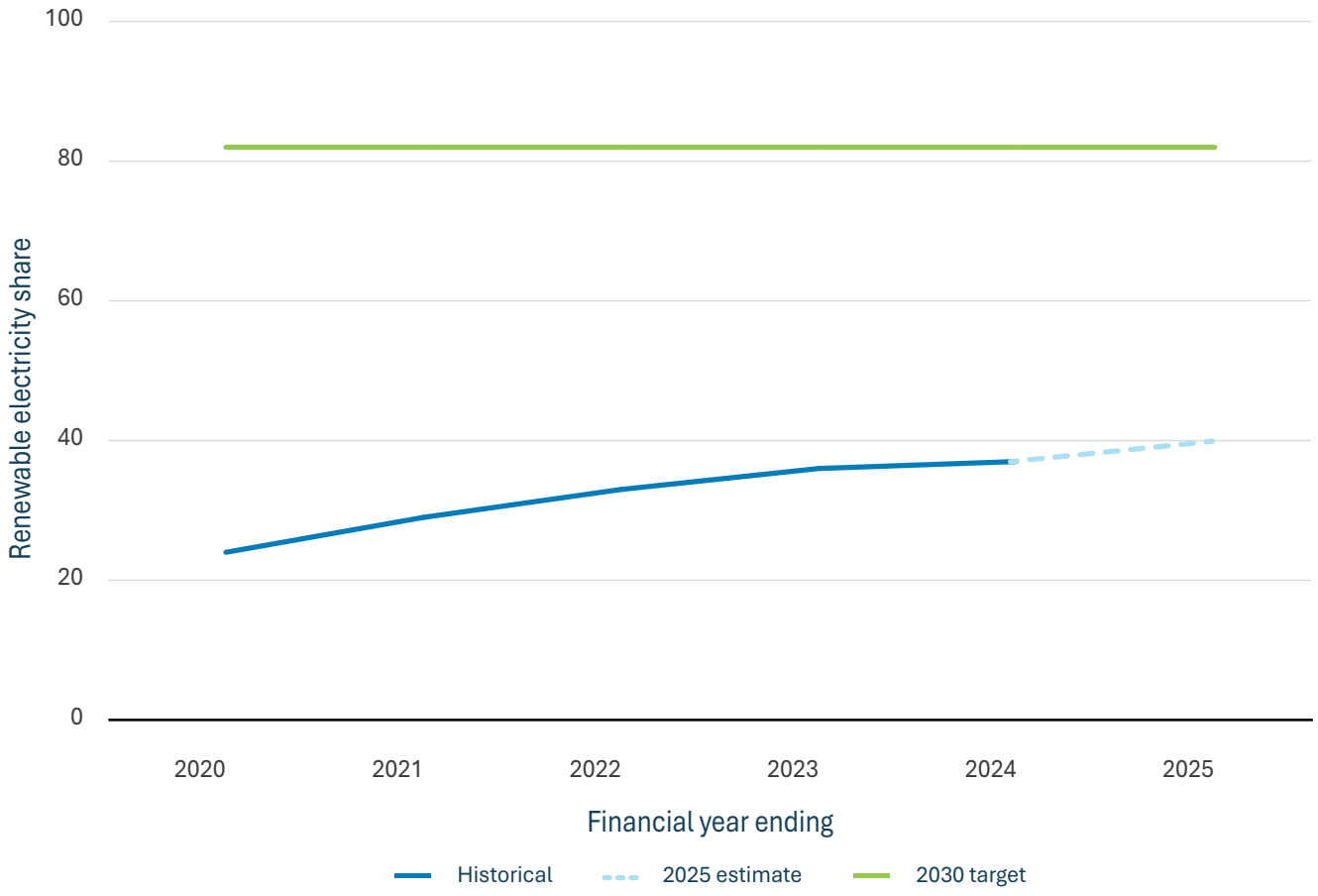
DCCEEW also consulted on whether aggregated resources, such as consumer energy resources, could be included in National Electricity Market (NEM)[33] tenders from late 2025 (DCCEEW, 2025a). Aggregated resources – such as rooftop solar, home batteries, electric vehicles, and smart appliances – are expected to play an increasingly significant role in the energy transition (DCCEEW, 2025a). Making more of these resources can also bring more renewables online in the near term while utility-scale renewables and transmission upgrades are built out.

33 The NEM delivers approximately 78% of Australia's electricity (Treasury, 2025a).

5.2 The Government should closely monitor whether enough renewable projects are going ahead to achieve the 82% target

Renewables are generating an increasing amount of Australia's electricity, but the pace of their deployment needs to increase. The share of on-grid[34] renewable electricity has grown by an estimated average of 3 percentage points each year in the 5 years since 2020 (Figure 14).[35] This will need to increase to 8 percentage points per year to reach the Government's 82% target by 2030 from today's share of around 40%.

Figure 14: Percentage share of on-grid renewable electricity over time



Sources: Historical data from AES (2025) and DCCEEW (2025d). 2025 estimate is CCA analysis from AES (2025) and OpenElectricity (2025).

