Australian Government

Department of Climate Change, Energy, the Environment and Water

Australia's emissions projections 2025

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Acknowledgement of Country

We acknowledge the Traditional Owners of Country throughout Australia and recognise their continuing connection to land, waters and culture. We pay our respects to their Elders past and present.

Feedback

The Department of Climate Change, Energy, the Environment and Water welcomes feedback regarding Australia's emissions projections at Emissions.Projections@dcceew.gov.au.

Executive summary

Australia's emissions projections 2025 provides the latest estimates of Australia's greenhouse gas emissions to 2040. They show how Australia is tracking against its emissions reduction commitments by examining the potential impact of currently implemented policies and measures to reduce greenhouse gas emissions.

Australia's emissions reduction targets

Australia recently set its 2035 target under the Paris Agreement. The Australian Government accepted the Climate Change Authority's advice under the *Climate Change Act 2022* to set Australia's 2035 target as a commitment to reduce emissions to 62–70% below 2005 levels by 2035, implemented as a multi-year emissions budget. A budget approach aligns with the science of climate change, as the extent of warming and other impacts depend on cumulative emissions over time, not on emissions in a single year. This target was submitted to the United Nations Framework Convention on Climate Change (UNFCCC) as Australia's second nationally determined contribution (NDC).

In addition to the 2035 target, Australia has a 2030 and 2050 target legislated in the *Climate Change Act 2022*. The 2030 target is both a single year commitment to reduce emissions to 43% below 2005 levels, and a multi-year emissions budget from 2021 to 2030. Both the 2030 and 2035 targets represent ambitious and achievable waypoints towards Australia's net zero emissions by 2050 commitment.

The 2025 emissions projections

The 2025 emissions projections show that with current policies Australia meets its 2030 target on a budget basis and is within reach of the point-in-time target. The 2025 emissions projections are prepared taking account of currently implemented policies, like the expanded Capacity Investment Scheme (CIS) to help deliver on the government's 82% renewable electricity target, the Safeguard Mechanism, the Australian Carbon Credit Unit (ACCU) Scheme and the New Vehicle Efficiency Standard (NVES), as well as some new announcements over the past year including the commencement of the Cheaper Home Batteries program, and changes to energy policy in Queensland.[1]

The emissions projections indicate that Australia's emissions will be 354 Mt CO_2-e or 42% below 2005 levels by 2030. In terms of the emissions budget, emissions are projected to be 3% below the budget. That is Australia is expected to overachieve on its 2030 target on a budget basis.

In terms of tracking against the 2035 target, the emissions projections indicate Australia's cumulative emissions over 2031 to 2035 will be 20–34% above the emissions budget, that is Australia needs to reduce its emissions by a further 283–429 Mt CO_2-e over 2031–35 in order to meet the 2035 target. The Climate Change Authority's advice to Government is that this target is achievable and that "[t]he foundational climate change policies for achieving this target are also now in place".

[1] The 2025 emissions projections reflect Queensland energy policy as understood at July 2025.

With currently implemented policies, emissions are projected to be 48% below 2005 levels in 2035 and 53% below 2005 levels in 2040.

The projections do not include new policies announced alongside the Net Zero Plan and 6 sector plans, or potential future policy changes, for example, from reviews of the Safeguard Mechanism scheduled for 2026–27, the NVES in 2026, and the review of the National Electricity Market (NEM) wholesale market settings or future policies to further the 5 decarbonisation priorities outlined in the Net Zero Plan and flagged in the 6 sector plans. The purpose of the projections also differs from the modelling and analysis undertaken by the Australian Treasury to support development of the Net Zero Plan and 6 sector plans. That modelling examined different scenarios to provide insights into how Australia can efficiently achieve emissions reductions over time and the economic opportunities from different pathways. It made different assumptions from these projections, including global mitigation action consistent with keeping global average warming well below 2°C, and market and technology trends consistent with that global action.

Table 1 – Tracking towards Australia's 2030 targets

	Emissions in 2030	**% below 2005**	**Cumulative emissions, 2021–2030 Mt CO_2-e**	**% above/ below emissions budget**
2030 target	349	43%	4,394	
Baseline scenario	354	42%	4,258	-3%

Table 2 – Tracking towards Australia's 2035 targets

	Cumulative emissions 2031–35 Mt CO_2-e	**% above/below emissions budget**
2035 target	1,248–1,395	
Baseline scenario	1,678	20-34%

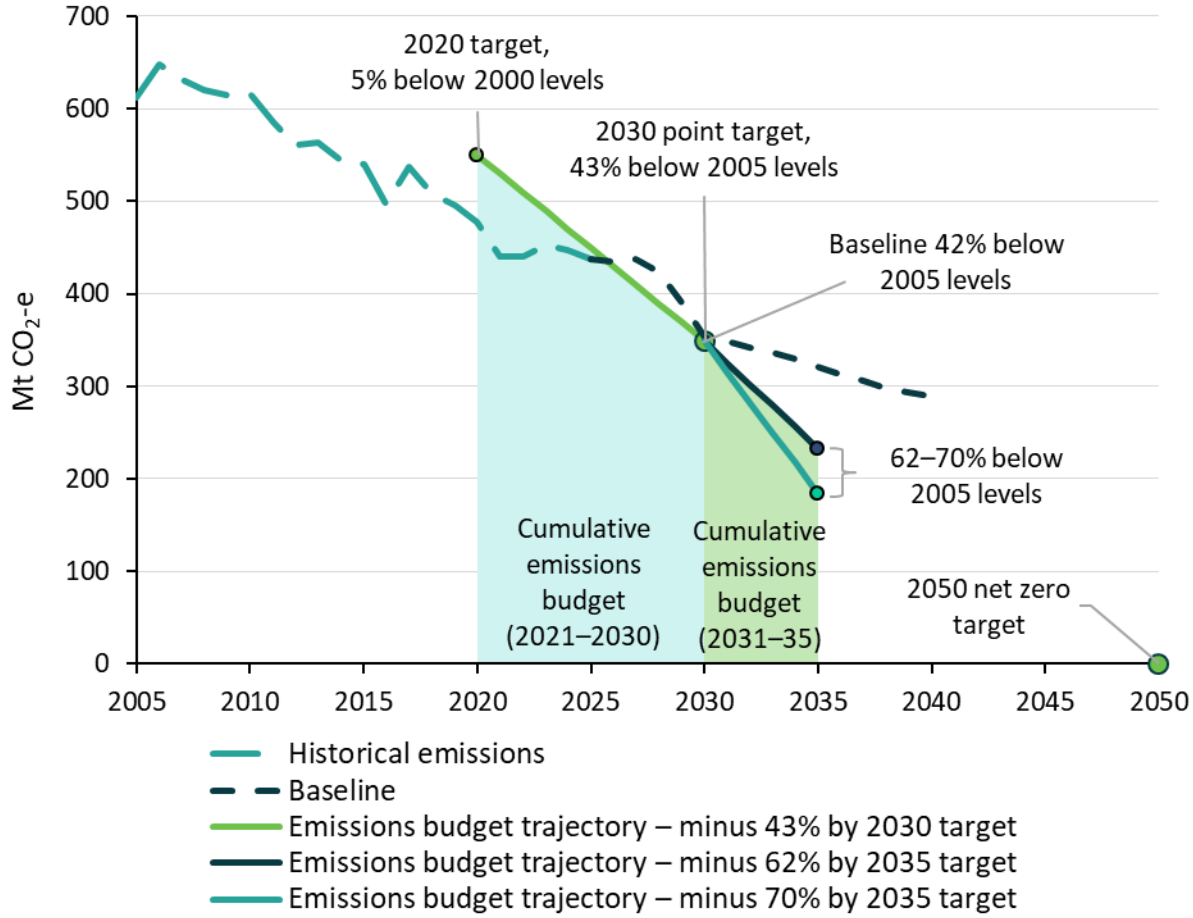

Figure 1 – Tracking against the 2030 and 2035 targets, 2005 to 2050, Mt CO_2-e

The policy foundations have been laid to achieve the 2030 target but more action is needed to 2050

The 2025 emissions projections show that with currently implemented government policies, Australia could achieve the 2030 target in budget terms and be close to achieving the 2030 point-in-time target. It also shows that more effort is needed to achieve Australia's 2035 target, which reflects Australia's obligation under the Paris Agreement for targets to represent each country's highest possible ambition and Australia's contribution to the goals of the Agreement.

The Net Zero Plan and 6 sector plans set out the policy foundations that have been laid to support further emissions reductions through the set-do-review-refine framework. This includes refinement of existing measures like the upcoming statutory reviews of the Safeguard Mechanism and NVES to ensure their settings are appropriately calibrated to the meet the 2035 target and the review of the National Electricity Market wholesale market settings. These emissions projections are an important part of that framework allowing us to track progress and continue to refine policies over time, including in response to changing international and domestic dynamics.

Actual emissions outcomes depend on a range of factors including the scale and pace of global action, technology development and implementation of policies, both existing and new. The emissions projections assume policies will be implemented as announced and do not attempt to forecast the impact of potential frictions to the successful delivery of policies. Nor do they forecast events that may provide windfall improvements in the emissions outlook, for example where

technology deployment is faster than expected, greater global action or unforeseen global events. More information on factors that influence the emissions outcomes are set out in the statement of uncertainty.

The baseline scenario

The baseline scenario of the 2025 emissions projections includes federal and state and territory policies which have been implemented. New announcements incorporated since the 2024 emissions projections include:

- the further expansion of the CIS from 32 GW to 40 GW announced in July 2025. The CIS will help deliver on the government's target to achieve 82% renewable on-grid generation nationally by 2030
- the Cheaper Home Batteries Program which commenced on 1 July 2025
- announced projects under the Powering the Regions Fund
- changes to energy policy in Queensland including the repeal of the state's renewable energy targets for 2030, 2032 and 2035; and no longer including the previous Queensland government's Queensland Energy and Jobs Plan and associated early coal closure schedule
- measures announced last year as part of the government's Future Made in Australia agenda including Hydrogen Headstart, the Hydrogen Production Tax Incentive and the Critical Minerals Production Tax Incentive, that were previously included in the 2024 projections 'with additional measures' scenario, are now also included in the baseline scenario.

These policies are in addition to the Safeguard Mechanism, the ACCU Scheme, the NVES and measures to help meet the Australian Government's target of 82% renewable generation on grid by 2030, like the expanded CIS, Rewiring the Nation and Renewable Energy Transformation Agreements.

The 2025 emissions projections do not include new policies announced with the 2035 target including:

- a new **$5 billion Net Zero Fund in the National Reconstruction Fund**, to help industrial facilities decarbonise and scale up more renewables and low emissions manufacturing
- **$1.1 billion to encourage more production and use of Low carbon liquid fuels** here in Australia
- **$40 million to accelerate the roll out of kerbside and fast electric vehicle (EV) charging** across our suburbs and regions
- **$85 million** for frameworks and tools to help households and businesses understand and **improve their energy performance**
- **up to $2 billion for the Clean Energy Finance Corporation**
- policies to further the **5 decarbonisation priorities** outlined in the Net Zero Plan and flagged in the **6 sector plans.**

A number of pre-existing policies are also not included, such as support to accelerate the development of Australia's green metals industry, including the green iron investment fund and the green aluminium production credit, projects funded under the Future Made in Australia Innovation Fund and new government purchases of ACCUs under the Powering the Regions Fund.

These have not been included in the 2025 emissions projections as their impact is dependent on further policy design, consultation or investment decisions yet to be made.

The emissions projections include state and territory policies as at July 2025.[2] States and territories are also continuing to update and refine their policies over time to meet their own relevant 2030, 2035 and net zero targets.

Sectoral trends

From 2025 to 2040, greenhouse gas emissions are projected to decline in almost all sectors driven by federal and state and territory policies.

In the **electricity sector**, emissions are projected to decline by more than 60% between 2025 and 2030. This is driven by state and territory renewable targets and plans as well as the Australian Government's target to achieve 82% on grid renewable generation nationally by 2030. The target is supported by the expanded CIS, which was expanded from 32 GW to 40 GW in July 2025, new and upgraded grid infrastructure through Rewiring the Nation, Renewable Energy Transformation Agreements and the Cheaper Home Batteries program.

After 2030, electricity sector emissions are projected to decline to 2040 albeit at a much slower rate. State/territory policies, including Victoria's 2035 renewable energy target and the exit of coal power stations in Victoria, NSW and Queensland contribute to emissions reductions. However emission reductions slow as increasing electricity demand from electrification and data centres is being met by a combination of coal, gas, and renewable generation.

In the **transport sector**, emissions have been steadily growing since 1990 with the exception of the 3 years over 2020 to 2022 when COVID-19 related restrictions limited transport activity. Transport emissions are projected to decrease in large part due to the projected impacts of the NVES which commenced on 1 January 2025. Transport emissions are projected to continue to decline through to 2040 as more efficient vehicles are sold and less efficient vehicles are retired.

Emissions in the **stationary energy** and **fugitives** sectors are projected to increase in the short-term to 2027 before declining. This follows temporary outages at a number of gassy coal mines and the ramp up of new and returning liquefied natural gas (LNG) capacity. This increase in stationary energy and fugitive emissions is partially offset by abatement activities at Safeguard facilities incentivised by the Safeguard Mechanism like efficiency improvements, fuel switching and process changes. Abatement incentivised by the Safeguard Mechanism also reduces emissions in the **industrial processes and product use (IPPU) sector.** Greater levels of technology deployment are projected to continue through to 2040 as Safeguard baselines decline to zero by 2050.

Agriculture and **waste** emissions are projected to remain largely flat from 2025 to 2040. Emissions in the agriculture sector are heavily influenced by seasonal conditions and the projections assume oscillations between wet and dry climate drivers over the short to medium-term. Agriculture emissions are projected to increase marginally between 2025 and 2040.

[2] The 2025 emissions projections reflect Queensland energy policy as understood at July 2025. This includes coal closures in Queensland based on technical life, with the exception of Gladstone Power station. The projections do not include the previous policy of renewable energy targets for 2030, 2032 and 2035.

The waste sector emissions are projected to decline marginally to 2030 and to 2040. Recycling, resource recovery, methane capture and the introduction of food organic and garden organic (FOGO) waste bins have helped to slowly reduce emissions from waste despite the impact of a growing population on the volume of waste disposal.

The **land use, land use change and forestry (LULUCF)** sector is projected to remain a net sink in 2030. That is, more carbon is projected to be sequestered than emitted from this sector each year. The net sink is expected to continue to moderate from a peak of -90 Mt CO_2-e in 2021 to -52 Mt CO_2-e in 2030. The 2021 peak resulted from high rainfall La Niña conditions, increasing forest growth and building soil carbon in cropland and grasslands. This is expected to be a temporary situation with conditions assumed to return to seasonal averages. Emissions are projected to remain a net sink with LULUCF emissions projected to be -50 Mt CO_2-e in 2035 and -53 Mt CO_2-e in 2040, in part due to sequestration activities incentivised by the ACCU scheme.

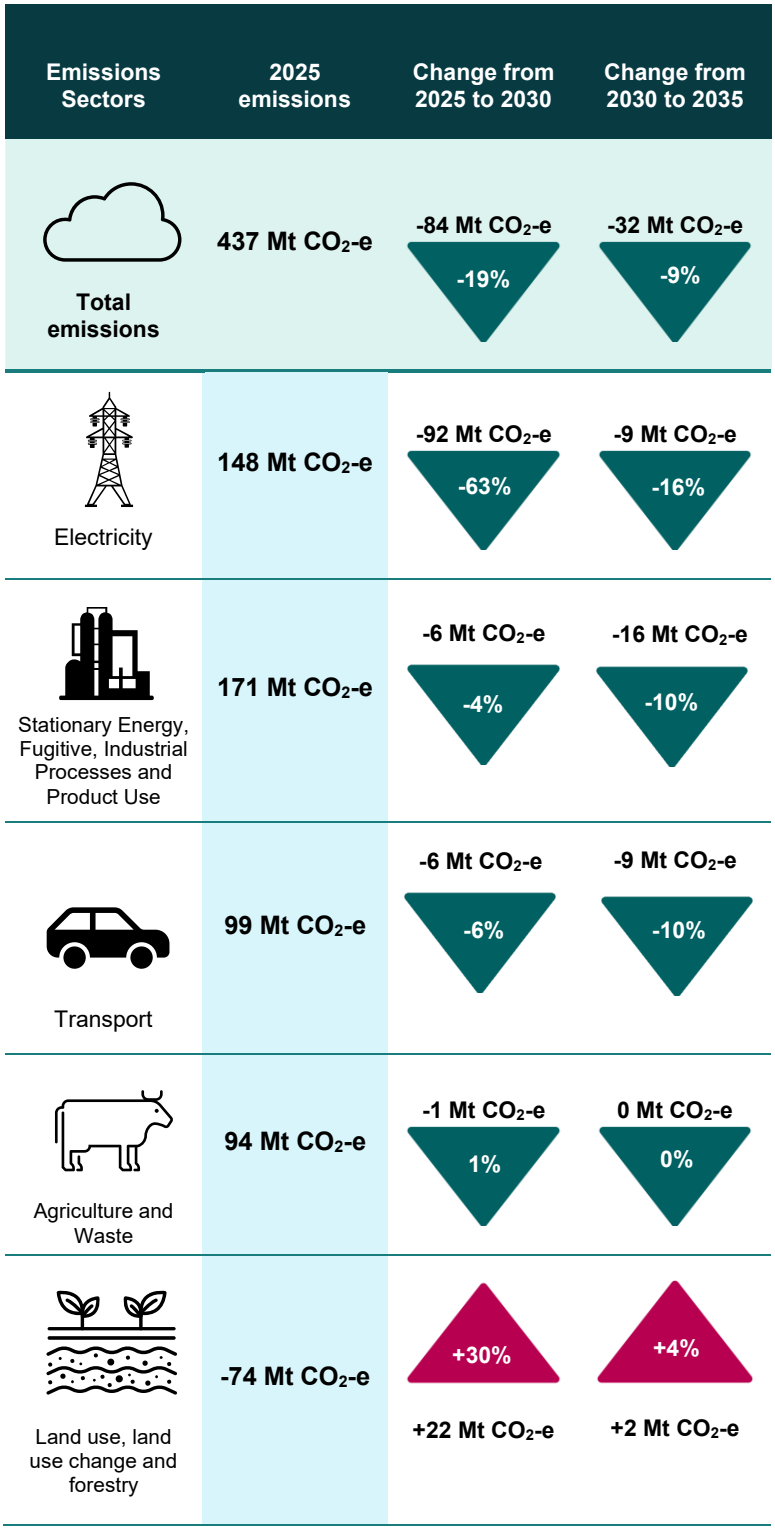

Figure 2 – Change in emissions by sector or grouped sectors, from 2025 to 2030 and 2030 to 2035, Mt CO_2-e and percentage change (%). While there are some changes in emissions from the agriculture and waste sectors the net impact is less than 1 Mt CO_2-e.

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Overview of the emission projections results

Introduction

The annual emissions projections provide estimates of Australia's greenhouse gas emissions to 2040. They indicate how Australia is tracking against its emissions reduction targets.

The annual emissions projections also indicate the expected drivers of future emissions. Historical and projected emissions are presented from 1990 to 2040. Reporting years for all sectors represent financial years – for example, '2030' refers to the financial year 2029–30. These projections update *Australia's emissions projections 2024* which was published in November 2024.

The *Methodology for the 2025 emissions projections* provides a detailed description of the methods applied in the preparation of, and key data inputs to, the 2025 emissions projections. This methodology document is available on the department's website.

The baseline scenario

Australia's emissions projections 2025 includes a baseline scenario. The baseline scenario includes national and state/territory policies which have been implemented. Since the 2024 emissions projections, the following new developments have been included:

- the further expansion of the CIS from 32 GW to 40 GW announced in July. The CIS will help deliver on the Australian Government's target to achieve 82% renewable on-grid generation nationally by 2030
- the Cheaper Home Batteries Program which commenced on 1 July 2025
- announced projects under the Powering the Regions Fund
- changes to energy policy in Queensland including the repeal of the state's renewable energy targets for 2030, 2032 and 2035 and delays to the closure of publicly owned state coal power stations outlined in the previous state government's Queensland Energy and Jobs Plan.

Measures announced last year as part of the government's Future Made in Australia agenda including Hydrogen Headstart, the Hydrogen Production Tax Incentive and the Critical Minerals Production Tax Incentive, that were previously included in the 2024 projections 'with additional measures' scenario, are now also included in the baseline scenario.

The 2025 emissions projections do not include new policies announced with the 2035 target. This is because these policies are subject to further design and consultation, or their emissions reduction impact is dependent on investment decisions yet to be made. They include:

- a new **$5 billion Net Zero Fund in the National Reconstruction Fund**, to help industrial facilities decarbonise and scale up more renewables and low emissions manufacturing
- **up to $2 billion for the Clean Energy Finance Corporation**
- **$1.1 billion to encourage more production and use of Low carbon liquid fuels** here in Australia

- **$40 million to accelerate the roll out of kerbside and fast EV charging** across our suburbs and regions
- **$85 million** for frameworks and tools to help households and businesses understand and **improve their energy performance**
- **up to $2 billion for the Clean Energy Finance Corporation (CEFC)**
- policies to further the **5 decarbonisation priorities** outlined in the Net Zero Plan and flagged in the **6 sector plans**.

A number of pre-existing policies are also not included, such as support to accelerate the development of Australia's green metals industry, including the green iron investment fund and the green aluminium production credit, projects funded under the Future Made in Australia Innovation Fund and new government purchases of ACCUs under the Powering the Regions Fund.

The projections reflect state and territory policies and programs as at July 2025.[3]

Appendix B provides further information on policies and measures included in these emissions projections.

Australia's targets

Australia's emission reduction targets are a commitment to reduce emissions to:

- 43% below 2005 levels by 2030, as both a single year target and a multi-year emissions budget from 2021 to 2030
- 62-70% below 2005 levels by 2035, implemented as a multi-year budget from 2031 to 2035
- net zero by 2050.

Australia's emissions reduction commitments were submitted in its NDC under the Paris Agreement which was most recently updated in September 2025.

Further details of Australia's emissions targets are at Appendix A.

Tracking to the 2030 target

Australia's emissions are projected to be 354 Mt CO_2-e in 2030 or 42% below 2005 levels. Over the period 2021 to 2030, emissions are 3% below the 2021–2030 emissions budget. That is, the 2030 target is more than met on a budget basis.

Table 3 – Tracking towards Australia's 2030 targets

	Emissions in 2030	% below 2005	Cumulative emissions, 2021-2030 Mt CO_2-e	% above/ below emissions budget
2030 target	349	43%	4,394	
Baseline scenario	354	42%	4,258	-3%

[3] The 2025 emissions projections reflect Queensland energy policy as understood at July 2025. The emissions projections were prepared prior to the announcement of Gladstone Power Station's potential closure in 2029 and the release of Queensland's Energy Roadmap 2025 on 10 October 2025. The projections include coal closures in Queensland based on technical life. The projections do not include the previous policy of renewable energy targets for 2030, 2032 and 2035.

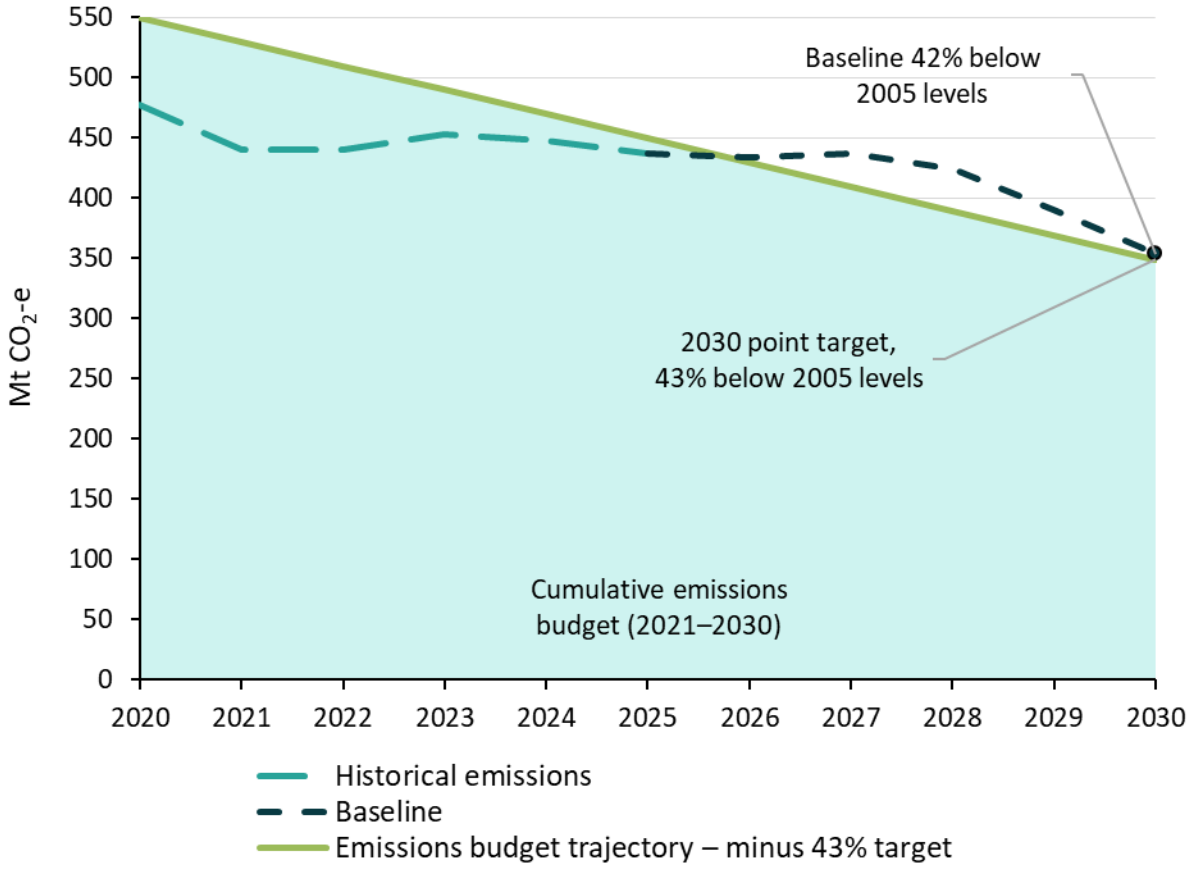


Figure 3 – Tracking against the 2030 emissions budget target, Mt CO_2-e

Tracking to the 2035 target

In 2035, emissions are projected to 48% below 2005 levels. In terms of tracking against the 2035 target, emissions are 20–34% above the 2031–2035 emissions budget. As noted above, the projections do not include policies announced with the Net Zero Plan or future policies governments may consider. The 2035 target reflects Australia's highest possible ambition and the Net Zero Plan sets out how the Government will continue to review and refine policies over time to ensure we are on track to meet our targets.

Table 4 – Tracking towards Australia's 2035 targets

	Cumulative emissions. 2031–35 Mt CO_2-e	**% above/below emissions budget**
2035 target	1,248 –1,395	
Baseline scenario	1,678	20-34%

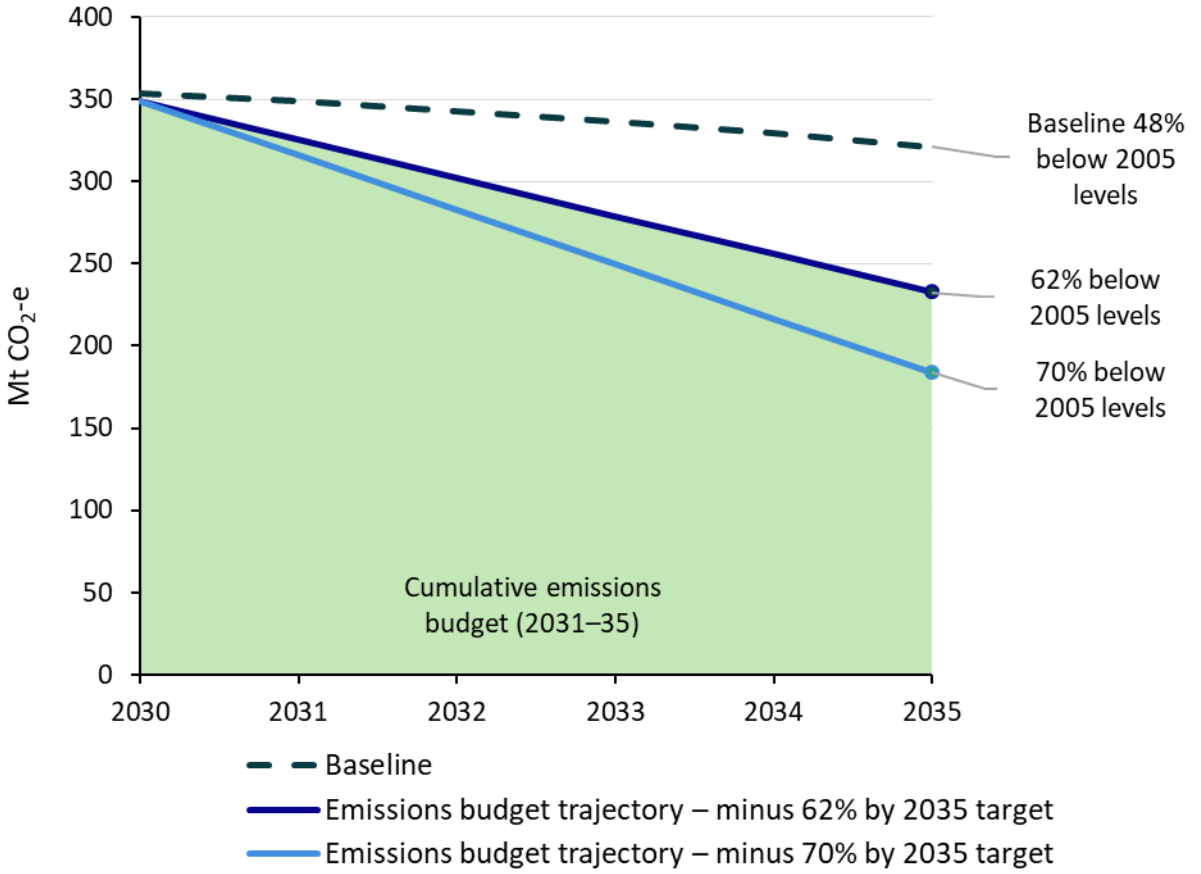


Figure 4 – Tracking against the 2035 emissions budget target, Mt CO_2-e

Emissions trends

Australia's emissions are projected to decline from 437 Mt CO_2-e in 2025 to 354 Mt CO_2-e in 2030, (42% below 2005 levels); and to 321 Mt CO_2-e in 2035, (48% below 2005 levels). Emissions are projected to be 289 Mt CO_2-e in 2040, (53% below 2005 levels).

Table 5 – Emissions projections to 2040, by sector, Mt CO_2-e

	National Greenhouse Gas Inventory			Projections		
Sector	**2005**	**2020**	**2025**	**2030**	**2035**	**2040**
Electricity	197	172	148	55	46	45
Stationary energy	81	99	95	93	84	73
Transport	82	93	99	92	83	77
Fugitives	43	55	45	44	41	34
Agriculture	87	74	80	81	81	81
Industrial processes and product use	30	32	30	27	23	20
Waste	16	13	14	13	12	12
Land use, land use change and forestry	77	-61	-74	-52	-50	-53
Total	**612**	**478**	**437**	**354**	**321**	**289**

Note: totals may not sum due to rounding.

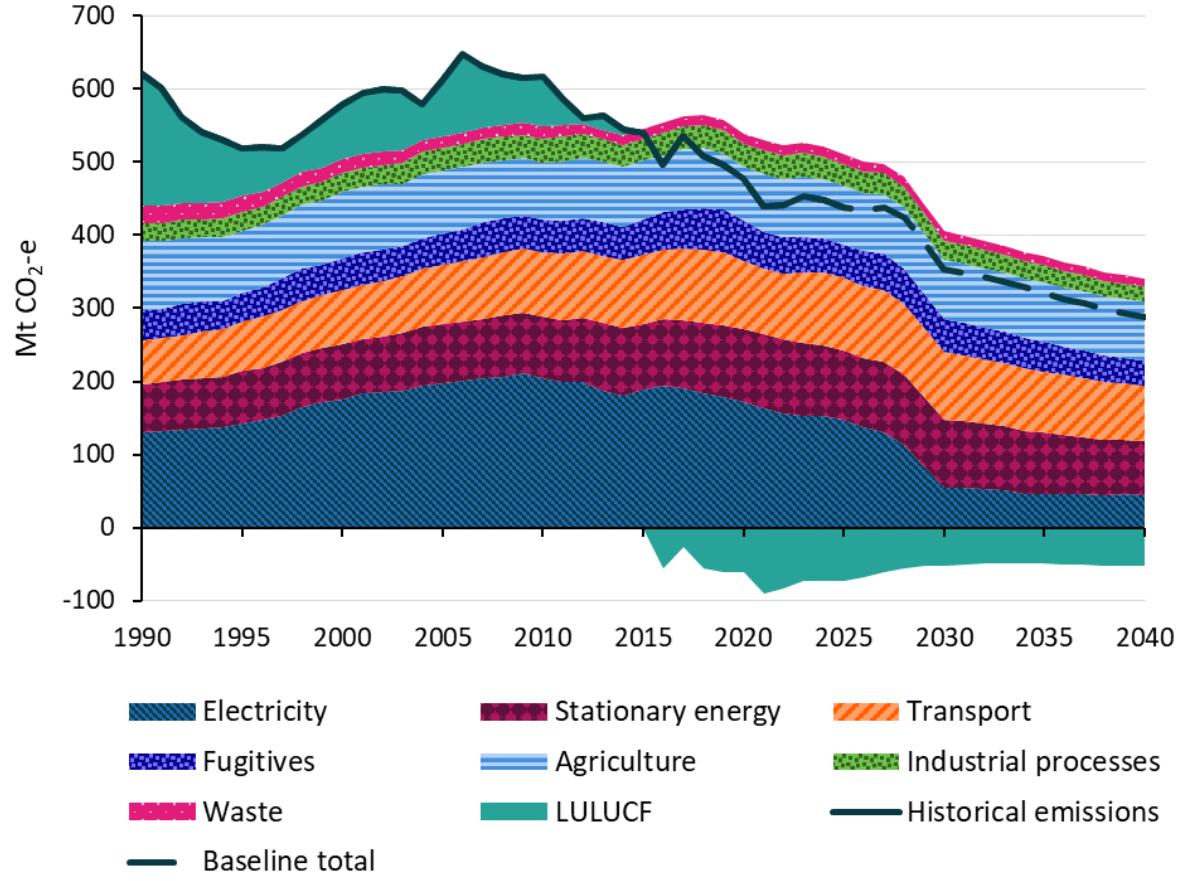


Figure 5 – Australia's emissions projections, 1990 to 2040, Mt CO_2-e

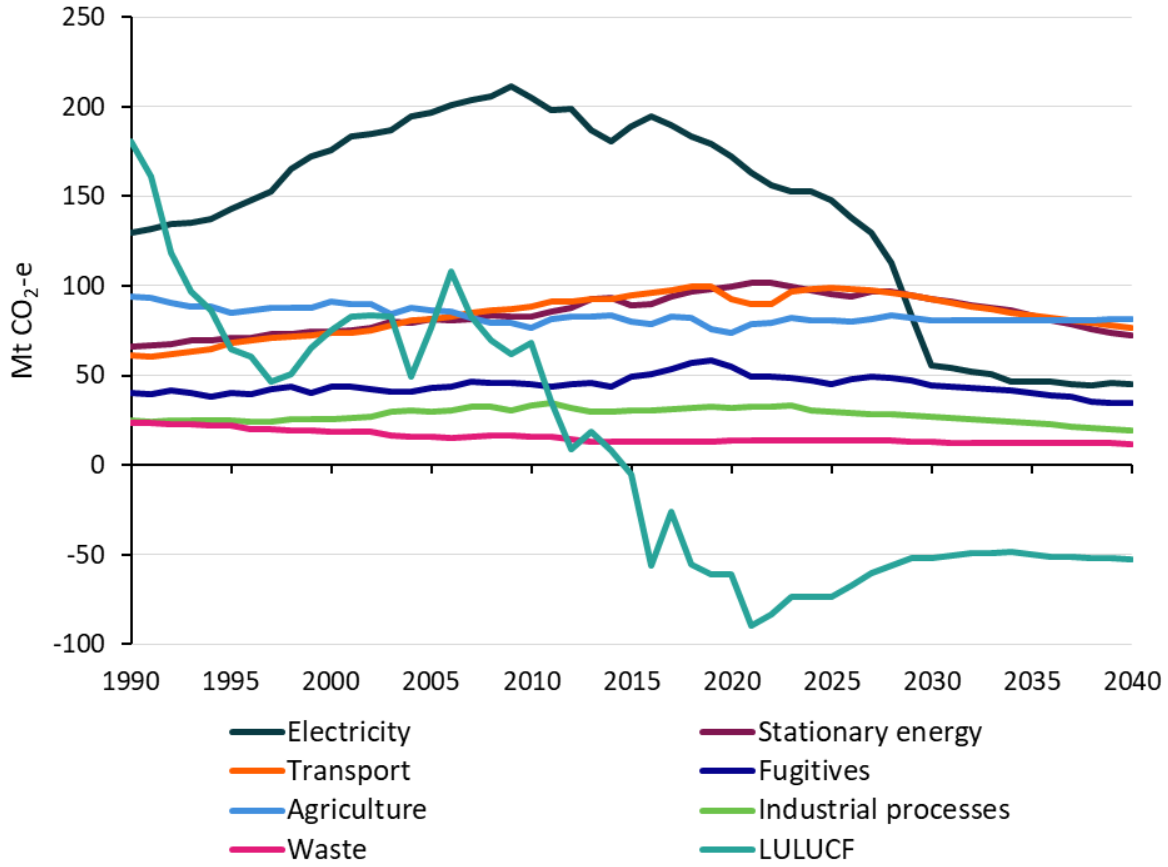


Figure 6 – Australia's emissions projections, by sector, 1990 to 2040, Mt CO_2-e

Most of Australia's emissions are covered by policies calibrated to the 2030 target

Well over half of Australia's emissions are now covered by legally binding emissions reduction policies. The emissions projections show Australia's total emissions are projected to decline by 84 Mt CO_2-e over next the five years to 2030. This is because of key federal policies like the Safeguard Mechanism, the NVES and the 82% on-grid renewable electricity target, all calibrated to the 2030 target.

The strongest emissions declines to 2030 are projected in the electricity sector

Emissions in the electricity sector are projected to reduce by more than 60% between 2025 and 2030 from 148 Mt CO_2-e in 2025 to 55 Mt CO_2-e in 2030. This is driven by federal and state and territory renewable targets and plans including the federal government's target to 82% on-grid renewable generation nationally, by 2030. This target is supported by the expanded CIS, which was expanded from 32 GW to 40 GW in July 2025, new and upgraded grid infrastructure through Rewiring the Nation, Renewable Energy Transformation Agreements and the Cheaper Home Batteries program.