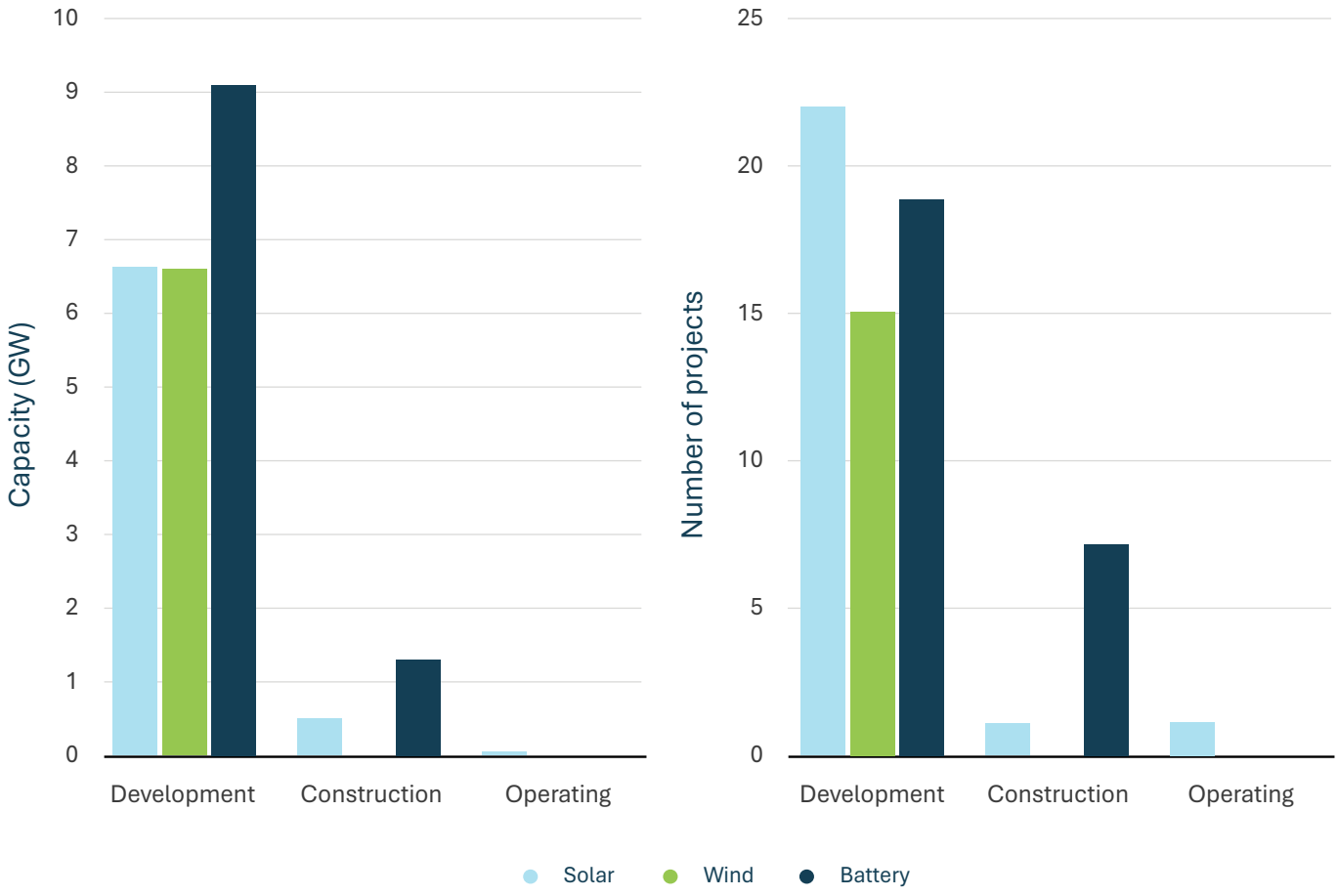
34 On-grid electricity covers electricity generated on Australia's major grids: the National Electricity Market (NEM), South-West Interconnected System (SWIS), North-West Interconnected System (NWIS), Darwin-Katherine Interconnected System (DKIS) and Mt Isa (which will be connected to the NEM in the future via the CopperString 2032 Project) (DCCEEW, 2025c).

35 Peak renewable contribution also continues to grow, and reached over 78% of the NEM in April 2025 (AEMO, 2025i).

The CIS has enabled investment in renewables by providing much needed revenue certainty to investors (DCCEEW, 2025h). Prior to the CIS, industry surveys cited a lack of clear market incentives to be a key risk (CEIG, 2022). Since its launch, CIS tender rounds have been consistently oversubscribed (DCCEEW, 2025z), and the Authority has heard in consultation that most renewable projects are now seeking CIS support. Furthermore, financial risks are no longer cited as the primary barriers to renewables deployment (CEIG, 2025). These are strong – albeit early – signs of the CIS's success.

Since the expanded CIS is relatively new (the first successful tenders were announced in September 2024 (ASL, 2024a), only one successful CIS project is currently operating (European Energy, 2025). Of the 65 projects selected in CIS tenders[36], 9 have reached final investment decision (FID). Of the projects that have reached FID, 8 are currently under construction and one is in operation (see Figure 15). As the scheme matures, the Authority will continue to monitor the pace of CIS projects moving through the pipeline from tender to operation.

Figure 15: Project status for CIS projects



Source: CCA analysis of DCCEEW (2025j), RenewMap data (2025), DCCEEW (2025l)

The Authority previously recommended the Government work with states and territories to reach a shared understanding of how much renewable capacity will be built by 2030 outside the CIS (CCA, 2024a; CCA, 2025c).[37] If necessary, the Government should further expand the CIS targets to provide more projects with financial support as required.

36 Including the South Australia-Victoria pilot tender.

37 Some additional capacity may be delivered by other means. For example, the NSW Government will now support 16 GW of new renewable generation through their *Electricity Infrastructure Roadmap* (ASL, 2025). This is 4 GW above the previous 12 GW target. Production tax credits for green industries and other private investment in power purchase agreements (PPAs) could bring additional capacity online. Additional consumer energy resources, including solar PV and home batteries, may also contribute.

5.3 Maintaining momentum in deploying renewable electricity is critical to meeting emissions targets

Without reforms to the market or an additional scheme to replace the CIS when it ends, renewables will not be brought online at the pace needed to meet Australia's targets. CIS tenders are scheduled to end in 2027. The Government established the NEM wholesale market settings review (NEM Review) to recommend new wholesale market settings to drive investment following the end of the CIS (DCCEEW, 2024d; DCCEEW, 2025t). The scope of the review excludes carbon trading or support for new fossil fuel generation (DCCEEW, 2024g).

The NEM Review panel has published a suite of draft recommendations (DCCEEW, 2025t), including the proposed Electricity Services Entry Mechanism (ESEM) to drive investment in renewable capacity as well as other services the electricity system requires (DCCEEW, 2025t). The ESEM, if implemented as proposed, would retain some core elements of the CIS, including reverse auctions to procure services from new renewables and storage, with the quantity determined by reliability requirements and jurisdictional renewable electricity goals. Unlike the CIS, the ESEM would underwrite only the later years of a project's life and would be embedded in the National Electricity Law. It could also procure firming services delivered after 2030, which would enable it to support investments with long-lead times, such as pumped hydro and offshore wind.

The Authority is supportive of efforts to deliver an enduring, cost-efficient mechanism. Whether the ESEM is successful in incentivising the renewable electricity needed to reach emissions targets will depend on the final design of NEM Review recommendations. In the meantime, the CIS will continue to drive the renewable investment needed now and, to date, has proven attractive to developers.

The NEM Review panel has observed that the lack of certainty on long-term electricity prices makes it challenging for renewable project proponents to secure finance. This is the challenge that the CIS, and the proposed ESEM, aim to solve.

‘Buyers and sellers [of electricity] must grapple with questions around the future cost of existing and emerging technologies, the trajectory of coal closures and emissions policies and future demand. These price and volume risks mean that on one hand investors in capital-intensive new projects need long-term revenue certainty to secure financing, but on the other the buyers of that generation are unwilling to make those long-term commitments.’

NEM wholesale market settings review (DCCEEW, 2025t)

‘Investment in new electricity generation has largely been driven by two key national policy mechanisms — the Renewable Energy Target (RET), which will conclude in 2030, and the Capacity Investment Scheme (CIS), which is set to stop issuing tenders after 2027. To maintain momentum and investor confidence beyond these dates, the Australian Government should prioritise the development of long-term, broad-based market frameworks.’

BlueScope submission, 2025

‘The main challenges to deploying renewable energy, in line with our climate targets are:

- the absence of an enduring carbon signal in the electricity market and no coherent plan for the phaseout of coal and fossil gas in households, and a limited and declining role for of fossil gas in the energy and industry sectors
- no mechanism to reduce technology and revenue risks beyond 2030, to replace the function of the Capacity Investment Scheme’

IGCC submission, 2025

‘Without certainty around the retirement of all coal-fired power stations, there is significant risk to delivering the required replacement generation – threatening Australia’s decarbonisation trajectory.’

Nexa Advisory submission, 2025

Setting fossil fuel generator retirement dates would further reduce revenue risk for renewable project developers. Generators must notify AEMO of their expected closure date (published on AEMO’s website) and provide at least 42 months’ notice before closing. The Orderly Exit Management (OEM) Framework and Rules – which commenced in January 2025 – provide jurisdictions with an opt-in mechanism to manage the risks of early coal and gas generator closures, including the option to require continued operation where needed (DCCEEW, 2024f).[38] While these measures help manage the risks around fossil fuel generator exits, they do not provide certainty to investors about a closure schedule. The Authority has previously recommended the Government work with state and territory governments to agree such timing (CCA, 2023a).

The Government should ensure the recent momentum in renewable deployment is maintained and built upon. Several efforts to reform the NEM have been proposed, and they did not result in substantial market reform (CCA, 2025c). As renewable energy projects have long lead times (CER, 2025d), investors rely on long term investment signals.

After the CIS ends, mechanisms will also be needed to deliver renewable capacity beyond the NEM, to decarbonise the remaining approximately 22% of Australia’s electricity production.[39] The CIS, unlike the proposed ESEM, operates nationwide and so provides an option to drive ongoing renewable investment outside the NEM.

The Authority has previously recommended the Government continue to support new capacity after the conclusion of CIS tenders (CCA, 2024a; CCA, 2025c). The Productivity Commission has also highlighted the need for ongoing policies to decarbonise electricity after the CIS and the Renewable Energy Target finish (Productivity Commission, 2025). Like the Productivity Commission, the Authority is not seeking to pre-empt the outcomes of the NEM Review or be prescriptive about the form of any future mechanism.

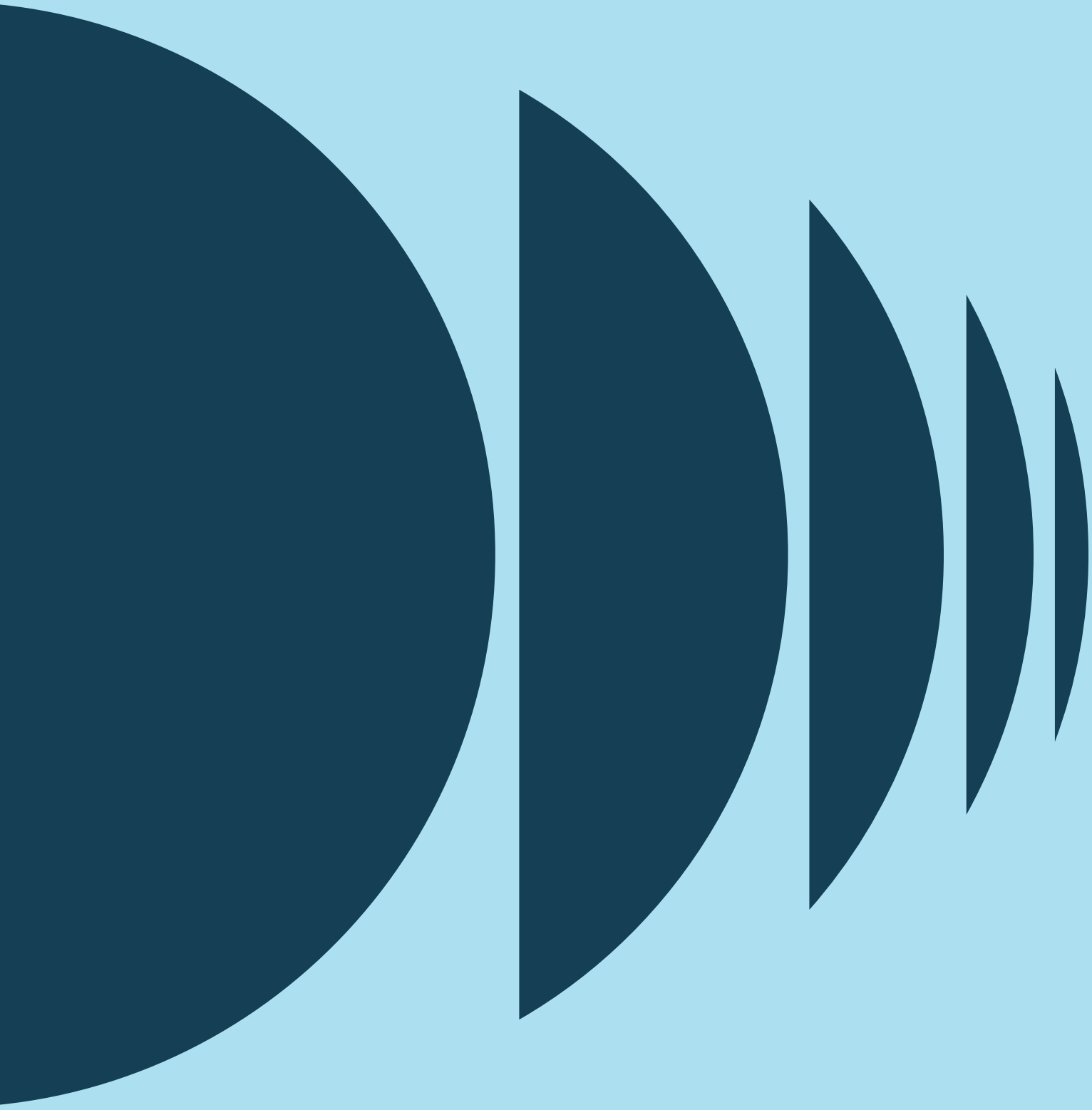
38 The OEM framework was established to help governments better manage the early exit of fossil fuel generators.
39 Mostly in Western Australia and the Northern Territory

Recommendation 2: Maintain momentum of the rollout of renewable electricity by extending the Capacity Investment Scheme (CIS) until it is no longer needed

A low-carbon electricity system is the backbone of a decarbonised Australia. Renewables are already generating more of Australia's electricity than ever before, but they need to be deployed faster for Australia to achieve its emissions reduction targets. The share of on-grid renewable electricity needs to roughly double over the next five years to achieve the 82% renewable electricity target that underpins Australia's emissions reduction goals.

The CIS is currently scheduled to conclude in 2027. While the NEM Review panel is expected to recommend a mechanism to replace the CIS by the end of this year, the timing of implementation is uncertain. Without extending the CIS, businesses will lack the policy certainty required to invest in renewable energy projects – the investments necessary for unlocking Australia's huge renewable energy potential.

The Government should refine the program to incorporate insights gained from its implementation, other capacity schemes and the NEM Review. The program should continue until it is no longer needed, rather than ending at an arbitrary point in time.