The New Vehicle Efficiency Standard (NVES) is projected to halt and reverse the historical trend of growing transport emissions

Emissions in the transport sector have steadily risen since 1990, with the exception of the period from 2020 to 2022 when COVID-19 related travel restrictions reduced emissions. Between 2025 and 2030, transport emissions are projected to fall 6% to 92 Mt CO_2-e in 2030. This is largely driven by the NVES which commenced on 1 January 2025 and covers the light vehicle category which is the single largest source of emissions within the transport sector.

The Safeguard Mechanism is incentivising emissions reduction in energy and industrial sectors

The Safeguard Mechanism covers about 30% of Australia's emissions, with most of these emissions related to mining, manufacturing and gas extraction and processing activities. Emissions reductions are projected in the stationary energy, fugitives and IPPU sectors. This is mostly due to on-site decarbonisation activities undertaken at Safeguard covered facilities. These activities range from investment in efficiency improvements, fuel switching, including electrification, as well as changes to process technology.

In addition to the Safeguard Mechanism, the phase down of hydrofluorocarbons (HFC) imports which commenced in 2018 and is supplemented by bans on the import and manufacture of air conditioning equipment using HFC refrigerants with a global warming potential (GWP) over 750 from 1 July 2024 further drive emissions reductions in the sector.

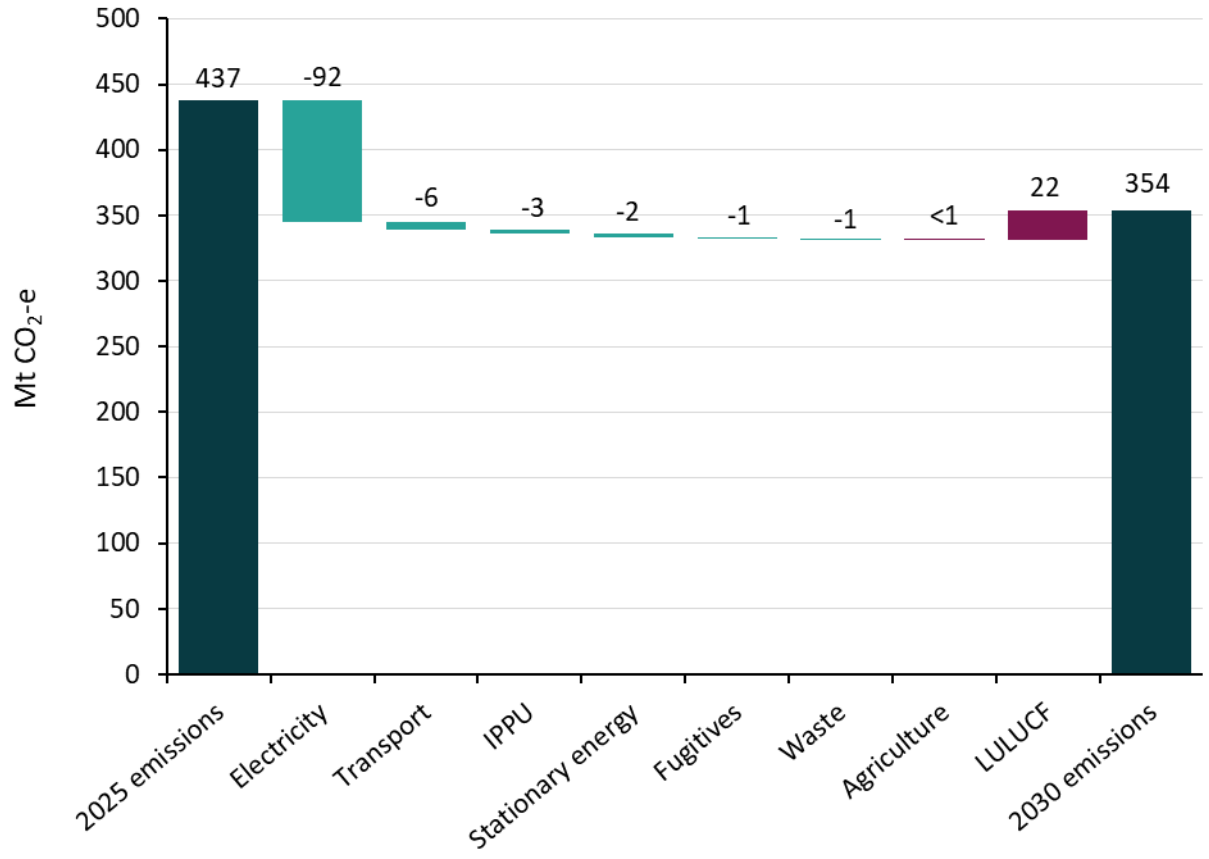


Figure 7 – Change in emissions projections from 2025 to 2030 by sector, Mt CO_2-e

Different sectors will decarbonise at different speeds

Agriculture and waste sector emissions are projected to remain fairly flat to 2030 and 2040. Emissions from the agriculture sector are projected to increase marginally from 80 Mt CO_2-e in 2025 to 81 Mt CO_2-e 2030. Agriculture emissions are heavily influenced by seasonal conditions and the projections assume oscillations between wet and dry climate drivers over the short- to medium-term. Agriculture emissions are projected to remain at 81 Mt CO_2-e in 2035 and 2040, modelled to follow average seasonal conditions.

Emissions from the waste sector are projected to fall marginally from 14 Mt CO_2-e in 2025 to 13 Mt CO_2-e in 2030 then to 12 Mt CO_2-e in 2035 where they remain in 2040. Recycling, resource recovery, methane capture and the introduction of FOGO waste bins have helped to slowly reduce emissions from waste, despite the impact of a growing population on the volume of waste disposal.

The land sector will ease from the current level of sequestration but remain a net sink

The LULUCF sector is projected to remain a net sink over the projections period. From a peak of -90 Mt CO_2-e in 2021, the sink is projected to decline to -52 Mt CO_2-e by 2030. The high rates of carbon sequestration in forest growth and soil carbon since 2021 are due to 3 consecutive La Niña events. Conditions have since normalised.

The LULUCF sector is projected to remain a net sink in 2035 of -50 Mt CO_2-e and in 2040 of -53 Mt CO_2-e. This is due to continued low rates of land-clearing, the policy of ending native forest harvesting

in Victoria and Western Australia as well as the sequestration activities supported by the ACCU Scheme.

More action is needed to achieve Australia's 2035 target

In September 2025, the Australian Government announced the nation's 2035 target under the Paris Agreement of 62–70% below 2005 levels by 2035. The government also released the Net Zero Plan with 6 supporting sector plans, and modelling undertaken by the Australian Treasury. The sector plans and modelling outline the decarbonisation opportunities and challenges as well as the key policy levers the government is using to meet the 2035 target and beyond.

The emissions projections reflect currently implemented policies and exclude policies announced alongside the Net Zero Plan or potential future measures. As such, the 2025 projections show that from 2030 to 2035, emissions are projected to reduce by 9% – a slower rate than the 5 years prior.

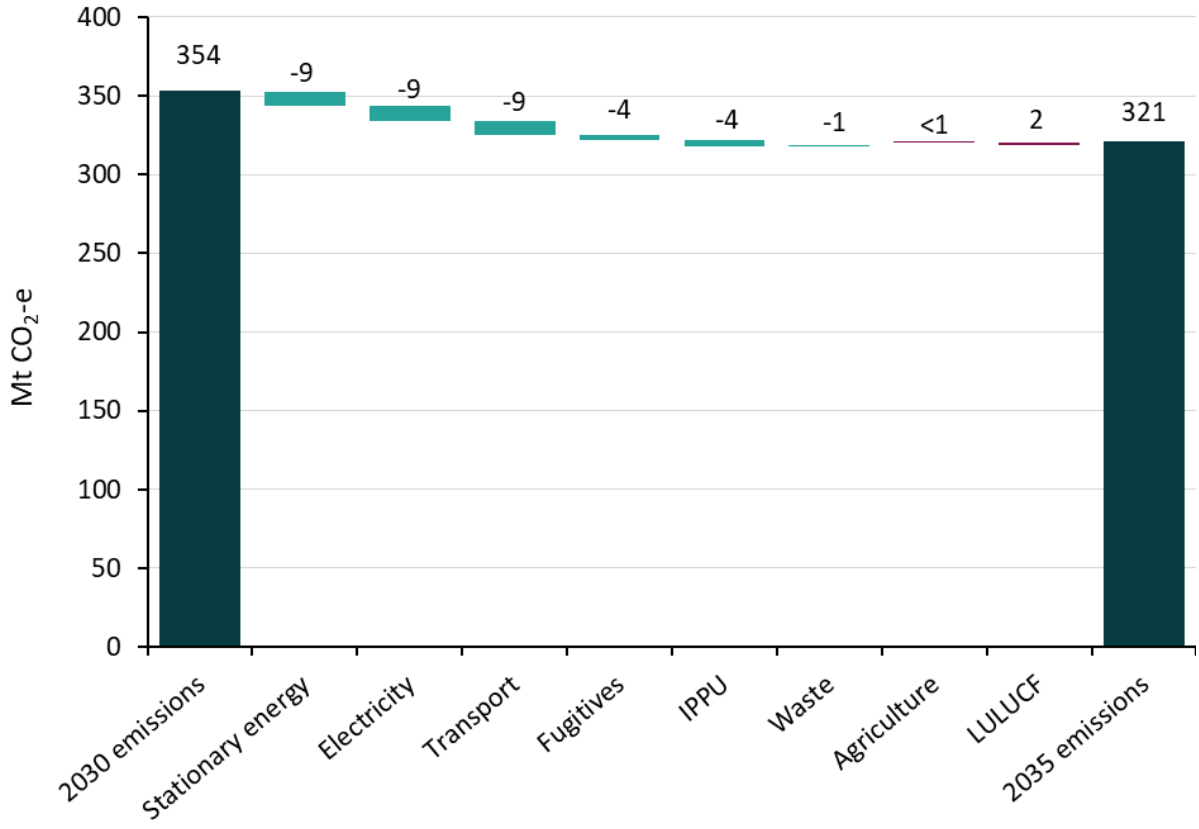


Figure 8 – Change in emissions projections from 2030 to 2035 by sector, Mt CO_2-e

In the electricity sector emissions continue to decline albeit more slowly after 2030. The Victorian Renewable Energy Target of 95% by 2035 and the closure of coal fired power stations in Victoria, NSW and Queensland contribute to emissions reductions. However, emissions reductions slow as increasing electricity demand from electrification and data centres is being met by a combination of fossil fuel and renewable generation. Electricity emissions are projected to fall from 55 Mt CO_2-e in 2030 to 46 Mt CO_2-e in 2035 and 45 Mt CO_2-e in 2040.

Emissions are projected to reduce in the stationary energy, fugitives, IPPU and transport sectors after 2030. Emissions are projected to reduce as a result of ongoing decarbonisation activities at Safeguard

facilities. Transport emissions are projected to decline as more energy-efficient vehicles begin to dominate the market.

The projections assume Safeguard baselines reduce at a rate of 4.9% each year to 2030 and then the indicative rate of 3.285% for each following year. The projections also reflect the NVES emission targets up to 2029 and then assume efficiency improvements after 2029 will revert to historical trend. Both the Safeguard Mechanism and NVES are subject to statutory reviews in 2026–27 and in 2026 respectively to ensure the policy setting are appropriately calibrated to the 2035 target.

The policy foundations have been laid; effective implementation and sustained action by all is crucial to achieving our targets

The 2025 emissions projections show that with currently implemented government policies, Australia could achieve the 2030 target in budget terms and be very close to achieving the 2030 point-in-time target. It also shows that more effort is needed to achieve Australia's 2035 target. The Net Zero Plan and 6 sector plans set outs how the policy foundations have been laid to support further emissions reductions through the set-do-review-refine framework. This includes refinement of existing measures like the upcoming statutory reviews of the Safeguard Mechanism and NVES, to ensure their settings are calibrated to meet the 2035 target and the review of the NEM wholesale market settings. The Net Zero Plan includes 5 decarbonisation priorities for:

- clean electricity across the economy
- lowering emissions by electrification and efficiency
- expanding clean fuel use
- accelerating new technologies
- net carbon removals scaled-up.

These emissions projections are an important part of the framework enabling us to track progress and continue to refine policies over time. Actual emissions outcomes will depend on a range of factors, including the scale and pace of global action and technology development, as well as effective implementation of policies. The emissions projections assume existing policies will be implemented as announced. They do not attempt to forecast the impact of potential frictions to the successful delivery of these policies, nor do they anticipate future policy developments or technology changes. More information on factors that influence actual emissions outcomes is set out in the statement of uncertainty.

Federal government policies, state and territory initiatives, as well as actions by companies and individuals are needed together to continue to drive emission reductions to 2035 and beyond. The early success of the Cheaper Home Batteries Program which commenced on 1 July 2025 shows communities are embracing the benefits of clean energy and lower energy costs to help reduce emissions. The actions needed to reach the 2035 target require sustained efforts from all parts of the community and all levels of government.

Other metrics

Metrics such as emissions per capita and emissions per unit of gross domestic product (GDP) provide additional insights into Australia's emissions trends over time. Since 2005, Australia's emissions have fallen while the economy and population have grown. The emissions intensity of the economy is

projected to fall by 69% between 2005 and 2030 and by 80% between 2005 and 2040. Emissions per person are projected to fall by 60% between 2005 and 2030 and by 71% between 2005 and 2040.

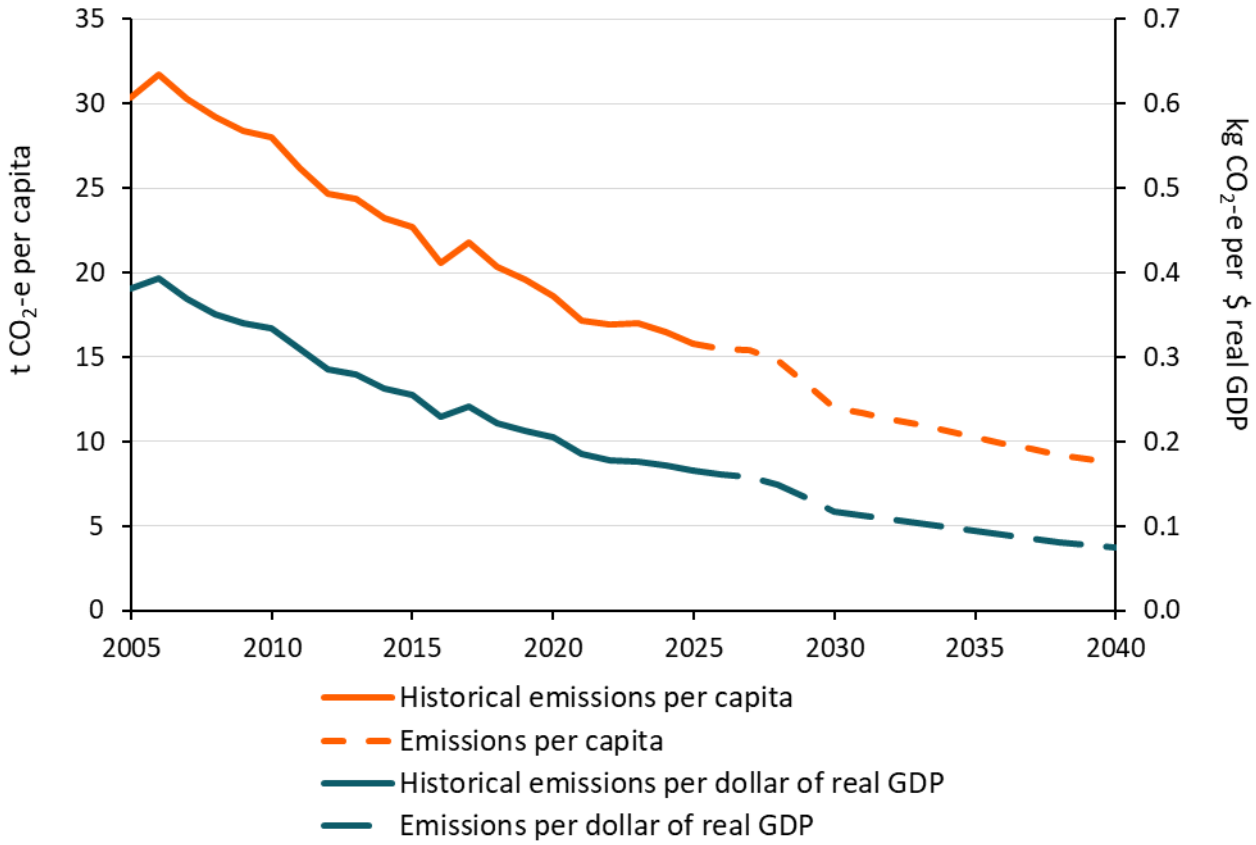


Figure 9 – Australia's projected emissions per capita and the projected emissions intensity of the economy, 2005 to 2040

Changes since the 2024 emissions projections

The emissions projections have been updated to include the latest economic and activity data, adjusted forecasts of domestic and global demand for Australian energy, resources and agricultural products, as well as the latest information on technology costs, uptake and deployment.

The 2025 emissions projections do not include a 'with additional measures' scenario.

Projected emissions in the baseline scenario in 2030 have increased from 352 Mt CO_2-e in the 2024 emissions projections to 354 Mt CO_2-e in the 2025 emissions projections. Tracking towards the target has also changed from 42.6% to 42% below 2005 levels in 2030. In 2035, emissions in the baseline scenario are projected to be 20 Mt CO_2-e higher compared to the 2024 emissions projections; changing from 51% to 48% below 2005 levels in 2035.

New and updated national and state/territory policies have been included in the emissions projections. This covers the further expansion of the CIS from 32 GW to 40 GW and the Cheaper Home Batteries Program, as well as changes to electricity policy following the change of government in Queensland.

Baseline emissions from the electricity sector are lower when compared to the 2024 emissions projections in 2030, but higher in 2035. Unlike the 2024 projections, the 2025 emissions projections do not include the Queensland renewable energy targets for 2030, 2032 and 2035 or the previous

state government's Energy and Jobs Plan[4] which included an early coal closure schedule. The increase in electricity emissions compared to last year's projections from 2035 to 2040 reflect changes to energy policy in Queensland and an assumed higher demand forecast in the NEM.

The LULUCF net sink is projected to be smaller in 2030 and 2035 compared to the 2024 emissions projections. This is because of new data relating to the change in the net sink following three consecutive La Nina events as well as methodological improvements, including to the savanna fire modelling in the National Greenhouse Gas Inventory.

Baseline emissions from the stationary energy sector and fugitives sector are together 1 Mt CO_2-e lower in 2030 and 6 Mt CO_2-e higher in 2035 compared to the 2024 emissions projections baseline. The difference is broadly due to changes in production forecasts and lower assumed on-site emissions reductions at Safeguard facilities reflecting updated analysis of technology uptake.

Waste and IPPU emissions are unchanged in 2030 and 1 Mt CO_2-e lower in 2035 between the 2024 and 2025 baseline emissions projections.

Somewhat offsetting the increase in emissions, projected baseline emissions in the agriculture and transport sectors are lower in 2030 and 2035 compared with the 2024 emissions projections. In agriculture this is primarily due to a new Australian-specific methane equation for enteric fermentation emissions from feedlot cattle adopted in the most recent National Inventory Report. The decrease in emissions in transport is mainly from lower than projected emissions in 2025 with the change flowing through the emissions projections.

Table 6 – Comparison between 2024 and 2025 projections of emissions in 2030, by sector, Mt CO_2-e

Sector	2024 projections	2025 projections	Difference
Electricity	59	55	-3
Stationary energy	93	93	<-1
Transport	95	92	-3
Fugitives	45	44	-1
Industrial processes and product use	27	27	<-1
Agriculture	83	81	-3
Waste	13	13	<-1
Land use, land-use change and forestry	-64	-52	12
Total	**352**	**354**	**1**

Note: totals may not sum due to rounding.
Emissions projections results show the baseline scenario.

[4] The 2025 emissions projections reflect Queensland energy policy as understood at July 2025. While the emissions projections were prepared prior to the announcement of Gladstone Power Station's potential closure in 2029 and the release of Queensland's Energy Roadmap 2025 on 10 October 2025, the projections include coal closures in Queensland based on technical life.

Table 7 – Comparison between 2024 and 2025 projections of emissions in 2035, by sector, Mt CO_2-e

Sector	2024 projections	2025 projections	Difference
Electricity	37	46	10
Stationary energy	80	84	4
Transport	87	83	-4
Fugitives	38	41	3
Industrial processes and product use	24	23	-1
Agriculture	84	81	-3
Waste	13	12	-1
Land use, land-use change and forestry	-61	-50	11
Total	**301**	**321**	**20**

Note: totals may not sum due to rounding.
Emissions projections results show the baseline scenario.

Cross cutting policies

This section outlines the emissions impact of policies that target multiple sectors of the economy: the Safeguard Mechanism and the ACCU Scheme.

The Safeguard Mechanism

The Safeguard Mechanism provides a legislated framework that sets limits, known as baselines, on the net emissions of large industrial facilities. The Safeguard Mechanism applies to facilities emitting more than 100,000 t CO_2-e of scope 1 emissions each year, including in the mining, oil and gas production, manufacturing, transport and waste sectors.

Box 1 – Safeguard Mechanism – Baselines

Safeguard baselines

Safeguard baselines decline by the default rate of 4.9% each year to 2030. Safeguard baselines are set based on a production-adjusted (emissions intensity) framework. An indicative default decline rate of 3.285% from 2031 has been included in the Safeguard Rule and this is what is assumed in these emissions projections from 2031. The actual decline rate after 2030 will be set in 5-year blocks, consistent with updates to Australia's NDC under the Paris Agreement and on a trajectory to net zero by 2050. The actual baseline decline rate for 2031–35 will be informed by the forthcoming 2026–27 review of the Safeguard Mechanism.

The default decline rate applies to all Safeguard facilities, unless a lower rate has been approved for a trade-exposed baseline-adjusted (TEBA) facility. Estimates of TEBA allowances have been incorporated in the Safeguard baseline estimates in these emissions projections.

Baselines for existing facilities are set using a hybrid model initially weighted towards the use of site-specific emissions intensity values, transitioning to industry average emissions intensity values.

All new facilities are given baselines set at international best practice levels, adapted for an Australian context. The baseline for reservoir CO_2 emissions of new gas fields supplying liquefied natural gas facilities is zero. Shale gas projects, including those in the Beetaloo Basin, must have net zero scope 1 emissions from entry.

Facilities that fall below the coverage threshold of 100,000 t CO_2-e can choose to continue to receive Safeguard Mechanism Credits (SMCs) for up to 10 years if they meet the criteria, noting that their baselines will continue to decline if they opt-in.

The Australian Government's reforms to the Safeguard Mechanism require these large industrial facilities to reduce their net emissions. Facilities can meet their Safeguard obligations through a combination of on-site emission reductions at the facility (for example, through efficiency

improvements or technology upgrades) and the surrender of ACCUs or Safeguard Mechanism credits (SMCs).[5] These reforms commenced on 1 July 2023.

Gross (on-site) emissions trends

In 2024[6] there were 219 Safeguard facilities across the mining, manufacturing, transport, oil, gas and waste sectors. The gross emissions[7] of these facilities were 136 Mt CO_2-e in 2024, a decline of 3 Mt CO_2-e compared with 2023. The gross emissions of Safeguard facilities are projected to decline by 10% to 122 Mt CO_2-e by 2030, and by 23% to 104 Mt CO_2-e by 2035. From 2024 to 2040 gross emissions are projected to decline by 38% to 84 Mt CO_2-e. Figure 10 shows historical emissions and projected Reference Safeguard emissions[8] and gross emissions from Safeguard facilities from 2017 to 2040.

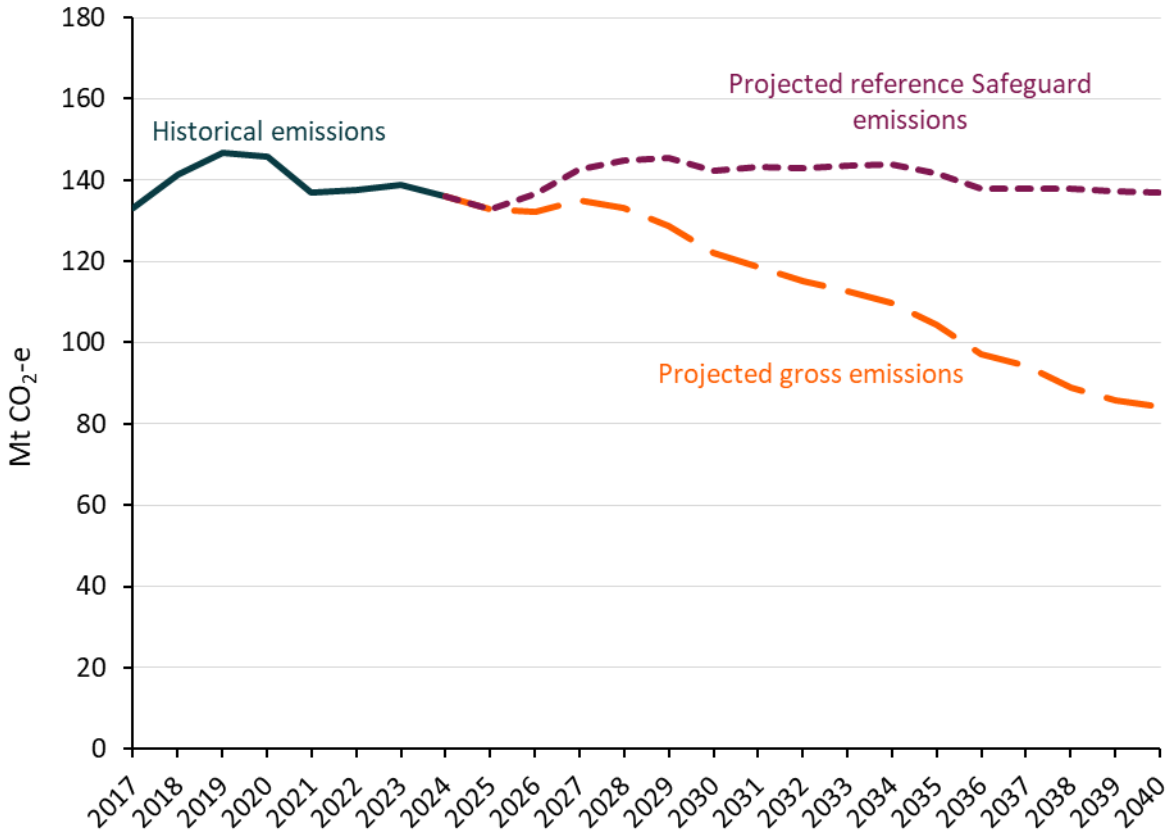


Figure 10 – Aggregate Safeguard facilities emissions, 2017 to 2040, Mt CO_2-e [9]

[5] Facilities generate tradeable SMCs when their gross emissions are below their Safeguard baseline.

[6] 2024 is the latest finalised data published by the Clean Energy Regulator (CER).

[7] Gross emissions are defined as on-site emissions occurring at Safeguard facilities as reported to the CER under the National Greenhouse and Energy Reporting (NGER) Scheme.

[8] Reference Safeguard emissions are estimated by holding the emissions intensity of production fixed at current levels.

[9] The historical Safeguard emissions data (2017–2024) is sourced from information reported to the CER under the NGER Scheme. Historical emissions in 2017–2020 have been adjusted to reflect the 100-year global warming potential values from the IPCC Fifth Assessment Report (AR5) to ensure time-series consistency. Therefore, these values may differ from Safeguard facility reported emissions published by the CER. The data presented for 2025 is preliminary Safeguard emissions estimates published by the CER in November 2025. Final covered emissions will be published by the CER in April 2026.

Safeguard facilities are projected to achieve 19 Mt CO_2-e of on-site emissions reductions in 2030, 35 Mt CO_2-e in 2035 and 51 Mt CO_2-e in 2040, relative to reference Safeguard emissions (Table 8).

Facilities are assumed to progressively implement on-site emissions reductions, initially prioritising low-cost process improvements and smaller equipment upgrades, where available, before gradually investing in larger-scale projects. Emissions reduction technology projects are outlined in the subsequent sectoral chapters of this report and include efficiency improvements, electrification, switching to renewable energy, methane capture and oxidation, and carbon capture and storage (CCS). Decisions to implement emissions reduction projects are driven by a number of factors including the suitability of a technology at a particular site, the age and remaining lifespan of the facility, the emissions intensity of the facility, and the relative economics of on-site emissions reduction and the price of ACCUs and SMCs.

Figure 11 and Table 8 shows projected on-site emissions reductions disaggregated by Intergovernmental Panel on Climate Change (IPCC) sector, based on current modelling assumptions. Stationary energy accounts for the largest share of on-site emission reductions, followed by the fugitives and electricity sectors. These tables and charts show projected on-site emissions reductions including those at facilities where emissions temporarily fall under the Safeguard Mechanism threshold of 100,000 t CO_2-e due to changes in production.

Table 8 – On-site emissions reductions by IPCC sector, Mt CO_2-e

	2030	**2035**	**2040**	**2026–2040**
Electricity	3	5	6	60
Stationary energy	6	13	19	151
Transport	1	3	5	34
Fugitives	7	12	15	144
Oil and gas fugitives	*3*	*6*	*8*	*73*
Coal fugitives	*4*	*6*	*8*	*71*
Industrial processes and product use	2	3	5	40
Waste	<1	<1	<1	1
Total	**19**	**35**	**51**	**430**

Note: totals may not sum due to rounding.

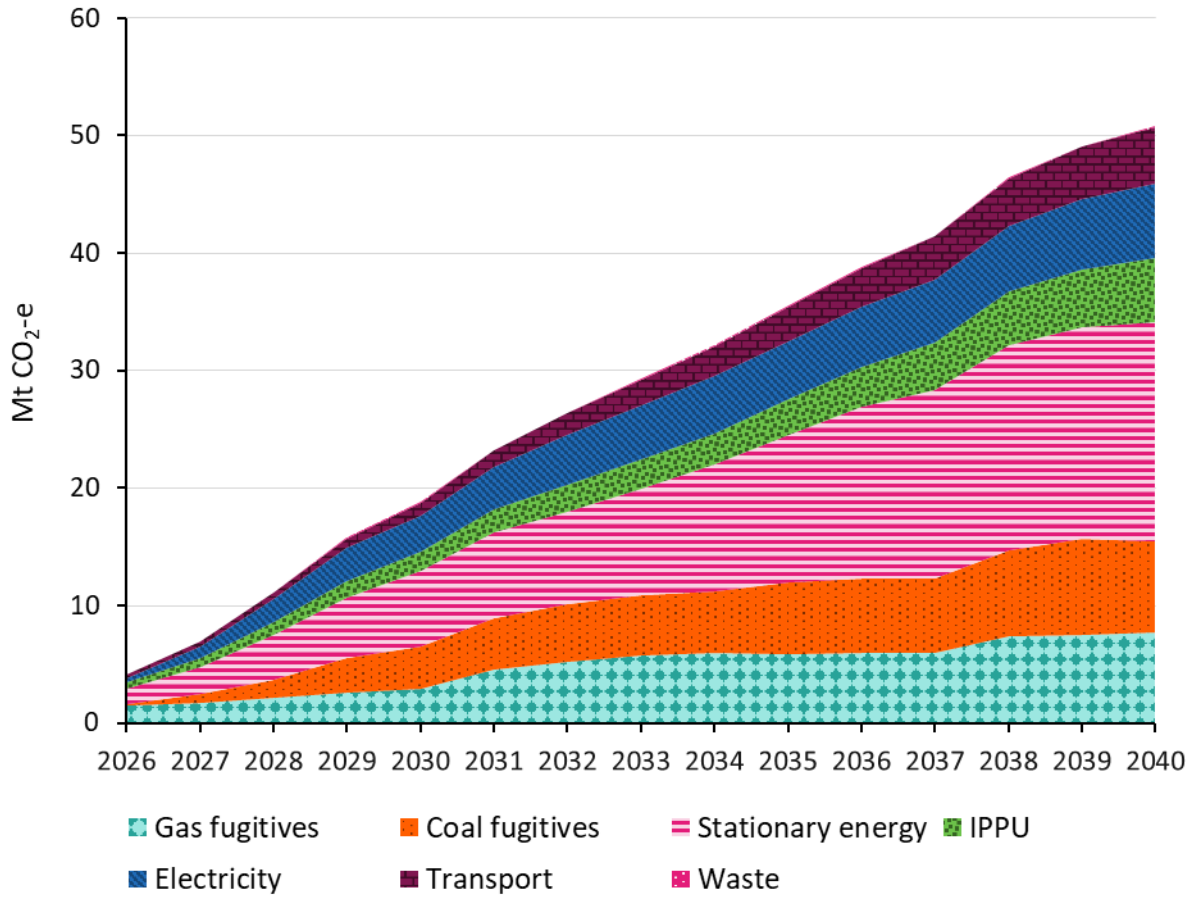


Figure 11 – On-site emissions reduction by Intergovernmental Panel on Climate Change (IPCC) sector, 2026 to 2040, Mt CO_2-e

The adoption of specific abatement technologies will lead to a change in the type and/or quantity of fuel used in Safeguard facilities. For example, electrification will increase the demand for electricity while decreasing the consumption of diesel, coal, or natural gas, depending on the technology being replaced. Another example is the switch from coal combustion to natural gas in the alumina industry, which will increase the demand for gas. While some coal-to-gas switching is anticipated, overall projections indicate a net reduction in natural gas use across Safeguard facilities. Improvements in energy efficiency will result in reduced fuel consumption.

The 2025 emissions projections considered changes in 16 different types of fuel across Safeguard facilities as a result of on-site abatement actions. Figure 12 shows a projected decline in diesel, natural gas, coal and aviation turbine fuel consumption, while renewable, grid and off-grid electricity, green hydrogen, biofuel and sustainable aviation fuel (SAF) consumption is projected to increase. Along with the transition to less emission-intensive fuels, on-site emissions reduction activities will result in enhanced energy performance, with net energy savings projected to reach 140 PJ by 2030, 263 PJ by 2035 and 335 PJ by 2040.

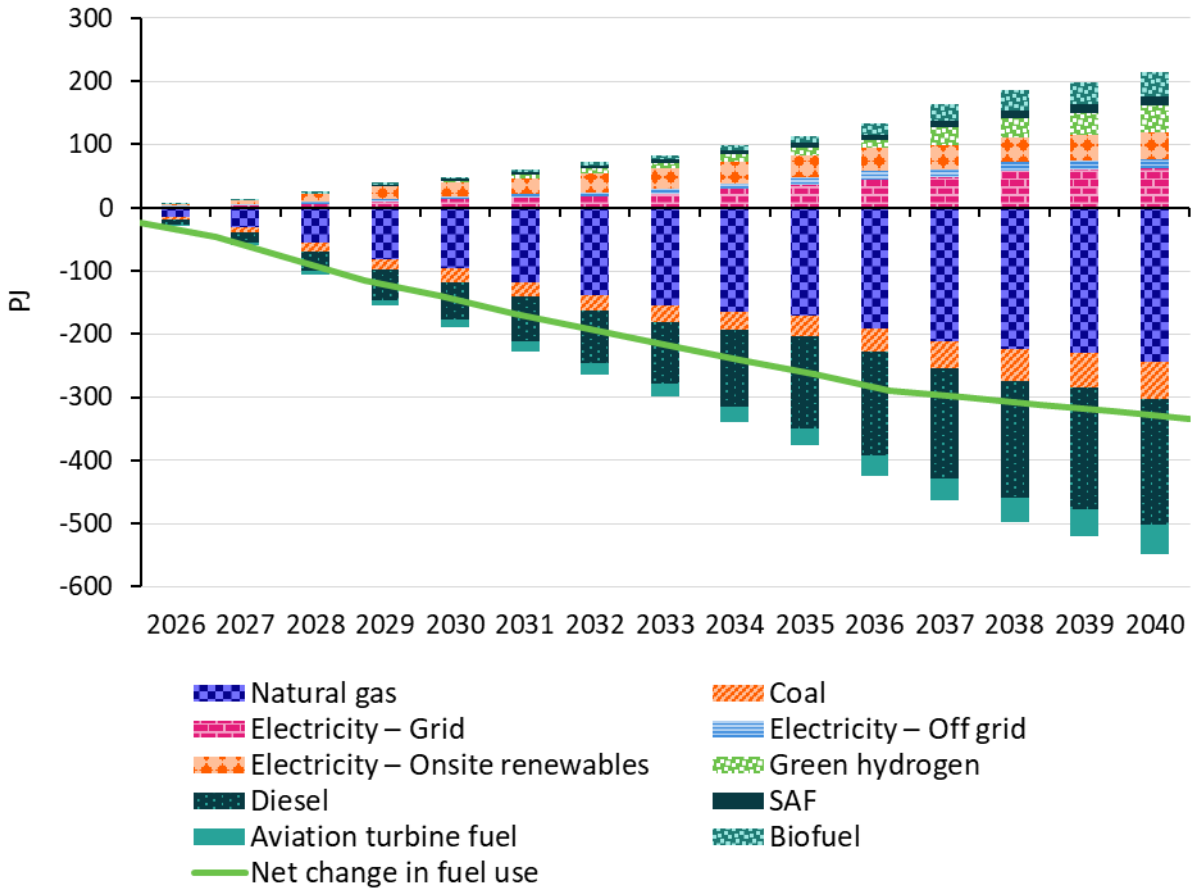


Figure 12 – Change in fuel use across Safeguard facilities due to on-site abatement action, 2026 to 2040, PJ
Notes:
'Electricity – Grid' in the chart refers to the change in electricity use from major Australian grids (NEM, WEM, NWIS, DKIS).
'Electricity – Off grid' in the chart refers to the change in electricity use from smaller, unconnected networks such as microgrids or individual dedicated power plants.
'Electricity – Onsite renewables' in the chart refers to the change in electricity use from on-site renewables. All facilities implementing renewables to displace on-site power generation are assumed to do so through on-site renewables rather than grid connections or Power Purchase Agreements (PPAs).

Demand for units by Safeguard facilities

As part of the Safeguard Mechanism's compliance arrangements, facilities can surrender ACCUs and SMCs to meet their baselines. SMCs are generated when a facility's on-site emissions are below their baseline. Safeguard facilities can surrender SMCs to meet their own Safeguard compliance obligations or sell the SMCs to other Safeguard facilities. Safeguard facilities are projected to generate 6 million SMCs in 2030, 3 million SMCs in 2035, and 1 million SMCs in 2040 (Figure 13).

In addition to the use of SMCs generated by Safeguard facilities, it is projected that there will be additional net demand for units to meet compliance obligations. Net demand for units[10] is projected to be 26 million units in 2030, 35 million units in 2035, and 39 million units in 2040. These units are predominantly ACCUs. In addition, former Safeguard facilities that are projected to fall under the

[10] Net demand for units are met by ACCUs and SMCs generated by former Safeguard facilities that have fallen under the 100,000 t CO_2-e threshold.

100,000 t CO_2-e threshold and opt-in to continue receiving credits are projected to generate about 1 million SMCs in both 2030 and 2035, increasing to around 2 million SMCs by 2040 (Figure 13).