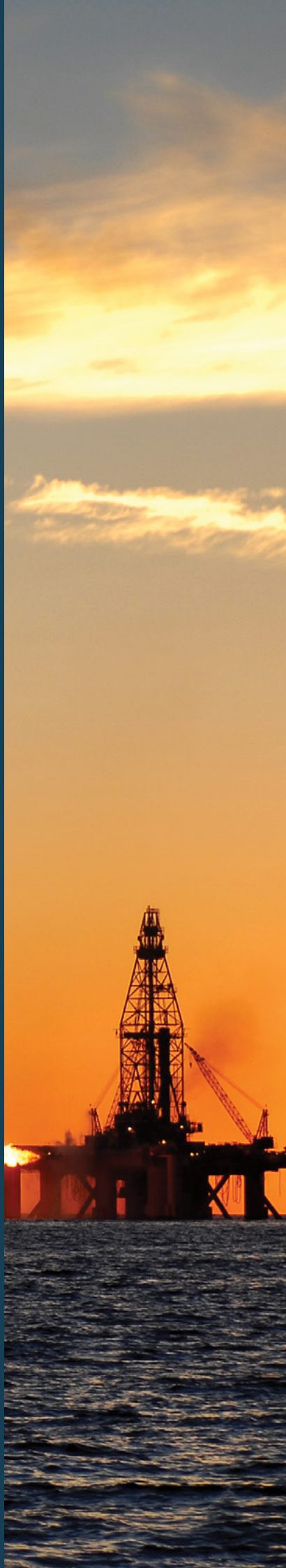


Part 6:

Policy focus – Safeguard Mechanism

Key points

- Over the first 2 years of the reformed Safeguard Mechanism, emissions have declined consistently with legislated outcomes.
- In 2026, the Authority will review opportunities to accelerate cuts in fossil methane emissions.
- The Authority stands ready to contribute to the Government's 2026–27 Review of the Safeguard Mechanism.



6.1 Safeguard emissions declined in 2025

Preliminary data show that in 2025[40], gross emissions[41] from facilities covered by the Safeguard Mechanism decreased by 3.2 Mt CO_2-e or 2.4% and net emissions[42] decreased by 7.9 Mt CO_2-e or 6.2% (Table 5).

The 2.4% decline in gross emissions was mainly due to some facilities' emissions falling below the 100 kt CO_2-e coverage threshold. These emissions reductions were largely due to permanent closures, decreased production and temporary shutdowns. Combined gross emissions across all other facilities was steady compared to 2024, with early analysis indicating some facilities have adopted decarbonisation technologies.

The higher – 6.2% – decline in net emissions was mainly driven by a further 4.9% reduction of baselines in the second year of the reformed scheme, combined with the assumed use of carbon units by facilities that did not meet their baselines through gross emissions reductions. Additionally, some facilities dropped below the coverage threshold. If production at these facilities rebounds in future years without a corresponding improvement in emissions intensity, this could put upward pressure on both gross and net emissions.

Exceedances have risen, while issuance of Safeguard Mechanism Credits (SMCs) looks set to fall

The amount by which facilities' emissions exceeded their baselines ('Exceedances' in Table 5) increased by 4.2 Mt CO_2-e, reflecting the reduction in baselines and facilities taking time to transition to low emissions technologies. This suggests that liable entities will need to surrender a higher amount of credits (ACCUs and SMCs) to acquit their liabilities, and/or invoke other flexibility measures for managing liabilities under the Scheme.

At the same time, the amount by which facilities' emissions[43] were below their baselines ('Possible SMC issuance' in Table 5) fell by 1.5 million compared to last year, also reflecting tighter baselines that make it harder to generate SMCs without adopting low emissions technologies.

40 All references to Safeguard compliance years are financial years ending 30 June.

41 Gross emissions are those defined as 'covered emissions' under the *National Greenhouse and Energy Reporting Act 2007*. For the purpose of this report, gross emissions are scope 1 emissions from Safeguard facilities excluding emissions specified in the Safeguard Rule.

42 Net emissions are calculated as gross emissions minus ACCUs and SMCs surrendered, plus ACCUs issued to Safeguard facilities. Preliminary findings assume any exceedances are fully offset through the surrender of carbon units.

43 Includes ACCUs issued to Safeguard facilities and emissions from eligible facilities, but excludes emissions from landfill facilities.

Table 5: Comparison of preliminary Safeguard findings for 2025 with preliminary and final findings for 2024

	2024		2025
	Preliminary	Final	Preliminary
Emissions and baselines			
Number of Safeguard facilities	215	**219**	**207**
Gross emissions (Mt CO_2-e)	135.8	**135.9**	**132.7**
Baselines (Mt CO_2-e)	132.3	**136.1**	**126.3**
Net emissions (Mt CO_2-e)	125.1	**127.5**	**119.6**
Net emissions from new and expanded facilities (Mt CO_2-e)	1	1	**2**
Exceedances[44]			
Number of Safeguard facilities with exceedances	153	**142**	**140**
Exceedances (Mt CO_2-e)	10.7	**9.2**	**13.4**
SMC generation			
Number of facilities with possible SMC generation	-	**66**	**59**
Possible SMC issuance (million)	9.2	**8.5**	**7.0**

Sources: CCA (2024a), CCA analysis of CER historical Safeguard data (2025), and CCA analysis of CER preliminary Safeguard data (2025).

Notes: The 2025 preliminary analysis includes early estimates of trade-exposed baseline-adjusted (TEBA) impacts across all parameters, and multi-year monitoring period (MYMP) contributions to baselines. Final TEBA, MYMP and borrowing arrangements are excluded from the preliminary analysis. The CER will publish Safeguard data that includes final impacts in April 2026. The 2024 preliminary analysis includes early estimates of TEBA impacts across all parameters other than 'Possible SMC issuance', and does not include MYMP contributions to baselines

44 Preliminary figures estimate demand for ACCUs and SMCs each November taking into account expected TEBA applications and facilities that have already acquitted their compliance obligation through early carbon unit surrenders. Final figures confirm actual demand after full application of flexibility measures.

Box 7: The Authority's assessment uses preliminary 2025 Safeguard data

The Authority's analysis of Safeguard emissions draws on preliminary data from the Clean Energy Regulator (CER) for the 2025 compliance period. The data have not yet undergone the CER's full quality control processes, nor do they reflect the flexible compliance measures that facilities may adopt under the Safeguard Mechanism. Consequently, the final 2025 data published by the CER in April 2026 is likely to differ.

Table 5 shows how the final data for 2024 changed compared to the preliminary 2024 data in last year's APR. The final data show higher baselines, resulting in lower total exceedances of baselines at 9.2 Mt CO_2-e. The higher baselines and lower exceedances were partly due to the application of flexible compliance measures. To manage 2024 exceedances, facilities surrendered a total of 1.4 million SMCs and 7.3 million ACCUs, reducing net emissions to 127.5 Mt CO_2-e and leaving 0.4 Mt in excess as of October 2025.

It is likely that a similar pattern will emerge when the CER publishes final 2025 data in 2026, with flexibility measures again raising baselines, lowering exceedances and increasing net emissions.