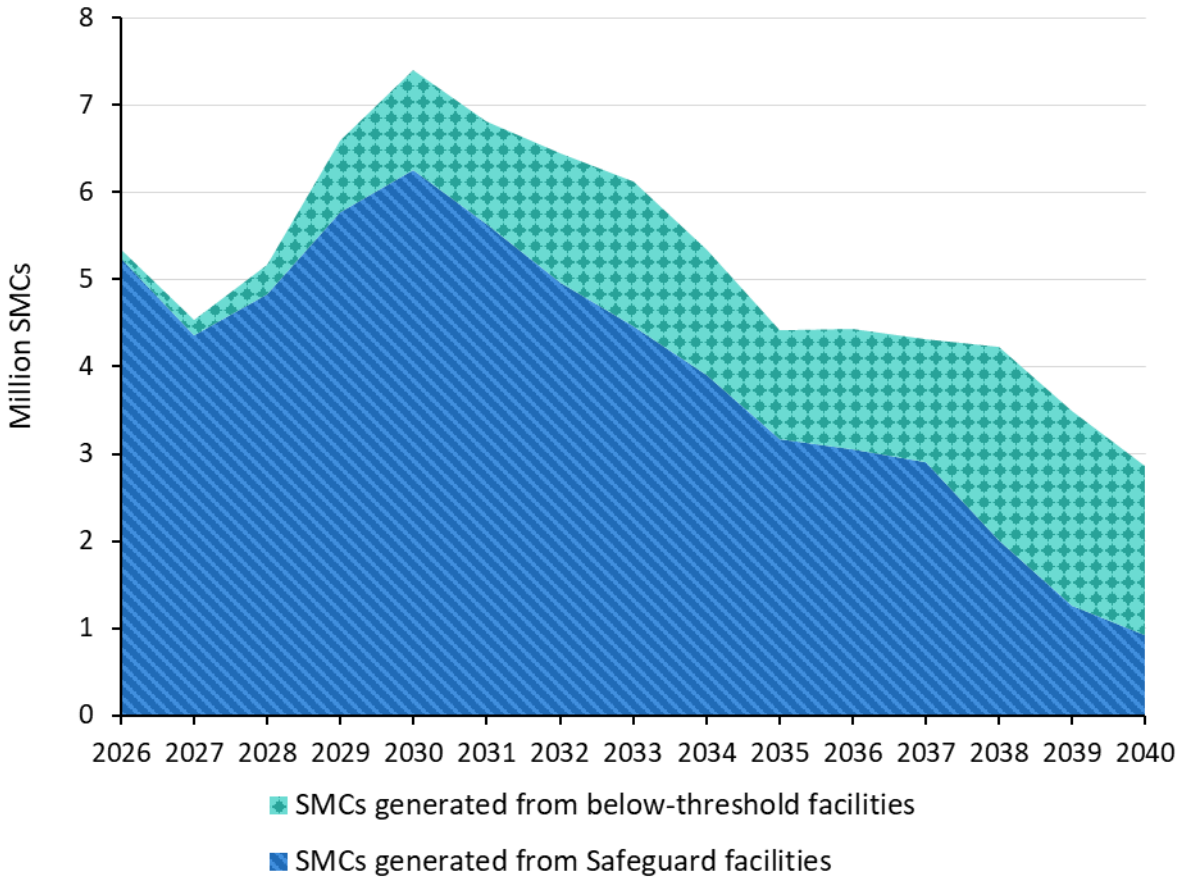


Figure 13 – Projected SMC generation, 2026 to 2040, million SMCs

Net emissions[11] from Safeguard facilities are projected to be 90 Mt CO_2-e in 2030. The projections indicate that all 2030 Safeguard targets will be met. Further details on the Safeguard targets are provided in Appendix E. The abatement task (the difference between Reference Safeguard emissions and baselines) is met through a combination of on-site abatement and net demand for units as outlined in Figure 14 and Table 9.

[11] Net emissions reflect the covered emissions of Safeguard facilities, adjusted for the surrender of ACCUs and SMCs, as well as ACCU add backs and deemed surrenders.

Table 9 – Safeguard emissions, on-site emission reductions and net demand for units, Mt CO_2-e

	2030	2035	2040	2026–2040
Reference Safeguard emissions [a]	**142**	**142**	**137**	**2,113**
On-site emission reductions [b]	-19	-35	-51	-427
Gross emissions Safeguard-covered facilities [c]	**122**	**104**	**84**	**1,660**
Net demand for units	-26	-35	-39	-445
Safeguard aggregate baselines [d]	**96**	**69**	**45**	**1,215**
Safeguard net emissions	**90**	**66**	**44**	**1,155**

Notes:
Totals may not sum due to rounding.
[a] Reference Safeguard emissions are estimated by holding the emissions intensity of production fixed at current levels.
[b] 'On-site emission reductions' refer to aggregate on-site emission reductions from Safeguard facilities with Reference Safeguard emissions above 100,000 tonnes CO_2-e in a given year. These totals may differ from those presented in Table 8 and Figure 11, which also include projected on-site reductions at facilities that may temporarily fall below the Safeguard Mechanism threshold of 100,000 tonnes CO_2-e due to fluctuations in production.
[c] 'Gross emissions at Safeguard-covered facilities' are aggregate on-site emissions of Safeguard facilities that remain above the 100,000 tonnes CO_2-e threshold after on-site emissions reductions.
[d] Safeguard aggregate baselines are the sum of facility-level baselines.

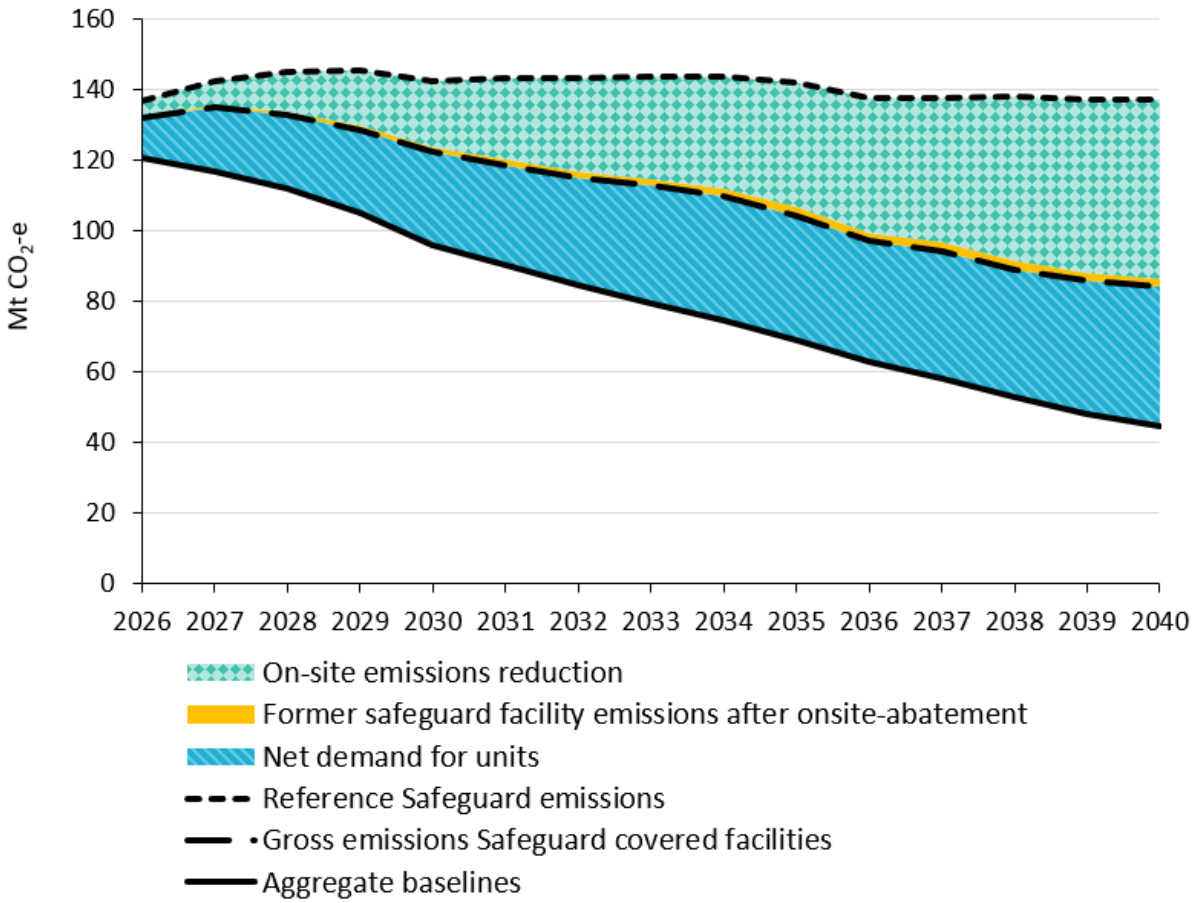


Figure 14 – Reference Safeguard emissions, gross emissions, on-site emissions reductions and net demand for units, 2026 to 2040, Mt CO_2-e

Comparison to previous projections

Compared to the 2024 projections, gross emissions from Safeguard facilities are expected to be higher by 1 Mt CO_2-e in 2030, increasing to 8 Mt CO_2-e higher by 2035, and 9 Mt CO_2-e higher by 2040.

The higher projected gross emissions are primarily due to a reduction in estimated on-site abatement. This reflects updated analysis of technology uptake and revised abatement estimates for several key technologies, including direct reduced iron (DRI), battery haulage trucks with trolley assist, biodiesel use in mining machinery, and natural gas replacing coal in alumina refining. These downward revisions are partially offset by improved projections for other technologies, such as autonomous haulage systems, biochar as a coal reductant, and fuel switching in cement production (e.g. natural gas replacing coal).

On-site emissions reductions from technologies already deployed – such as the coal-to-gas boiler conversion at Worsley Alumina – are excluded from the 2025 projected on-site abatement figures, as their impact is now embedded in the Reference Safeguard emissions.

Aggregate baselines for Safeguard facilities are projected to remain unchanged in 2030 but increase by 3 Mt CO_2-e in 2035 and 1 Mt CO_2-e in 2040 compared to the previous projections. These changes are mainly driven by updated data and assumptions following the first year of the reformed Safeguard Mechanism.

Net demand for units is 2 million units higher in 2030, 5 million units higher in 2035 and 7 million units higher 2040 compared with the previous projections. This reflects an increase in gross emissions, which is only partially offset by slightly higher aggregate baselines for Safeguard facilities. SMC generation is projected to be 1 million units lower in 2030 and 2035 and 2 million units lower in 2040 when compared with the 2024 emissions projections. Net emissions are 2 Mt CO_2-e higher in 2030, 4 Mt CO_2-e higher in 2035, and 2 Mt CO_2-e higher in 2040 due to the increase in gross emissions and aggregate baselines for Safeguard facilities as described above.

In the 2025 projections, change in fuel use due to on-site abatement action is 31 PJ (petajoules) lower in 2030, and 19 PJ and 34 PJ lower in 2035 and 2040 respectively. Compared to the 2024 baseline projections, the updated projections indicate greater reductions in natural gas use and increased demand for grid electricity by Safeguard facilities. However, reductions in coal and diesel use are smaller, and projected demand for green hydrogen and biofuels is also lower than previously estimated.

The Australian Carbon Credit Unit Scheme

The ACCU Scheme offers landholders, communities, and businesses the opportunity to run projects within Australia that avoid the release of emissions or remove and sequester carbon from the atmosphere. Each ACCU represents one tonne of carbon dioxide equivalent (t CO_2-e) stored or avoided by a project. ACCUs are a tradeable financial product that can be bought or sold. ACCUs can be used by Safeguard facilities to meet their obligations under the Safeguard Mechanism, voluntarily retired under the Climate Active program or used for other purposes.

ACCU projects can reduce emissions or sequester carbon from a range of activities. To date, the majority of projects have been undertaken in the LULUCF sector to increase sequestration or reduce emissions including from vegetation and savanna fire management projects.

Increasing ACCU demand has a positive impact on prices and sends a price signal to support increased supply. Over the projections period additional ACCU projects are anticipated to be registered resulting in more ACCUs generated. The projections take account of the time required for new projects to be established and for abatement to occur.

ACCU demand and issuance

ACCU demand[12] is projected to increase over the projections period reaching 25 million in 2030, 35 million in 2035, and 37 million in 2040 (Figure 15). The primary source of increased demand is the Safeguard Mechanism where companies are projected to use ACCUs to help meet their obligations in addition to on-site abatement and SMCs. Deliveries of ACCUs under government Carbon Abatement Contracts and voluntary cancellation of ACCUs are projected to be smaller sources of demand.

The annual issuance of ACCUs is projected to grow steadily from 21 million ACCUs in 2025 to 22 million in 2030, 31 million in 2035 and 38 million ACCUs in 2040, as demand increases. Most ACCUs are currently generated from the land sector. This is projected to continue with the largest sources of new ACCU issuance coming from vegetation projects. Annual issuance will likely continue to change as new methods are developed.

ACCUs do not need to be used in the year they are issued and can be held by market participants for future use or sale. Unit holdings could comprise ACCUs or SMCs and are currently tracked through the Australian National Registry of Emissions Units. Unit holdings were 59 million at the end of the 2025 financial year.[13] ACCU issuance is currently greater than demand and this is projected to continue until 2027, increasing the stock of unit holdings. From 2028 to 2036 demand is projected to be higher than issuance[14], however this shortfall can be met through existing unit holdings while maintaining a stock of at least 46 million units (more than a year's total demand) throughout the projections period (Figure 15).

[12] 'ACCU demand' is defined as the total cancellation of ACCUs to meet compliance obligations in particular under the Safeguard Mechanism, delivery of ACCUs to the Commonwealth against Carbon Abatement Contracts, and voluntary cancellation of ACCUs.

[13] CER 2025, Quarterly Carbon Market Report June Quarter 2025, Clean Energy Regulator.

[14] As new methods are developed this is likely to influence supply of ACCUs in the long-term.

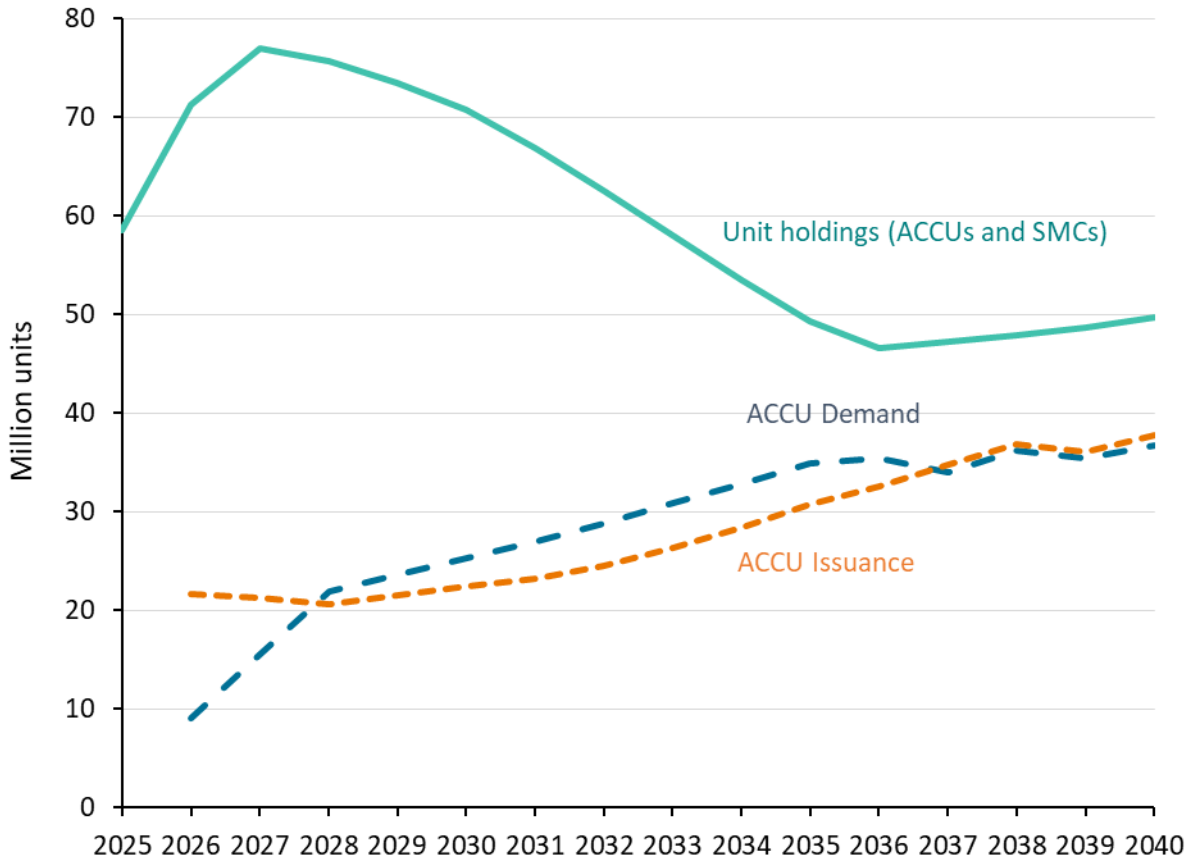


Figure 15 – Projected ACCU issuance, demand and unit holdings, 2025 to 2040, million units

Comparison to previous years

Compared to the 2024 projections, ACCU demand is projected to be 2 million units lower in 2030, 4 million units higher in 2035 and 7 million units higher in 2040. The difference in 2035 and 2040 is due to comparatively higher demand from Safeguard facilities due to lower projected on-site abatement and less projected generation of SMCs.

ACCU supply is projected to be 2 million units lower in 2030 and 1 million units lower in 2035 as the current pipeline of projects are projected to deliver fewer ACCUs than assumed in the 2024 emissions projections. ACCU supply is projected to be 6 million units higher in 2040 compared to the previous projections as supply increases over time to meet demand.

The resulting unit holdings are projected to be higher than the 2024 projections reaching a peak of 77 million units in 2027, compared with a maximum of 52 million units in the 2024 projections. The trough is projected to be 47 million units in 2036, compared with 38 million in the 2024 projections.

The 2025 projections have applied a one-year lag to unit demand from the Safeguard Mechanism to more accurately project the year in which the units will be cancelled. For example, ACCU liabilities that Safeguard facilities accrue in the 2025 financial year will result in the cancellation of ACCUs or SMCs by February 2026, during the 2026 financial year. This has contributed to the higher projected unit holdings compared with the 2024 projections.

Sectoral trends

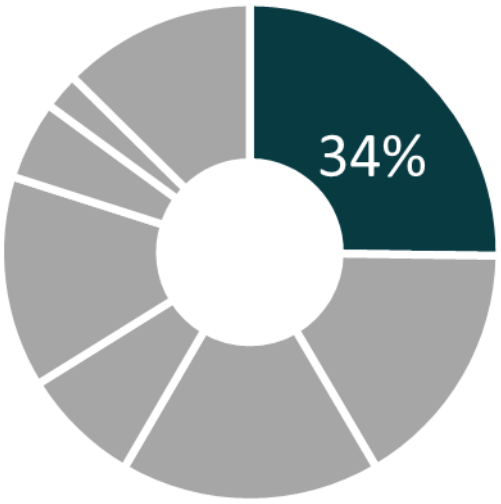
This section sets out the emissions projections associated with each sector under the emissions projections. The sector breakdown is consistent with the international guidelines for reporting under the UNFCCC. These sectors are described in Table 10.

Table 10 – Sector coverage

Sector	Coverage
Electricity	Emissions from the combustion of fuels to generate electricity
Stationary energy	Emissions from the combustion of fuels to generate steam, heat or pressure, other than for electricity generation and transport
Transport	Emissions from the combustion of fuels for transportation within Australia
Fugitive emissions from fuels	Emissions released during the extraction, processing and delivery of fossil fuels
Industrial processes and product use	Emissions from non-energy related industrial production and processes. Includes emissions from HFCs, which are used in refrigerants and air conditioning
Agriculture	Emissions from livestock, manure management, crop residue, rice cultivation, application of nitrogen to soils, and burning of agricultural residues
Waste	Emissions from the disposal of solid waste and wastewater
Land use, land-use change and forestry	Emissions and sequestration from activities occurring on forest lands, forests converted to other land uses, grasslands, croplands, wetlands, settlements, and harvested wood products

Electricity

34% of Australia's emissions in 2025
↓ 49 Mt CO_2-e 2005 to 2025
↓ 92 Mt CO_2-e 2025 to 2030



Emissions from electricity generation are the result of fuel combusted for electricity production in the NEM, Western Australia's Wholesale Electricity Market (WEM), other small grids and off-grid networks.

The NEM is the electricity market covering the east coast of Australia. It contains 5 regions – Queensland, NSW including the ACT, Victoria, Tasmania, and South Australia. The NEM represents approximately 80% of electricity generation in Australia. The WEM operates in the south-west of Australia. The other smaller grids are the Darwin–Katherine Interconnected System (DKIS), the North-West Interconnected System (NWIS) and Mt Isa. Off-grid electricity generation which includes micro-grids, such as Alice Springs, accounts for approximately 9% of national generation.

Full market modelling is completed for the NEM, WEM, and DKIS grids as part of the emissions projections.

Emissions trends

Emissions from electricity generation peaked in 2009 and have fallen each year since 2016, as renewable generation enters the market and displaces fossil fuel fired generation. Electricity emissions are estimated to be 148 Mt CO_2-e in 2025 and are projected to decrease by 63% to 55 Mt CO_2-e in 2030. From 2025 to 2040 emissions decline by 70% to 45 Mt CO_2-e in 2040.

The decline in electricity emissions is driven by the projected continued decarbonisation of electricity generation across the country. The emissions projections assume the Australian Government's 82% renewable electricity generation target for on-grid electricity is met by 2030. The government continues to apply a range of policy levers to support the 82% renewable target including the recently expanded CIS, implementation of Renewable Energy Transformation Agreements, Cheaper Home Batteries Program, Rewiring the Nation and significant transmission expansion[15], and efforts to accelerate approvals processes. Through the CIS, the government seeks competitive tender bids for

[15] AEMO's 2024 ISP [PDF 4.1 MB] identifies $16 billion investment in uncommitted transmission through to 2050 will be required as part of the NEM transition, representing around 5,000 km of transmission lines.

variable renewable capacity and clean dispatchable capacity projects to deliver an additional 40 GW of capacity by 2030 and fill expected reliability gaps as ageing coal-fired power stations exit the market. A proportion of the total capacity under the expanded CIS is being allocated to specific jurisdictions through bilateral Renewable Energy Transformation Agreements, ensuring investment through the CIS complements investment under state systems. The CIS, along with state renewable targets and plans, will support delivering the government's 82% renewable electricity generation target for on-grid electricity (NEM [including Mt Isa], WEM, NWIS and DKIS) by 2030.

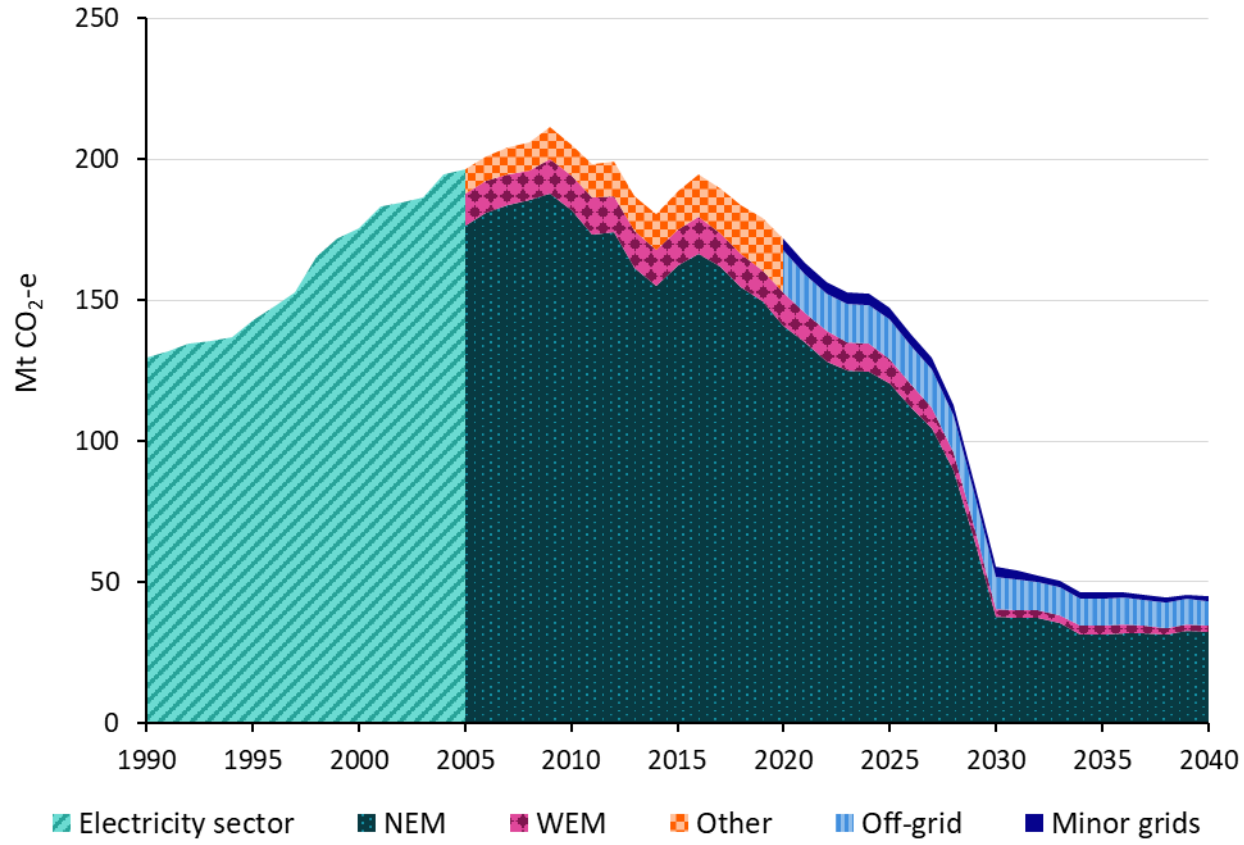


Figure 16 – Electricity emissions, 1990 to 2040, Mt CO_2-e

The NSW Electricity Infrastructure Roadmap[16] has been included in the emissions projections, along with state renewable energy targets in Tasmania, Victoria, and South Australia (Table 11). Victoria's Energy Storage Targets[17] and Victoria's Offshore Wind Targets[18] also contribute to the projected decline in electricity emissions in the NEM. The WEM sees additional deployment of storage over the projections period due to the WA Government's Residential Battery Scheme.

The Safeguard Mechanism reforms have flow on impacts to the electricity sector, which are reflected in the electricity sector emissions projections. It is assumed that some facilities covered by the Safeguard Mechanism will choose to reduce emissions through fuel switching and electrification, and this contributes to additional electricity demand. There is also on-site electricity abatement from

[16] The electricity emissions projections modelling assumptions were finalised prior to the updated target from 12 GW to 16 GW of renewable capacity by 2030 and from 28 GWh to 42 GWh of long-duration storage by 2034.

[17] Target of 2.6 GW of renewable energy storage capacity by 2030 and 6.3 GW by 2035.

[18] Offshore wind targets of 2 GW by 2032, 4 GW by 2035 and 9 GW by 2040.

Safeguard facilities through efficiency improvements like process optimisation, and use of renewables and batteries for primary generation. The increasing uptake of EVs, demand for onshore data centre capacity, and electrification of other parts of the economy are also projected to increase electricity demand from 2025 to 2040.

As demand grows out to 2040, so does the generation from renewable sources. A number of coal generators are projected to close over the period to 2040, lowering the emissions intensity of generation.[19]

Table 11 – Renewable energy targets included and assumed to be met in the projections, % [20]

	2027	2030	2035	2040
South Australia [21]	100%			
Victoria (VRET)		65%	95%	
Tasmania (TRET) [22]		150%		200%
Australia, on-grid		82%		

National Electricity Market (NEM)

Emissions in the NEM are projected to decrease from 121 Mt CO_2-e in 2025 to 38 Mt CO_2-e in 2030 and 32 Mt CO_2-e in 2040, a decrease of 88 Mt CO_2-e or 73% from 2025 to 2040. The share of renewable generation is projected to continue to grow to 84% in 2030. In 2040, renewable generation in the NEM is projected to reach 87% of total generation. Both milestones assume the rollout of new large scale transmission projects will be delivered on their announced timeline to enable connection of new generation into the grid.

Demand in the NEM

The electricity emissions projections use the Australian Energy Market Operator's (AEMO's) forecast of underlying electricity demand from the 2024 NEM Electricity Statement of Opportunities Step Change scenario with further adjustments.[23] The NEM is projected to see growth in electricity demand out to 2040 as demand associated with population growth and electrification is forecast to outweigh energy efficiency improvements. With the increasing use of artificial intelligence (AI) and

[19] The 2025 emissions projections reflect Queensland energy policy as understood at July 2025. While the emissions projections were prepared prior to the announcement of Gladstone Power Station's potential closure in 2029 and the release of Queensland's Energy Roadmap 2025 on 10 October 2025, the projections include coal closures in Queensland based on technical life.

[20] Renewable share is defined in this table as renewable generation (as generated) over total generation (excluding discharge from pumped hydro and batteries). The projections assume renewable build, including to meet state targets and plans, occur as announced.

[21] South Australia's net renewable energy target for 2027 calendar year accounts for exports. The target is formulated such that total exports must be greater than fossil-fuel generation from 2027 onwards.

[22] Tasmania's renewable energy target accounts for exports. The TRET is based on Tasmania's 2020 demand i.e. 15,750 GWh for the interim target of 150% by 2030, and 21,000 GWh for the 200% target by 2040.

[23] AEMO's electricity demand series is adjusted to account for the consumption of electricity from EVs, grid connected electrolyser demand and electrification consistent with modelling for the transport and stationary energy sectors in the projections, including in response to the Safeguard Mechanism reforms. It is also adjusted to account for the expected savings from current energy efficiency policies and measures, based on advice from DCCEEW.

cloud computing, Australia is expected to store and manage more data onshore, increasing demand for data centre facilities holding servers that store and process digital data. Demand from data centres is projected to represent around 6% of total demand in the NEM in 2030 and increase to 11% in 2040.

The electricity sector continues to be a key enabler for the decarbonisation of other sectors such as stationary energy and transport. However, with EVs starting from a low share of the national fleet, electricity consumption by EVs is projected to account for only 3% of total demand in the NEM in 2030 and 7% in 2040.

The projections also include new sources of electricity demand in the NEM in the form of electrolysers producing hydrogen.[24] This represents around 1% of total demand in the NEM in 2030 and 5% of total demand in 2040.

Interconnector projects such as CopperString 2032 contribute to additional demand in the NEM, connecting Mt Isa and Queensland's North West Minerals Province to the NEM by 2032.

Renewables in the NEM

From 2025 large-scale renewables are projected to enter the NEM in line with the Clean Energy Regulator (CER)'s large-scale projects pipeline, with new renewable capacity also projected to be built to deliver the CIS and to meet state renewable energy targets. The continued growth of rooftop photovoltaic (PV) capacity in the projection slows the uptake of utility scale solar due to competition in the middle of the day. Despite this, utility-scale solar capacity is projected to increase by 20 GW to 2040.

The NEM is projected to see renewable capacity, and pumped hydro and battery storage capacity, increase to 2040. Rooftop PV capacity contributes the most to renewable build out to 2040, with over 9 GW of rooftop solar build projected in each of the following 3 NEM states: NSW, Queensland, and Victoria. South Australia and Tasmania also see an increase in rooftop PV capacity, where export to the mainland is supported by the Marinus Link project. Wind capacity (including both onshore and offshore) is projected to more than triple by 2040, from approximately 13 GW in 2025 to 33 GW in 2030 and 43 GW in 2040. Small-scale battery storage installations are also projected to rise, with the ratio of small-scale batteries to rooftop system installations increasing from 2024 to 2040.

[24] The projections include some hydrogen electrolyser projects in CSIRO's HyResource database, which includes a list of hydrogen-related (industry) projects at different development stages in Australia.

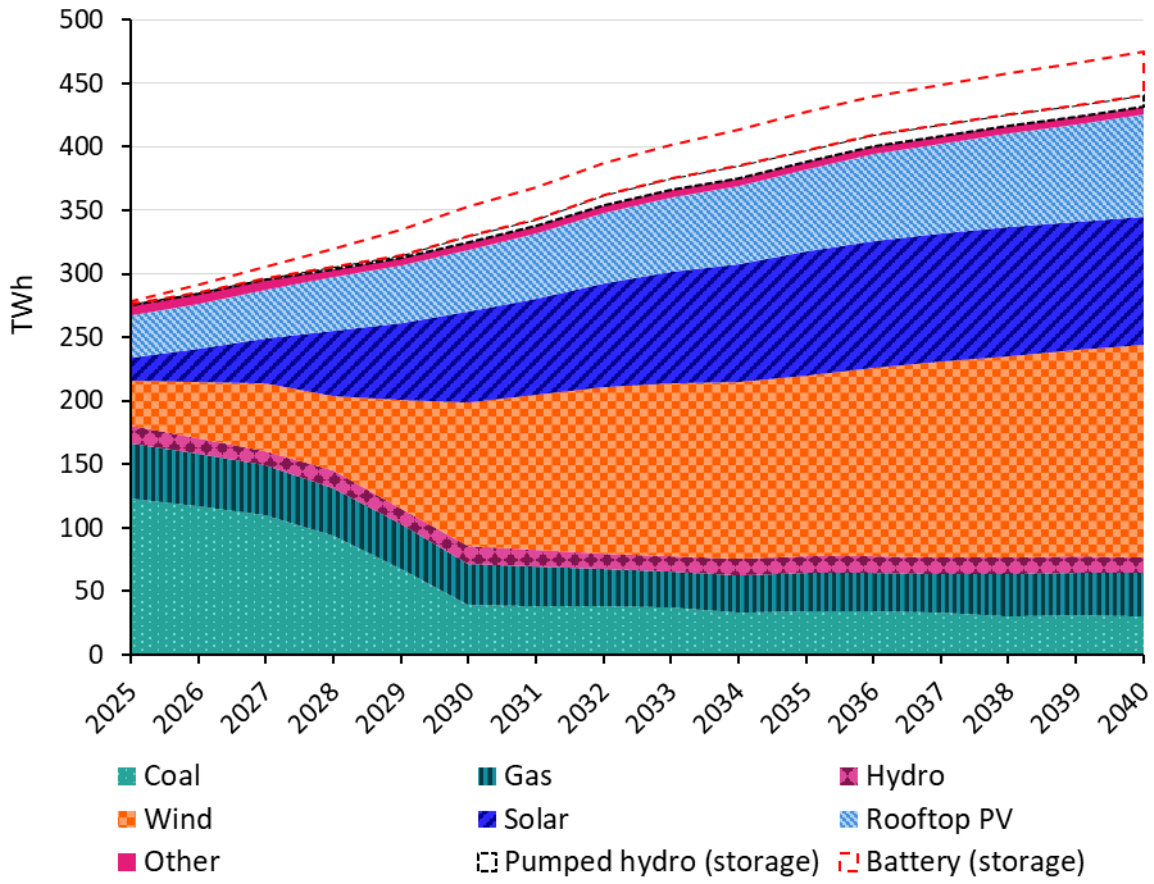


Figure 17 – Electricity generation mix in Australia, by fuel, 2025 to 2040, TWh [25]

Reliability in the NEM

Increasing intermittent renewable generation requires more firming capacity in the NEM, leading to gas-fired generation being maintained to 2040. Despite the grid being projected to reach 87% renewable generation in 2040, thermal generation continues to play an important role in managing peak demand when renewables output is low. Battery storage is also deployed, including through the Cheaper Home Battery Program and the CIS, with storage (batteries and pumped hydro) projected to represent 33 GW or 20% of installed capacity in the NEM in 2030, and 48 GW or 23% in 2040. The Cheaper Home Batteries program commenced on 1 July 2025 and uptake to date has exceeded expectations.

Interconnector and transmission capacity also supports the balancing of intermittent renewables across the NEM by allowing trade across different states and territories. Electricity traded each year across the NEM regions is projected to more than double by 2040. Rewiring the Nation is included in the projections to the extent that it supports delivery of national, state and territory renewable targets and plans, delivering new transmission and facilitating the connection of new renewable energy generation. As part of Rewiring the Nation, the Australian Government has existing

[25] Chart shows modelled projections from 2025 for as-generated generation by fuel type. As generated generation is total production of electricity before accounting for how much energy is consumed on the generator site.

agreements with NSW, Victoria, Western Australia, the Northern Territory and Tasmania on the prioritisation of key transmission projects.[26]

Western Australia Wholesale Electricity Market (WEM)

Emissions in the WEM are projected to decline from 9 Mt CO_2-e in 2025 to 3 Mt CO_2-e in 2030 and 2 Mt CO_2-e in 2040, a decline of 70% and 74% respectively. Renewable generation in the WEM is projected to increase to meet demand as coal-fired power stations close over the projections period, in line with the state government announcement.[27] Despite increasing renewable build and generation, gas continues to be an important source of generation, as it supports the reliability of supply in the WEM as coal capacity exits and demand increases.

Wind and rooftop PV are the largest contributors to new build in the WEM from 2025 to 2040, with a total capacity of 8 GW of rooftop PV and 4 GW of wind in 2040, representing a combined 59% of capacity in the WEM in 2040. Wind generation increases significantly, in part supported by the CIS and the WA Government's wind capacity announcements. This new generation combines with solar and batteries to replace coal-fired generation in line with the announced closure of Muja D and Collie coal-fired power stations.[28] To support this renewable generation, utility battery storage capacity expands, including the Kwinana and Collie big batteries supported by the WA Government's investment in energy security. Also supporting this renewable generation is an agreement between the Australian Government and Western Australia on the prioritisation of key transmission projects, and household battery build supported by the Cheaper Home Batteries Program and WA Residential Battery Scheme.

Darwin-Katherine Interconnected System (DKIS)

Emissions in the DKIS are projected to decrease from 1.2 Mt CO_2-e in 2025 to 0.9 Mt CO_2-e in 2030, and 0.8 Mt CO_2-e in 2040, a decline of 26% and 28% respectively. Emissions are projected to decrease in this grid due to less gas generation and more large-scale solar and rooftop PV build coming online by 2030. The DKIS is the largest grid in the Northern Territory but accounts for <1% of total (national) electricity emissions in 2025.

Several gas generators in Darwin are expected to be retired in the projection period, in line with public announcements. To help mitigate reliability risks and balance intermittent generation sources, the DKIS includes around 134 MW of battery storage build out to 2040, representing 14% of installed capacity in the grid. This will be supported and enabled by new transmission projects, including prioritised projects under an agreement between the Australian Government and the Northern Territory.

Off-grid electricity, and the North West Interconnected System (NWIS)

Emissions from off-grid electricity and the NWIS are projected to decline from 2025 to 2040. Off-grid electricity emissions are from remote communities and industrial users, including for LNG production and emissions from mining. Emission declines from increased renewables are partially offset by increased electricity use to support anticipated electrification and fuel-switching.

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[26] As of 22nd October 2025: Rewiring the Nation - DCCEEW.