6.2 Safeguard emissions are declining consistently with legislated Safeguard outcomes

In 2025, emissions from facilities covered by the Safeguard Mechanism are consistent with the following outcomes set out in the *National Greenhouse and Energy Reporting Act 2007* (NGER Act):

- outcome (b): net emissions over the decade to 2030 do not exceed 1,233 Mt CO_2-e
- outcome (c)(i): annual net emissions do not exceed 100 Mt CO_2-e by 2030
- outcome (d): average gross emissions over the financial year 2020 to 2024 period are lower than average gross emissions over the financial year 2017 to 2021 period.[45]

Whether emissions are declining consistently with meeting the longer-term outcome (c)(ii), which requires that net emissions decline to zero by 2050, will depend on how the policy framework evolves over time. The Authority will continue to monitor how policy settings are calibrated, particularly any changes adopted following the Government's scheme-wide review in 2026–27.

45 Legislative requirement for 2025. In each year from 2025, the NGER Act requires average emissions over a 5-year reference period to be lower than an earlier 5-year comparison period. The comparison period ends 3 years earlier than the reference period for years up to 2027, and 2 years earlier from 2028.

Box 8: The Authority is required to assess whether Safeguard emissions are declining consistently with legislated Safeguard outcomes

Under section 14 of the *Climate Change Act 2022*, the Authority is required to advise on whether gross and net Safeguard emissions are declining consistently with Safeguard outcomes (b), (c) and (d) of the NGER Act:

Outcome (b) *Total net Safeguard emissions for all of the financial years between 1 July 2020 and 30 June 2030 do not exceed a total of 1,233 million tonnes of carbon dioxide equivalence.*

Outcome (c) *Net Safeguard emissions decline to:*
(i) no more than 100 million tonnes of carbon dioxide equivalence for the financial year beginning on 1 July 2029; and
(ii) zero for any financial year to begin after 30 June 2049.

Outcome (d) *The 5-year rolling average Safeguard emissions for each financial year that begins after 30 June 2024 are lower than the past 5-year rolling average Safeguard emissions for that financial year.*

If emissions are not declining consistently with Safeguard outcomes, the Authority must advise on whether any amendments to the *National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015* are needed to achieve each of the outcomes.

When assessing the Safeguard outcomes, the Authority must consider:

- the impact of new and expanded Safeguard facilities for the financial year, or any expected new or expanded facilities for future financial years
- any emissions estimates provided to the Authority by the Minister for the Environment relating to approvals under the EPBC Act, required under section 15A of the *Climate Change Act 2022*.

Net emissions are declining consistently with outcomes (b) and (c)(i)

The Authority projects net emissions to be 43 Mt CO_2-e below the cumulative 1,233 Mt CO_2-e target between 2021 and 2030, and 8 Mt CO_2-e below the 100 Mt CO_2-e target in 2030 (Table 6).

Compared to 2024, projected net emissions increased 6 Mt CO_2-e over the period from 2021 to 2030, and 3 Mt CO_2-e in 2030. The main drivers of this increase are higher production forecasts and lower expected onsite abatement at continuing facilities. Additional new and expanded facilities identified since 2024 also contribute to the rise, partly offset by cancellations or delays. Overall, the Authority's projections now include 58 new and expanded facilities that could be covered by the scheme from 2024 to 2030.[46] A detailed breakdown of new and expanded facilities is at Appendix A.

Table 6: Assessment of net emissions outcomes

	2024		2025
	Preliminary	Final	Preliminary
Cumulative net emissions from 2021 to 2030 (Mt CO_2-e)			
Continuing facilities[47]	1,150	1,153	1,158
New facilities[48]	25	25	25
Expanded facilities	5	5	8
Total	**1,181**	**1,184**	**1,190**
Net emissions in 2030 (Mt CO_2-e)			
Continuing facilities	82		84
New facilities	5		6
Expanded facilities	2		2
Total	**89**		**92**

Source: CCA analysis of CER historical Safeguard data (2025), CCA analysis of CER preliminary Safeguard data (2025), CCA analysis of DCCEEW unpublished data (2025), and internal CCA analysis of new and expanded facilities (2025).

Note: Totals may not sum due to rounding.

Gross emissions are declining consistently with outcome (d)

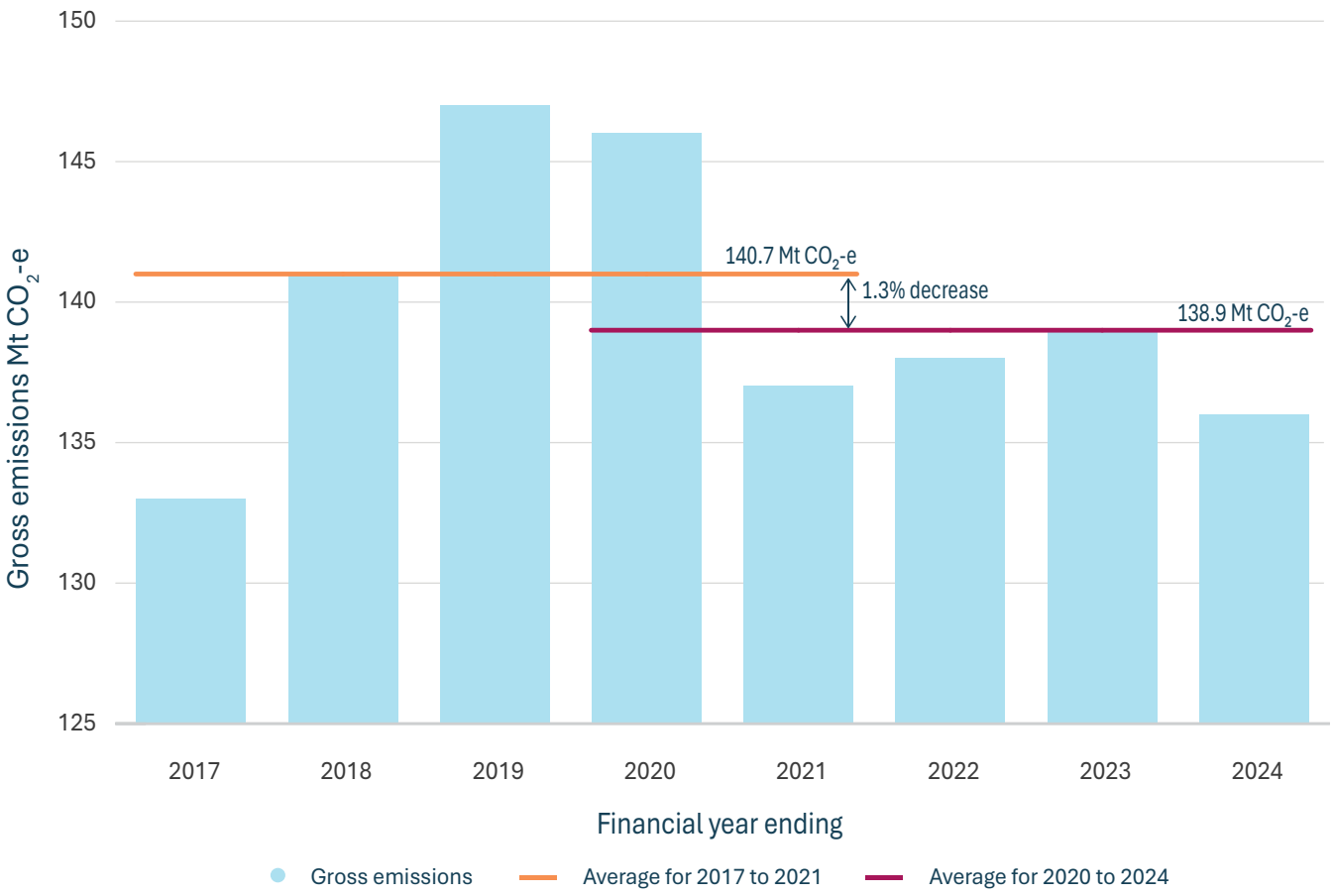
Average gross emissions over the 2020 to 2024 period were 1.8 Mt CO_2-e or 1.3% lower than average gross emissions over the 2017 to 2021 period (Figure 16), consistent with outcome (d).