[27] The WA Government has committed to introducing 810 MW of wind and 1,100 MW/4,400 MWh of storage by 2030.

[28] Collie power station announced closure by late 2027 and Muja D power station announced closure in 2029.

Electricity emissions in mining and remote communities (off-grid excluding LNG facilities and the NWIS) are projected to decline from 9 Mt CO_2-e in 2025 to 6 Mt CO_2-e in 2030 and 5 Mt CO_2-e in 2040, a decline of 31% and 39% respectively. Electricity demand is projected to more than double over the projections period, including from electrification from Safeguard facilities and the Murchison Green Hydrogen project as part of round 1 of the Hydrogen Headstart Program. Additional demand is met by increasing renewables generation, based on the assumption that mining operations and remote communities are likely to switch to hybrid systems to reduce reliance on high-cost liquid fuels over time. Around 13.5 GW of new renewable capacity is projected to be added by 2040, comprising large-scale solar, small-scale solar and wind.

Emissions associated with electricity production at LNG facilities (off-grid excluding mining and remote communities and the NWIS) occur when natural gas is combusted in on-site generators. Off-grid LNG electricity emissions are projected to stay at 5 Mt CO_2-e in 2025 and 2030, before declining by 39% to 3 Mt CO_2-e in 2040. Electricity used in LNG facilities generally follows the trend of LNG production. It is assumed that LNG facilities, which are all covered by the Safeguard Mechanism, will, over time, choose to reduce their emissions through increased use of renewables. See the fugitive oil and gas section of the projections for further details on LNG production.

The NWIS is a relatively small grid serving the resource industry in the north-west of Western Australia. Emissions are projected to remain at 2 Mt CO_2-e in 2025 and 2030 before declining by 62% from 2030 to 1 Mt CO_2-e in 2040 as renewable supply makes up a growing share of generation.

Table 12 – Installed capacity by technology in Australia, GW

Technology	2020	2025	2030	2035	2040
Coal	25	22	13	8	5
Gas	19	22	22	22	24
Hydro	6	6	7	7	7
Wind	7	14	37	44	50
Large-scale solar	3	11	35	43	45
Rooftop PV	12	26	42	56	69
Other	4	5	5	5	5
Pumped hydro	2	2	3	5	5
Battery storage	<1	5	34	41	49
Total electricity sector	**78**	**114**	**199**	**232**	**259**

Note: totals may not sum due to rounding.

Table 13 – Renewable share of electricity generation [29], %

Grid, region	2020 [30]	2025	2030	2035	2040
National Electricity Market		42%	84%	87%	87%
Queensland		30%	78%	71%	72%
NSW/ACT		40%	90%	94%	91%
Victoria		42%	75%	95%	97%
South Australia		78%	93% [31]	96%	95%
Tasmania		97%	100%	100%	100%
Western Australia's Wholesale Electricity Market		38%	82%	79%	84%
On-grid (NEM, WEM, NWIS, DKIS, Mt Isa)	**24%**	**41%**	**82%**	**85%**	**87%**
Off-grid	3%	8%	31%	63%	68%
Total electricity sector	**22%**	**38%**	**77%**	**83%**	**84%**

Table 14 – Electricity emissions, Mt CO_2-e

Emissions by grid, region	2005	2020	2025	2030	2035	2040
National Electricity Market	177	141	121	38	31	32
Western Australia's Wholesale Electricity Market	11	12	9	3	3	2
Other grids, including off-grid	9	19	18	15	12	10
Total electricity sector	**197**	**172**	**148**	**55**	**46**	**45**

Note: totals may not sum due to rounding.

Comparison to previous projections

Compared to the baseline scenario from the 2024 projections, electricity emissions are projected to be 3 Mt CO_2-e lower in 2030, 10 Mt CO_2-e higher in 2035, and 16 Mt CO_2-e higher in 2040. Electricity emissions from 2035 to 2040 are projected to be higher than in the 2024 projections baseline scenario, due to changes to energy policy in Queensland and an assumed higher demand forecast in the NEM, mainly from data centres. Unlike the 2024 projections, the 2025 emissions projections do not include the Queensland Renewable Energy Targets for 2030, 2032 and 2035 and the early closure of publicly owned Queensland coal power stations outlined in the previous Queensland government's Queensland Energy and Jobs Plan.

[29] Renewable share is defined in this table as renewable generation (as generated) over total generation (excluding discharge from pumped hydro and batteries). The projections assume renewable build, including to meet state targets and plans, occur as announced. This includes the assumption that projects are completed without experiencing delays.

[30] DCCEEW Australian Energy Statistics, Supplementary tables, August 2025 (financial year) used for 2020. All other years in the table reflect Australia's emissions projections modelling.

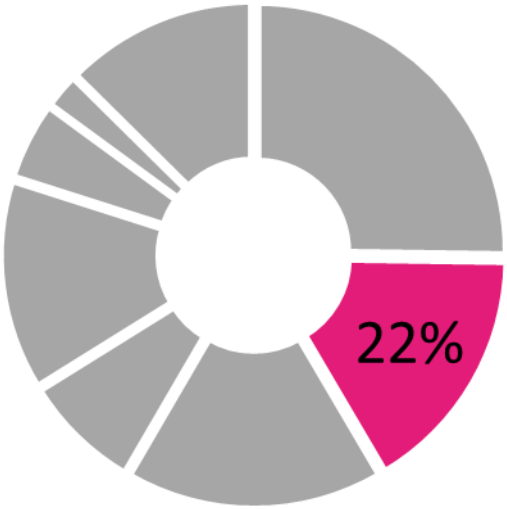
[31] South Australia's 2027 net renewable energy target was considered under the projections to take account of factors, such as exports, that the number in the table does not.

Stationary energy

22% of Australia's emissions in 2025

↑ 14 Mt CO_2-e 2005 to 2025

↓ 2 Mt CO_2-e 2025 to 2030



Stationary energy emissions result from the direct combustion of fuels, excluding those related to electricity generation and transport. Stationary energy emissions are produced in almost all sectors of the economy. The stationary energy sector consists of 6 sub-sectors: energy; mining; manufacturing; buildings; agriculture, forestry and fishing; and military.

Emissions trends

Stationary energy emissions are estimated to be 95 Mt CO_2-e in 2025 and are projected to decrease by 2% to 93 Mt CO_2-e in 2030. From 2025 to 2040, emissions decline by 24% to 73 Mt CO_2-e in 2040 (Figure 18). This is primarily driven by projected on-site emissions reductions incentivised by the Safeguard Mechanism.

Table 15 – Stationary energy emissions, Mt CO_2-e

Emissions by sub-sector	2005	2020	2025	2030	2035	2040
Manufacturing	36	31	26	26	25	22
Energy	14	26	23	24	24	20
Buildings	16	18	16	15	14	13
Mining	8	20	23	20	13	9
Agriculture, forestry and fishing	7	8	7	7	7	7
Military	1	1	1	1	1	1
Total	**81**	**103**	**95**	**93**	**84**	**73**

Note: totals may not sum due to rounding.

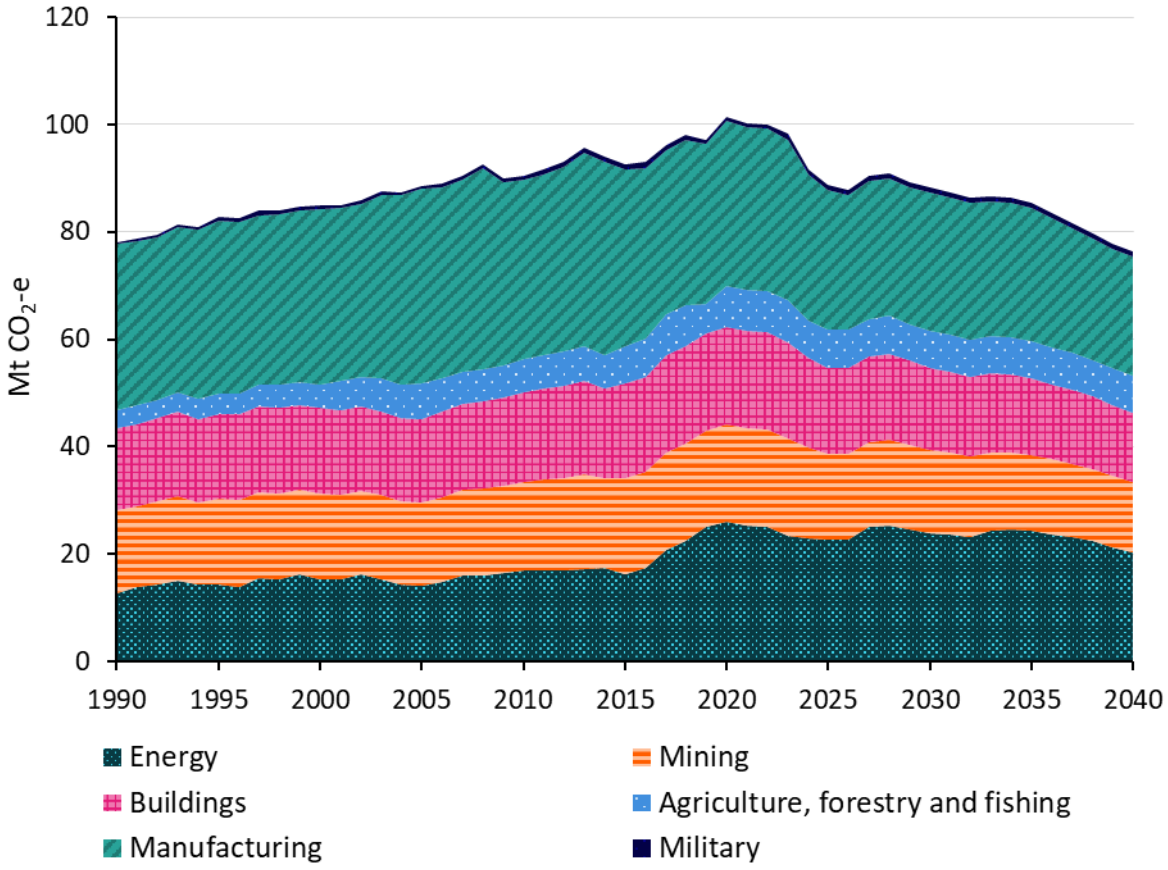


Figure 18 – Stationary energy emissions, 1990 to 2040, Mt CO_2-e

Manufacturing

The manufacturing sub-sector is the largest source of emissions within the stationary energy sector representing 27% of total emissions in 2025. The largest share of manufacturing emissions is generated from the manufacture of basic non-ferrous metals such as alumina. Non-ferrous metals contribute 44% of total manufacturing emissions with alumina refining making up most of emissions in the sub-category. Other large emission sources in manufacturing in 2025 are the manufacture of chemicals (21%) and non-metallic minerals (15%).

Table 16 – Manufacturing emissions, Mt CO_2-e

Emissions by sub-sector	2005	2020	2025	2030	2035	2040
Non-ferrous metals	14	12	11	12	12	10
Non-metallic minerals	6	5	4	4	4	3
Iron and steel	3	2	1	2	1	1
Pulp, paper and print	2	1	1	1	1	1
Chemicals	7	7	5	5	5	5
Food processing, beverages, and tobacco	4	3	2	2	2	1
Other manufacturing	1	1	<1	<1	<1	<1
Total	**36**	**29**	**26**	**26**	**25**	**22**

Note: totals may not sum due to rounding.

Manufacturing emissions are projected to be 26 Mt CO_2-e in 2025 and remain relatively stable to 2030 before declining to 22 Mt CO_2-e in 2040 (Table 16). This is mainly driven by the Safeguard Mechanism, which is projected to drive the uptake of cleaner fuels and technologies, particularly after 2030. This is projected to deliver 2 Mt CO_2-e of on-site emissions reductions in 2030 and 6 Mt CO_2-e in 2040. Most of these reductions are attributed to the non-ferrous metals, alumina sub-sector, followed by the chemicals sub-sector.

The Safeguard Mechanism is projected to first drive incremental efficiency improvements such as process optimisation, equipment turnover, and minor process changes in the manufacturing sub-sector. Emission reductions accelerate due to expected higher technology uptake. These technologies include the replacement of fossil fuel combustion for heat with lower-emissions fuels and electrification across the sub-sector. The introduction of mechanical vapour recompression and the switch from coal to gas and hydrogen in the alumina industry further drives a declining emissions trend after 2035.

Energy

The energy sub-sector includes fuel combustion emissions from oil and gas extraction, natural gas production and distribution, solid fuel manufacture and fuel refining. Emissions trends in the energy sub-sector are mainly driven by LNG production, which accounted for 76% of energy sub-sector emissions in 2025. Emissions from the energy sub-sector are projected to increase from 23 Mt CO_2-e in 2025 to 24 Mt CO_2-e in 2030 before declining to 20 Mt CO_2-e in 2040 (Table 17). The increase is due to the Darwin LNG backfill beginning in 2025 with a projected ramp up in production to 2028. The decrease in emissions from 2030 is mainly due to the projected impacts of the Safeguard Mechanism through fuel switching, improvements in energy and process efficiency, and the use of renewables in the oil and gas sector. The on-site emissions reduction in the energy sub-sector are projected to be 1 Mt CO_2-e in 2030, growing to 2 Mt CO_2-e in 2040. Projected declines in LNG and domestic gas production also contributes to lower emissions in 2040.

Table 17 – Energy emissions, Mt CO_2-e

Emissions by sub-sector	2005	2020	2025	2030	2035	2040
Oil and gas extraction	7	22	21	22	21	17
LNG		19	17	17	16	12
Oil and other gas		3	3	4	5	5
Manufacture of solid fuels	1	1	<1	<1	<1	<1
Gas production and distribution	1	<1	<1	1	2	2
Fuel refining	5	3	2	1	1	1
Total	**14**	**26**	**23**	**24**	**24**	**20**

Note: totals may not sum due to rounding.

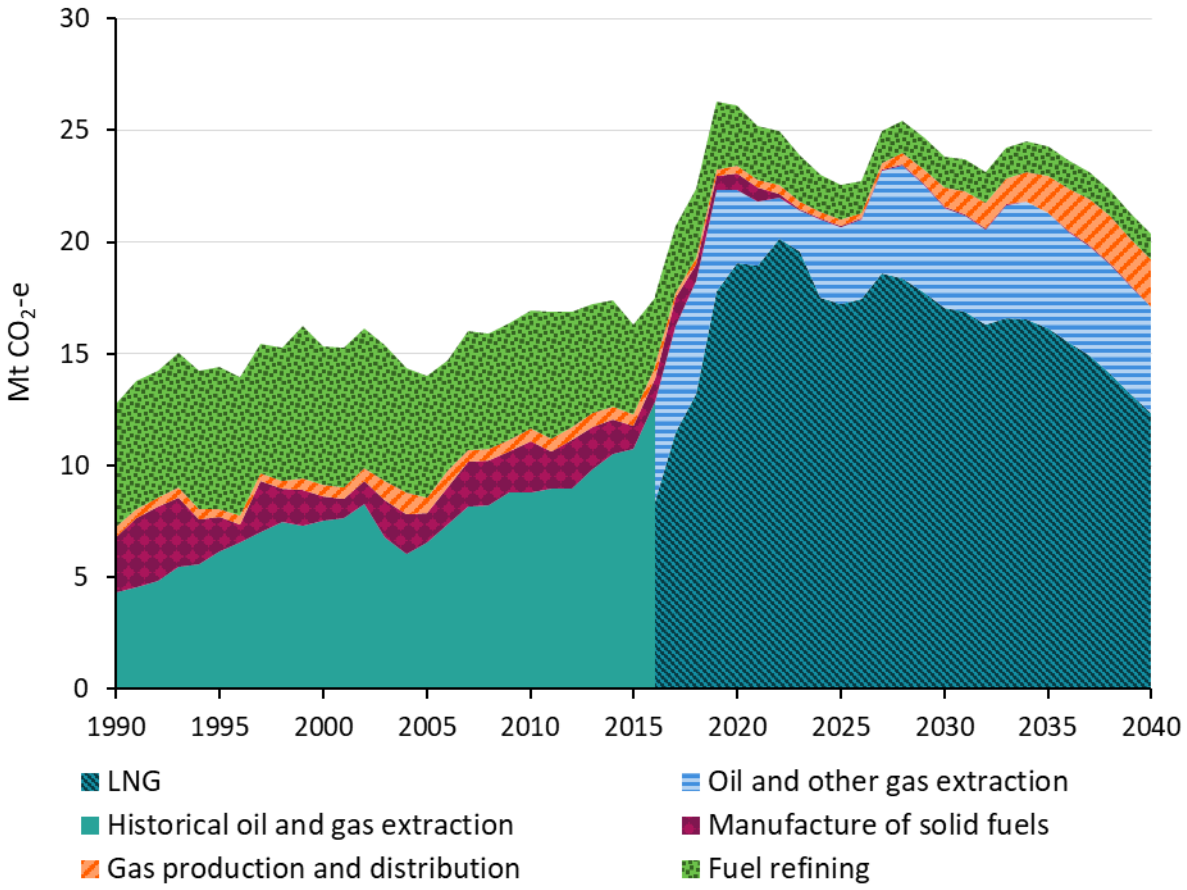


Figure 19 – Energy sub-sector emissions, 1990 to 2040, Mt CO_2-e
Note: Historical oil and gas extraction was disaggregated into oil and other gas extraction and LNG.

Buildings

The building sub-sector includes all the emissions from fuel combustion in residential and commercial buildings as well as construction activities associated with infrastructure, and commercial and residential buildings. Overall, emissions in the building sub-sector are projected to decrease by 4% from 16 Mt CO_2-e in 2025 to 15 Mt CO_2-e in 2030, before declining to 13 Mt CO_2-e in 2040 (Table 18). The increase in construction emissions is due to projected growth in construction activities at an average annual growth rate of 1.5% from 2025 to 2040. In the residential and commercial sub-sectors, emissions decrease by 29% and 22% respectively between 2025 and 2040 due to electrification and energy efficiency improvements and Victoria's Gas Substitution Roadmap.

Table 18 – Building emissions, Mt CO_2-e

Emissions by sub-sector	2005	2020	2025	2030	2035	2040
Construction	2	2	2	2	2	3
Residential	9	11	8	8	7	6
Commercial	4	5	6	5	5	4
Total	**16**	**18**	**16**	**15**	**14**	**13**

Note: totals may not sum due to rounding.

Mining

Mining sub-sector emissions in 2025 consist of coal mining (48%) and other mining (52%). 'Other mining' is primarily made up of emissions from iron ore (53%) and gold (19%) mining, with 11 other commodities making up the remainder (28%).

Stationary energy emissions from coal mining are projected to decline from 11 Mt CO_2-e in 2025 to 10 Mt CO_2-e and 3 Mt CO_2-e in 2030 and 2040 respectively. The reduction is driven by lower coal production due to lower international coal demand and abatement from the Safeguard Mechanism.

Emissions from other mining are projected to decline by 9% from 12 Mt CO_2-e in 2025 to 11 Mt CO_2-e in 2030. Decarbonisation activities incentivised by the Safeguard Mechanism across the other mining sub-sector is the major driver of a 59% decline in emissions between 2025 and 2040 (Table 19).

The Safeguard Mechanism is projected to provide 3 Mt CO_2-e of abatement from the mining sub sector in 2030; this grows to 11 Mt CO_2-e in 2040. This is due to projected energy efficiency improvements, electrification, and switching from diesel to low-carbon fuels across all mining equipment categories (e.g. haulage trucks, mining utes, excavators, loaders). The 2025 emissions projections also account for projected decarbonisation activities at non-Safeguard facilities across the mining sub-sector.