46 As part of this analysis, the Authority also considered the 8 referrals it received under section 15A of the *Climate Change Act 2022* between November 2024 and September 2025 (a summary of the facilities identified as part of this analysis can be found at Appendix A). Referrals received prior to this period were incorporated into the *2024 Annual Progress Report* and also informed this year's assessment.

47 A facility that exceeded the Safeguard Mechanism emissions threshold of 100 kt CO_2-e per annum in any year between 2017 and 2023 and is continuing operations in 2025.

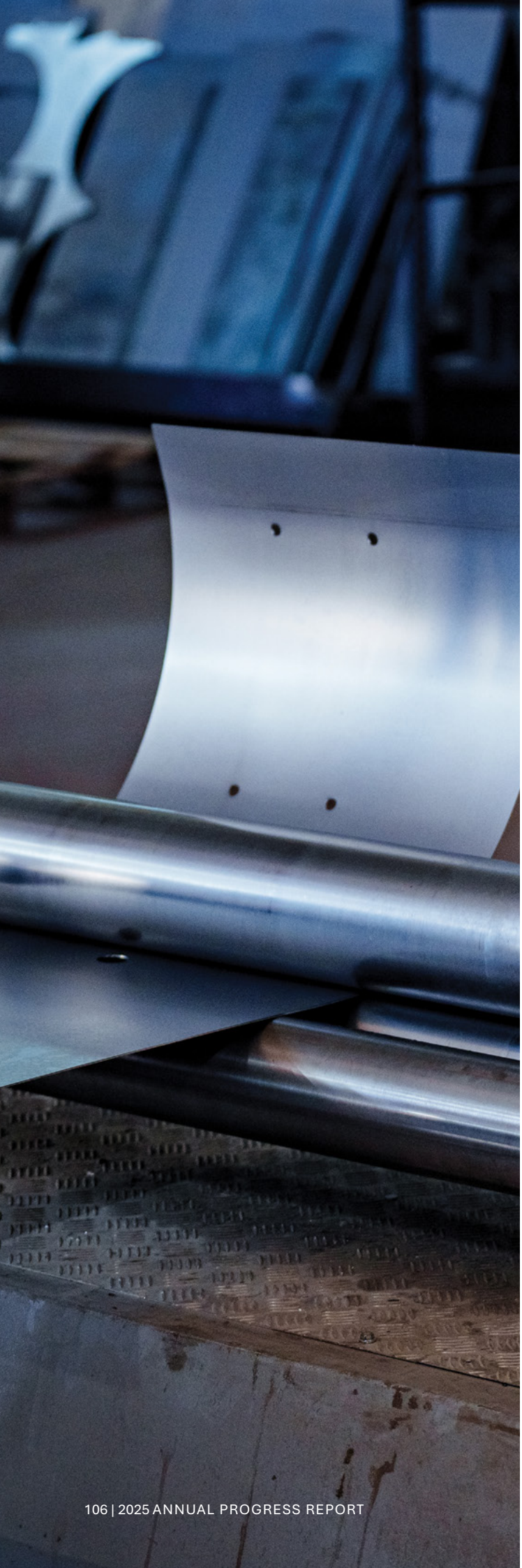
48 A facility covered by the Safeguard Mechanism for the first time from 2024 onwards.

Figure 16: Comparison of average gross emissions for the 5-year periods defined in the NGER Act for 2025



Source: CCA analysis of CER unpublished National Greenhouse and Energy Reporting data (2025), and CCA analysis of CER historical Safeguard data (2025).

Note: Differences between gross emissions values published by the Authority and those published by the CER are due to the Authority using historical emissions that have been recalculated using the 100-year global warming potentials from the Intergovernmental Panel on Climate Change's Fifth Assessment Report (IPCC, 2014).



6.3 The Authority will continue to assess opportunities to accelerate cuts in fossil methane emissions in 2026

In 2024, around 17% of Safeguard emissions were from methane fugitives, and they have remained relatively stable since 2022 (CCA, 2024a; CER, 2025e). Coal mines accounted for half of the facilities with the largest deviations (30% or more) from their baselines in 2024, and fugitive methane emissions were a major contributor.

Where a facility surrenders ACCUs equal to more than 30% of its baseline, it is required to provide an explanation in its ACCU surrender statement. In the case of coal mines, these statements have commonly cited a lack of commercially ready solutions for mitigating coal mine methane. Technologies such as Ventilation Air Methane (VAM) systems are being trialed through demonstration projects but remain at an early stage of development in Australia (GM3, 2025; Kestrel Coal, 2024).

In its *2035 Targets Advice,* the Authority highlighted that the resources sector could make a significant contribution to achieving Australia's 2035 target, including through reductions in fugitive methane emissions (CCA, 2025a). However, the Government's 2024 Emissions Projections show fugitive methane emissions increasing by 5% to 2030 (compared to 2024 levels) followed by a modest decline of 11% to 2035 (DCCEEW, 2024).

Given the higher global warming potential of methane, uncertainties around fugitive methane measurement and low maturity of some key abatement technologies, it makes sense for the Government to prioritise efforts to reduce fugitive methane emissions (CCA, 2024b; DCCEEW, 2025q). Potential actions include targeting the deployment of available fossil methane abatement technologies and accelerating the demonstration and commercialisation of more nascent technologies. Any additional incentives could work in concert with state and territory regulatory environments, for example to support the proposed NSW EPA regulation to require methane destruction in NSW underground coal mines by 2027, and implementation of VAM by 2030 (NSW EPA, 2025).

Recommendation 5: Note the Authority will take a deep look at the opportunities to radically reduce fossil methane emissions in Australia

Methane is 80 times more potent than carbon dioxide when it comes to global warming over a 20-year period and reducing it can help to quickly slow climate change. Fossil methane made up around 7% of Australia's emissions last year and can be abated more readily than biogenic methane from livestock.

In 2026, the Authority will explore the opportunities to rapidly abate fossil methane. This will include a review of the latest developments in technological solutions and policy interventions, such as regulatory or market-based mechanisms and measures to leverage research, development and demonstration (RD&D) opportunities in Australia.

Nearly 1 in 5 Safeguard facilities had gross emissions 30% or more either above or below their baselines in 2024, leading to significant credit use (to meet liabilities) or SMC generation, respectively. Coal mines accounted for half of these facilities (CER, 2024). The Authority found the emissions intensities of these facilities have changed for a number of reasons (Table 7).

Table 7: Common reasons facilities had gross emissions 30% or more above or below their baseline

Facilities with gross emissions 30% or more below their baseline	Facilities with gross emissions 30% or more above their baseline
• Installed onsite abatement technology to reduce their gross emissions • Began mining from a coal seam with a lower methane concentration • Baselines set using facilities' start-up periods that were not representative of emissions from routine operations	• Increased mining haulage distances resulting in increased emissions from diesel fuel • Began mining from a coal seam with higher methane concentration • Reduced production levels but had gross emissions that did not scale proportionally with production

Declining baselines will continue to reduce the number of SMCs that facilities can generate without adopting low emissions technologies. The Authority will continue to examine the reasons for large deviations from baselines as part of its annual assessment of the Safeguard Mechanism.

6.4 The Authority stands ready to contribute to the Government's 2026–27 Review of the Safeguard Mechanism

The 2026–27 Review of the Safeguard Mechanism is an opportunity for the Government to ensure the mechanism's settings are appropriately calibrated to achieve the Safeguard outcomes to 2030, and to contribute to achieving the Government's new 2035 target and future emissions reduction targets. Topics the review could consider include:

1. **Potential risks to achieving legislated outcomes, including**:
   - higher than anticipated production volumes from continuing facilities
   - higher than anticipated emissions from new and expanded facilities
   - higher than anticipated emissions due to trade-exposed-baseline-adjusted facility arrangements
   - a mismatch between the supply and demand of ACCUs and SMCs, making it more costly for facilities to comply when there is an undersupply or weakening the incentive for facilities to reduce emissions onsite when there is an oversupply.
2. **Setting the baseline decline rate for 2031–2035, including consideration of**:
   - the Safeguard Mechanism's contribution to achieving Australia's 2035 target
   - the interactions between the Safeguard Mechanism, the ACCU market, the land and agriculture sectors and other land uses
   - the balance between onsite emissions reductions and using ACCUs and SMCs for compliance.
3. **How well the scheme incentivises onsite abatement** – The review could consider whether adjusting scheme settings or introducing complementary policies could better promote investment in industrial abatement or stimulate the development of shared infrastructure for technologies like electricity, hydrogen and carbon capture and storage.
4. **Reviewing scheme coverage of sectors and facilities** – Some stakeholders have suggested broadening the Safeguard Mechanism, either by expanding sectoral coverage or lowering the emissions threshold (CCA, 2023b; Grattan Institute, 2025; Productivity Commission, 2025). The review could consider whether the mechanism's coverage is appropriate for Australia's decarbonisation needs by weighing the costs and benefits of expanding coverage.

The Authority stands ready to assist in the review.

Appendix A:

Analysis of new and expanded Safeguard facilities

The tables below summarise the Authority's analysis of emissions from new and expanded Safeguard facilities that commenced or are expected to commence operations between 2024 and 2030.

Table A1: New or expanded facilities that are likely to contribute to Safeguard emissions between 2024 and 2030

Coal		**Net emissions 2024–30**	**10 Mt CO_2-e**
New facilities		**Expansions**	
Facility name	Baseline type[49]	Facility name	Baseline type
Blair Athol Operations*	Default	Caval Ridge Mine Horse Pit Extension	Hybrid
Burton*	Default	Gregory Crinum	Hybrid
Hillalong	Best Practice	Rolleston (Phase 2)	Hybrid
Ironbark No. 1*	Default	Tahmoor South*	Hybrid
Maxwell Underground Mine	Default	**Boggabri Coal Expansion Mod 8**	Hybrid
New Acland (Stage 3 extension)	Hybrid	**Mammoth Underground Coal Mine***	Hybrid
Olive Downs South*	Best Practice		
Vickery	Hybrid		
Vulcan South	Best Practice		
Wilton-Fairhill	Best Practice		
Oil and gas		**Net emissions 2024–30**	**9 Mt CO_2-e**
New facilities		**Expansions**	
Facility name	Baseline type	Facility name	Baseline type
Arcadia*	Hybrid	Crux Project	Hybrid
Barossa Backfill to Darwin LNG	Best Practice	Pluto Expansion (Train 2)	Hybrid
Beetaloo (Empire Energy)	Best Practice	**Goog-a-binge (Surat Gas Project Phase 2)**	Hybrid
Beetaloo (Tamboran/Santos)	Best Practice	**Halyard-2 infill / Greater East Spar***	Hybrid
Dorado Oil Project	Best Practice		
Narrabri Coal Seam Gas Project	Best Practice		
Scarborough	Best Practice		
Surat Gas Project (Phase 1)*	Hybrid		
Waitsia (Stage 2)	Best Practice		
West Erregulla (Phase 1)	Best Practice		

49 A baseline is determined by applying an 'emissions reduction contribution', which is a rate that declines at 4.9 percentage points each year to 2030, to the product of emissions intensity and production levels. A best practice baseline is calculated using an emissions intensity value that is based on international best practice levels, adapted for an Australian context. A hybrid baseline is calculated using an emissions intensity value that is a weighted combination of the facility-specific and industry average emissions intensities, where weighting gradually shifts from facility-specific to industry average. A default baseline is calculated using the industry average emissions intensity.

Metal ore mining		Net emissions 2024–30	9 Mt CO_2-e
New facilities		**Expansions**	
Facility name	Baseline type	Facility name	Baseline type
Ashburton Hub/ Onslow Iron Ore*	Best Practice	Western Range*	Hybrid
Greenbushes Lithium Operation*	Hybrid	**Gudai Darri Capacity* Expansion**	Hybrid
Iron Bridge*	Default	**KCGM Fimiston South***	Hybrid
Marillana Mine	Best Practice	**Pilgangoora (P1000)***	Hybrid
McPhee Creek	Best Practice	**Tanami Expansion 2**	Hybrid
Mt Todd	Best Practice		
NiWest Nickel-Cobalt Project	Best Practice		
Nolans Project	Best Practice		
Saint Elmo Vanadium Project	Best Practice		
Thunderbird (Stage 1)	Best Practice		
West Musgrave	Best Practice		
Eva Copper Project	Best Practice		
Mulga Rock	Best Practice		
Murchison Technology Metals Project	Best Practice		

Other		Net emissions 2024–30	4 Mt CO_2-e
New facilities		**Expansions**	
Facility name	Baseline type	Facility name	Baseline type
BP Renewable Fuels	Best Practice		
Kwinana Lithium Refinery (Tianqi/IGO)	Default		
Kwinana Lithium Refinery (Wes/SQM)	Best Practice		
Perdaman Urea Plant	Best Practice		
Townsville Energy Chemical Hub - Stage 1	Best Practice		

Note: The Authority identified a total of 58 facilities that meet the definition of new and expanded facilities but have excluded 4 from the list to avoid disclosing unpublished facility-level data.

Projects added to the list of new and expanded facilities in 2025 are **bolded**.

* Project has been covered by the Safeguard Mechanism in any year since the reformed scheme commenced.

Table A2: Comparison of new and expanded Safeguard facilities identified in 2024 and 2025 APR

	2024 APR	2025 APR
Total facilities	**46**	**58**[50]
New	38	43
Expanded	8	15
Covered by the Safeguard Mechanism[51]	**8**	**20**

Table A3: Comparison of net emissions from new and expanded Safeguard facilities identified in 2024 and 2025 APR

	2024 APR	2025 APR
Cumulative emissions 2024–2030 (Mt CO_2-e)	**31**	**32**
Coal	12	10
Oil and gas	9	9
Metal ore mining	6	9
Other	4	4

Table A4: Projects that are either not probable to proceed or not likely to become a Safeguard facility before 1 July 2030, and excluded from the list of new and expanded facilities at Table A1

Project name	Positive FID	Regulatory approval	Direct government support
Coal			
Alpha (mine and rail)	N	Y	N
Angus Place West	N	N	N
Baralaba South	N	N	N
Blackwater North Ext.	N	N	N
Blackwater South	N	N	N
Boggabri Coal Expansion Mod 10	N	N	N
Chain Valley Extension	N	N	N
Clarence Colliery Expansion	N	N	N
Coppabella Mine	N	N	N
Dysart East	N	Y	N
East Olive Downs South Extended	N	Y	N
Elimatta	N	N	N

50 This figure does not include 4 projects included in the Authority's 2024 assessment that are no longer considered probable.

51 The project has commenced operations and has been covered by the Safeguard Mechanism in any year since the reformed scheme commenced.

Gemini coal mine	N	N	N
Glendell Coal Mine	N	N	N
Grosvenor Phase 2	N	Y	N
Isaac River Coal Mine	N	Y	N
Karin	N	N	N
Kevin's Corner	N	Y	N
Meandu King 2 East Project	N	N	N
Minyango	N	Y	N
Mt Pleasant Optimisation Project[52]	Y	Y	N
Mt Thorley	N	Y	N
Norwich Park Mine[53]	N	Y	N
Saraji East	N	N	N
South Galilee	N	Y	N
Springsure Creek	N	Y	N
Spur Hill	N	N	N
Taroborah	N	Y	N
Wallarah 2[54]	Y	Y	N
Wards Well	N	N	N
Washpool	N	N	N
Winchester South[55]	N	Y	N
Gas			
Atlas (Stage 3)	N	Y	N
Bowen Gas Project	N	Y	N
Browse to North West Shelf	N	N	N
Ichthys Expansion (Train 3)	N	N	N
Otway (Phase 3) Development Project	N	N	N
Otway Offshore Gas	N	Y	N
Surat Gas Project (Phases 2–5)	N	Y	N
Towrie Gas Project	N	Y	N
Metal ore mining			
Balmoral South	N	N	N

52 This project has received approval under the EPBC Act, however, its NSW approval is currently the subject of a legal challenge.
53 As of 2025, this project has been placed into care and maintenance with no indication of when development will resume.
54 This project was excluded because it is expected to commence after 2030.
55 Existing environmental approval is currently being reconsidered.

Blacksmith Project	N	Y	N
Caravel (Stage 1)	N	N	N
Cashmere Downs	N	N	N
Greenbushes Expansion CGP4	N	N	N
Havieron	N	N	N
Hemi Gold Project	N	Y	N
Hillgrove Gold-Antimony Project	N	Y	N
Kalgoorlie Nickel Project - Goongarrie Hub	N	N	N
Kathleen Valley Expansion	N	Y	N
Mt Gibson Gold Project	N	N	N
Oakover Project	N	N	N
Pilgangoora (P2000)	N	N	N
Rhodes Ridge	N	N	N
Savage River Expansion	N	Y	N
Sconi	N	N	N
Wingellina	N	Y	N
Other			
Ammaroo Phosphate Project	N	N	N
Boodarie Lithium Sulphate Processing Facility (Train 1)	N	N	N
Cape Flattery Silica Sands	N	N	N
Kathleen Valley Refinery	N	N	N
Kemerton Lithium Refinery[56]	Y	Y	N
McIntosh	N	N	N
Northern Silica Project	N	N	N
Sun Metals Zinc Refinery (Stage 2)[57]	Y	Y	N
Thunderbird (Stage 2)	N	Y	N
Uley 2	N	Y	N

Note: This list includes projects that could be covered by the Safeguard Mechanism before 2030, but did not meet the inclusion criteria for the 2025 assessment. The Authority will continue to monitor these projects as part of its future assessments of new and expanded Safeguard facilities.

56 The Kemerton Lithium Refinery expansion project has been put on hold and is not expected to commence operations prior to 2030.

57 Excluded due to insufficient project information.

Table A5: Projects assessed that were considered extensions to existing Safeguard facilities and excluded from the list of new and expanded facilities at Table A1

Project	Positive FID	Regulatory approval	Government support	Extension (E) or reactivation (R)
Atlas gas project	Y	Y	N	E
Cadia PC 1–2	Y	N	N	E
Cowal Gold Operations Continuation	N	Y	N	E
Ensham Coal Mine	N	Y	N	E
Kipper Expansion 1B	Y	Y	N	E
Nammuldi Iron Ore Mine Extension	Y	Y	N	E
Narrabri Stage 3	N	Y	N	E
Worsley Bauxite Expansion	Y	Y	N	E

Table A6: Classification of new projects and expansions referred to the Authority under section 15A of the *Climate Change Act 2022*

Project name	Proponent	EPBC reference	Project type
Boggabri Coal Mine Modification 8	Idemitsu	EPBC 2021/8875	**Expansion**
Caval Ridge Mine Horse Pit Extension	BM Alliance Coal	EPBC 2021/0931	**Expansion**
Cowal Gold Operations Continuation	Evolution Mining	EPBC 2022/09223	Extension
Lake Vermont Meadowbrook Extension	Bowen Basin Coal	EPBC 2019/8485	Extension
Nammuldi Iron Ore Mine Extension	Rio Tinto	EPBC 2019/8518	Extension
Vulcan South Coal Mine	Vitrinite	EPBC 2023/09708	**New Project**
West Angelas Iron Ore Mine Expansion	Robe River Mining	EPBC 2021/8923	Extension
Worsley Bauxite Expansion	South32	EPBC 2019/8437	Extension

Note: Projects that met the requirements to be included in the list of new and expanded facilities at Table A1 are **bolded.**

Appendix B:
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