Table 19 – Mining emissions, Mt CO_2-e

Emissions by sub-sector	2005	2020	2025	2030	2035	2040
Coal	5	10	11	10	5	3
Other mining	3	10	12	11	8	7
Iron			6	5	3	3
Gold			2	2	2	2
Copper, nickel, lithium			2	2	2	1
Other			2	1	1	1
Total	**8**	**19**	**23**	**20**	**13**	**9**

Note: Historical emissions did not disaggregate other mining emissions.
Totals may not sum due to rounding.

Agriculture, forestry and fishing (energy use)

Emissions from energy use in agriculture, forestry and fishing activities, including fuel used for on-farm vehicles and machinery, is projected to remain around 7 Mt CO_2-e across the projections outlook. Assumed fuel switching from diesel to electricity and energy efficiency improvements partly offsets the increased emissions from growth in activity in this sub-sector.

Military

The military sub-sector covers fuel used by military vehicles, for example, trucks and planes, and fuel used for training within Australia. This is the smallest sub-sector in the stationary energy projections. Emissions from the military sub-sector are projected to remain stable at 1 Mt CO_2-e to 2040.

Comparison to previous projections

Compared to the baseline scenario from the 2024 projections, stationary energy emissions are projected to be slightly lower in 2030, 4 Mt CO_2-e higher in 2035, and 5 Mt CO_2-e higher in 2040. This is mainly due to lower projected onsite abatement at Safeguard facilities across mining and manufacturing subsectors and a higher starting point in the coal and other mining subsectors that carries across the projections time series.

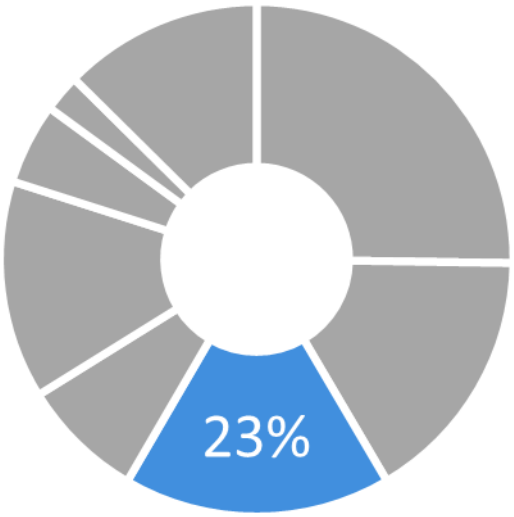
In the manufacturing subsector, revisions to the assumptions of Safeguard incentivised technology uptake have meant projected delays in boilers transitioning from coal to natural gas in the alumina sub-sector.

In the mining subsector, projected abatement has slightly increased due to the earlier adoption of electric utes across coal mines, now expected before 2030. This improvement is partly offset by lower projected abatement in other mining activities. Post 2030 there is lower projected abatement in the mining subsector due to lower expected uptake of battery haulage truck and trolley assist and slower projected uptake of renewable fuels.

The lower projected Safeguard abatement in the manufacturing and mining sector combined with a higher mining inventory starting point, contribute to higher stationary energy emissions across the projections period to 2040.

Transport

23% of Australia's emissions in 2025
↑ 17 Mt CO_2-e 2005 to 2025
↓ 6 Mt CO_2-e 2025 to 2030



Emissions in the transport sector result from combusting fuels for mobility. This includes road, domestic aviation, rail, domestic shipping, off-road recreational vehicle activity, and gas pipeline transport. Road transport includes passenger vehicles (PVs), light commercial vehicles (LCVs), articulated trucks, rigid trucks, buses, and motorcycles. Emissions from the generation of electricity used in EVs and rail are accounted for in the electricity sector.

Emissions trends

Transport emissions are estimated to be 99 Mt CO_2-e in 2025 and are projected to decrease by 6% to 92 Mt CO_2-e in 2030. From 2025 to 2040 emissions decline by 22% to 77 Mt CO_2-e in 2040. Transport emissions remain just below their peak of 100 Mt CO_2-e in 2019. The projections show emissions are expected to consistently decrease from 2025 onwards.

While growth in EV sales has fluctuated over the last 12 months, sales are still at historically high levels on an annualised basis. When combined with increased uptake of hybrids, the efficiency of Australia's light vehicle fleet has been improving.[32] The New Vehicle Efficiency Standard (NVES), which commenced on 1 January 2025, is projected to reduce emissions in the light vehicle fleet and will contribute the most to the projected decrease in transport emissions.[33]

The Safeguard Mechanism covered around 11% of transport emissions in 2024 – mostly in rail and aviation – and is projected to reduce transport emissions by incentivising efficiency improvements and fuel switching. This reduces railway sector's emissions by 2040, and largely offsets potential emissions growth from domestic aviation driven by growing demand. Heavy road vehicle emissions are projected to increase with growing demand, though the rate at which this increases is reduced due to the uptake of low emissions fuels and efficiency improvements.

[32] NTC 2024, Light Vehicle Emissions Intensity in Australia: Trends Over Time report, National Transport Commission.

[33] Projections are based on the current NVES setting which sets emissions limits until 2029. Standards set for subsequent years will be incorporated into future projections.

Table 20 – Transport emissions, Mt CO_2-e

Emissions by sub-sector	2005	2020	2025	2030	2035	2040
Passenger vehicles	43	41	41	35	28	23
Light commercial vehicles	11	17	18	17	14	13
Motorcycles	<1	<1	<1	<1	<1	<1
Rigid trucks	6	9	9	10	10	10
Articulated trucks	10	11	11	12	12	13
Buses	1	2	2	2	1	1
Domestic aviation	5	7	10	10	11	11
Railways	2	4	4	3	3	2
Domestic navigation	2	2	2	2	2	2
Other transportation	1	1	1	1	1	1
Total transport sector	**82**	**93**	**99**	**92**	**83**	**77**

Note: totals may not sum due to rounding.

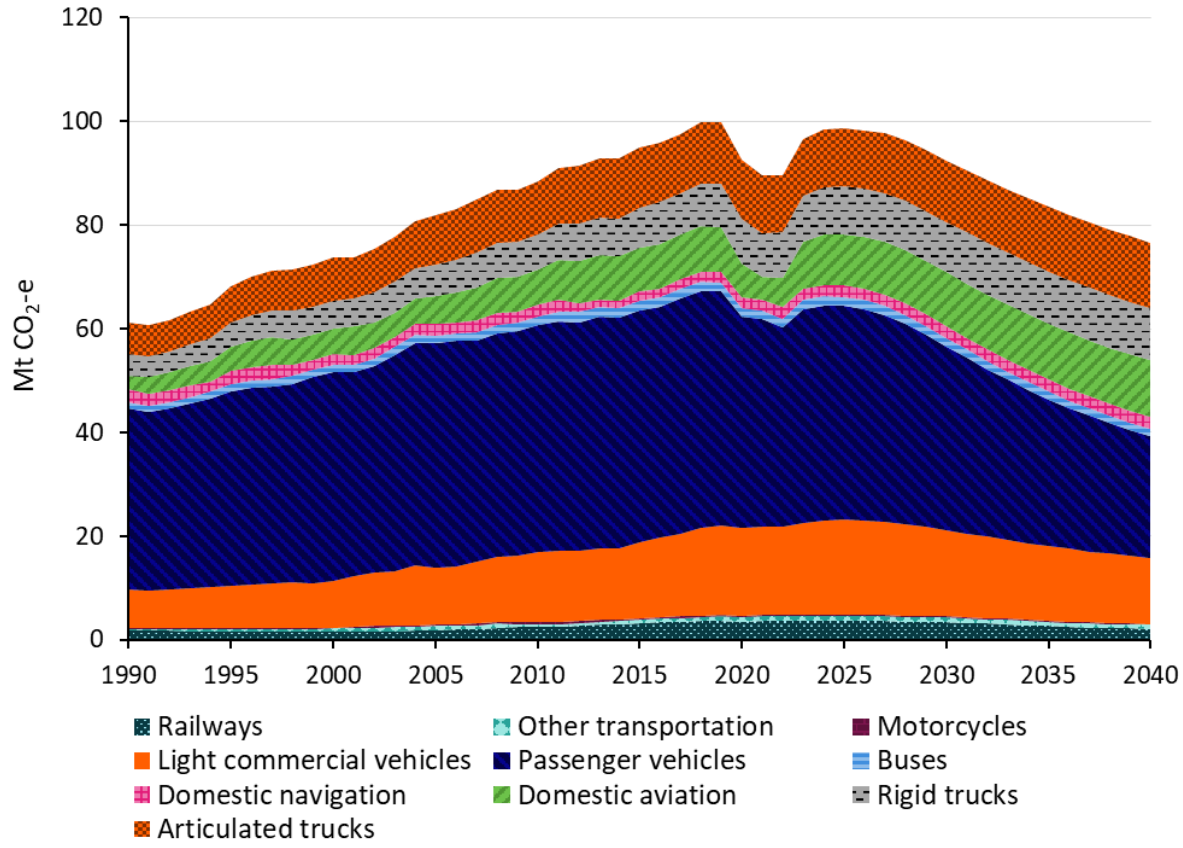


Figure 20 – Transport emissions, 1990 to 2040, Mt CO_2-e

Passenger and light commercial vehicles

Emissions from passenger and light commercial vehicles are estimated to be 59 Mt CO_2-e in 2025 and are projected to decrease to 52 Mt CO_2-e in 2030 and 36 Mt CO_2-e in 2040. This is due to the introduction of the NVES.

The NVES imposes a regulatory obligation on car makers to supply vehicles that, on average, meet a certain CO_2-e grams/km emissions target. The target is reduced over time, which encourages suppliers to provide more efficient light vehicles. The NVES adopts a technology-neutral approach, requiring reductions in average tailpipe emission intensity across new vehicles irrespective of whether they use petrol, diesel, hybrid, plug-in hybrid or battery EV technology. To reflect the policy, the transport emissions model takes a top-down approach by considering only activity levels and the emissions intensity of vehicles. No assumptions are made about individual technologies such as electric or hybrid vehicle adoption or efficiency improvements in internal combustion vehicles.

The NVES currently specifies emission limits until 2029. From 2030, projections assume annual improvements will revert to the historical trend. An annual statutory review of the NVES is required to commence in 2026; this will consider future NVES policy settings, including emissions limits after 2029. Projections will incorporate new standards as they become available.

'Real world' emissions are typically higher than the laboratory tests reported by manufacturers[34] and are used in the emissions projections to more accurately estimate actual emissions. Table 21 shows the total activity and average 'real world' emissions intensity of the passenger vehicle and light commercial vehicle. Figure 21 shows the average 'real world' emissions intensities of new light vehicles used in the emissions projections. The Australian Government is supporting information on vehicle emissions through the $14 million Real-World Testing of Vehicle Efficiency program conducted by the Australian Automobile Association.

Table 21 – Projected light duty vehicle activity and average emissions intensities[35]

	2019	2025	2030	2035	2040
Passenger vehicles					
Activity (billion km travelled)	179	179	191	203	214
Emissions intensity (g CO_2-e/km)	253	230	186	140	110
Light commercial vehicles					
Activity (billion km travelled)	54	60	63	67	71
Emissions intensity (g CO_2-e/km)	318	306	262	214	180

[34] AAA 2025, Research & Data, Australian Automobile Association.

[35] Includes both new and existing vehicles

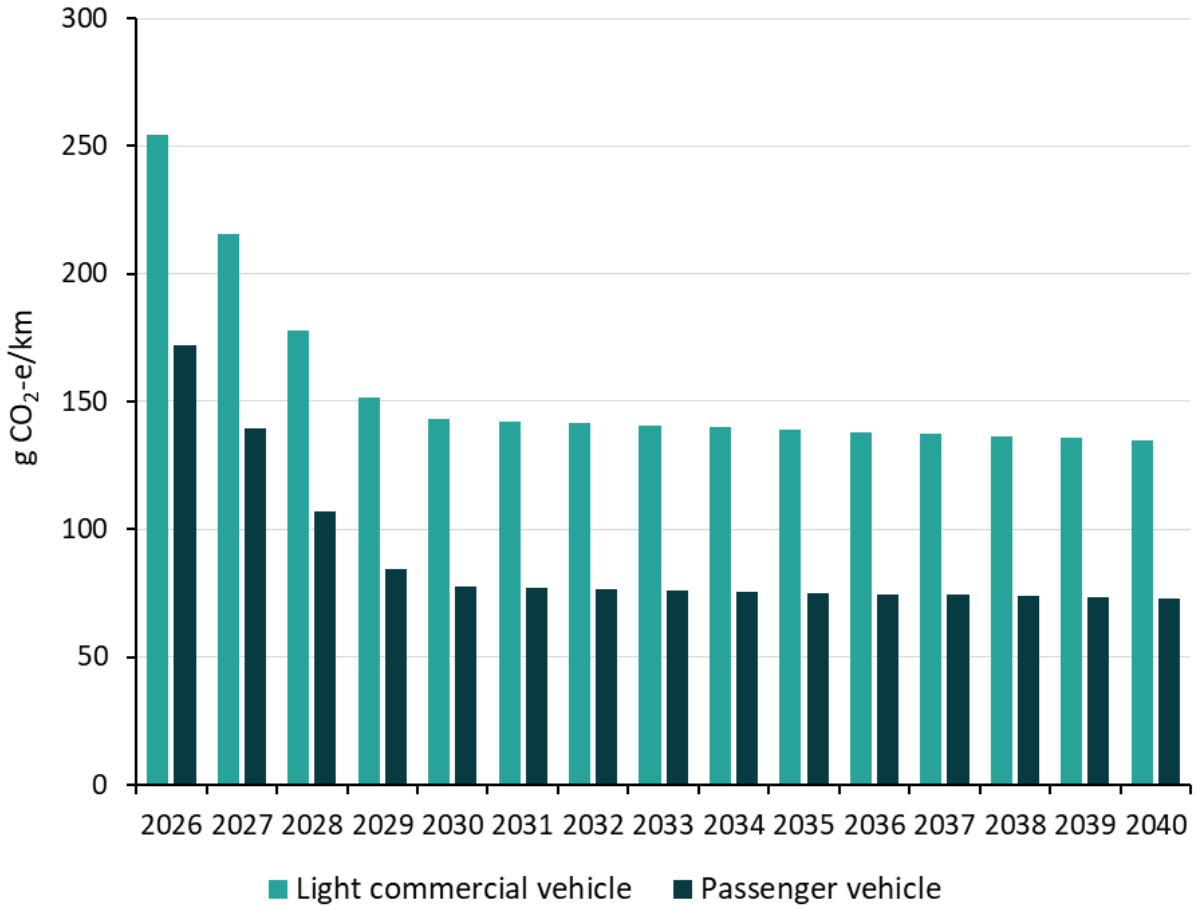


Figure 21 – Assumed average emissions intensity for new light vehicles, 2026 to 2040, grams CO_2-e per km
Note: The headline limits for new vehicles under the NVES are stated in the *New Vehicle Efficiency Standard Act 2024* and are measured based on the New European Driving Cycle (NEDC) test procedure. The NEDC emission intensities are lower than the projected real-world emission intensities listed above.

All other road transport

Emissions from all other road transport are estimated to be 22 Mt CO_2-e in 2025 and are projected to increase to 23 Mt CO_2-e in 2030 and 24 Mt CO_2-e in 2040. The projected increase in emissions takes account of a small amount of abatement driven by the Safeguard Mechanism, which covers only a small share of all other road transport emissions.

Road freight activity is projected to grow by approximately 35% between 2025 and 2040, leading to a 10% or 2 Mt CO_2-e increase in truck emissions by 2040. Truck emissions are projected to increase through 2035, then flatten with diminishing year-on-year growth before a marginal decline by 2040. This reflects efficiency improvements and fuel switching. In June 2025 Bloomberg New Energy Finance (BNEF) published the Electric Vehicles Outlook 2025 which includes analysis of EV adoption in trucks for Australia, indicating that electric trucks[36] are expected to account for around 1% of total truck activity by 2035 and 4% by 2040.

Emissions from buses and motorcycles are both projected to decline by 26% between 2025 and 2040.

[36] Includes battery-electric, plug-in hybrid electric and fuel-cell vehicles.

Non-road transport

In the transport sector, domestic aviation, railway and some heavy freight operators are subject to the Safeguard Mechanism where they emit more than 100,000 t CO_2-e of scope 1 emissions each year.

Emissions from aviation are estimated to be 10 Mt CO_2-e in 2025 and are projected to increase by 11% to 11 Mt CO_2-e in 2040. The upward pressure on emissions from increased activity is partially offset by on-site abatement incentivised by the Safeguard Mechanism which come from ongoing operational and technological improvements and the progressive introduction of SAF.[37]

Emissions in the rail sector are estimated to be 4 Mt CO_2-e in 2025 and remain relatively flat to 2030. Safeguard abatement in the rail sector is expected to arise from electrification, fuel switching and efficiency improvements. This is projected to reduce emissions in the rail sector by 44% (2 Mt CO_2-e) by 2040.

Emissions from domestic navigation and other transport are estimated to be 2 Mt CO_2-e and 1 Mt CO_2-e in 2025 respectively and remain flat over the projections period to 2040.

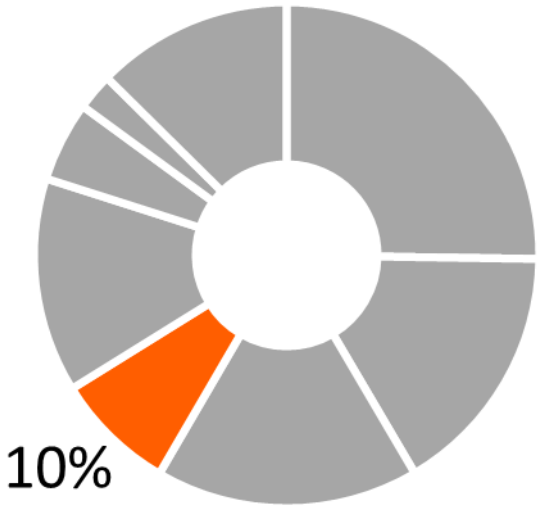
Comparison to previous projections

Compared with the baseline scenario from the 2024 projections, transport emissions are projected to be 3 Mt CO_2-e lower in 2030, 4 Mt CO_2-e lower in 2035 and 3 Mt CO_2-e lower in 2040. This is partly due to the latest inventory which shows that transport emissions were lower than projected in 2025. Updated assumptions regarding the electrification of trucks have also resulted in a lower projected emissions intensity for trucking, leading to reduced heavy vehicles emissions relative to the previous projections.

[37] The 2025 emissions projections do not include Sustainable Aviation Fuel Funding Initiative announced with the 2035 target.

Fugitive emissions from fuels

10% of Australia's emissions in 2025
↑ 3 Mt CO_2-e 2005 to 2025
↓ 1 Mt CO_2-e 2025 to 2030



Fugitive emissions are released during the extraction, processing and transport of fossil fuels. Fugitive emissions do not include emissions from fuel combusted to generate electricity, operate mining plant and equipment, or transport of fossil fuels by road, rail or sea.

Fugitive emissions are estimated to be 45 Mt CO_2-e in 2025 and are projected to decrease by 2% to 44 Mt CO_2-e in 2030. From 2025 to 2040, emissions decline by 25% to 34 Mt CO_2-e.

Table 22 – Fugitive emissions, Mt CO_2-e

Emissions by sub-sector	2005	2020	2025	2030	2035	2040
Open cut mines	8	9	9	9	9	8
Underground coal mines	23	22	14	16	14	14
Oil	2	1	<1	<1	<1	<1
Domestic natural gas	10[38]	11	9	8	7	6
Liquefied natural gas		12	13	11	10	6
Total	**43**	**55**	**45**	**44**	**41**	**34**

Note: totals may not sum due to rounding.

[38] Includes domestic natural gas and LNG.

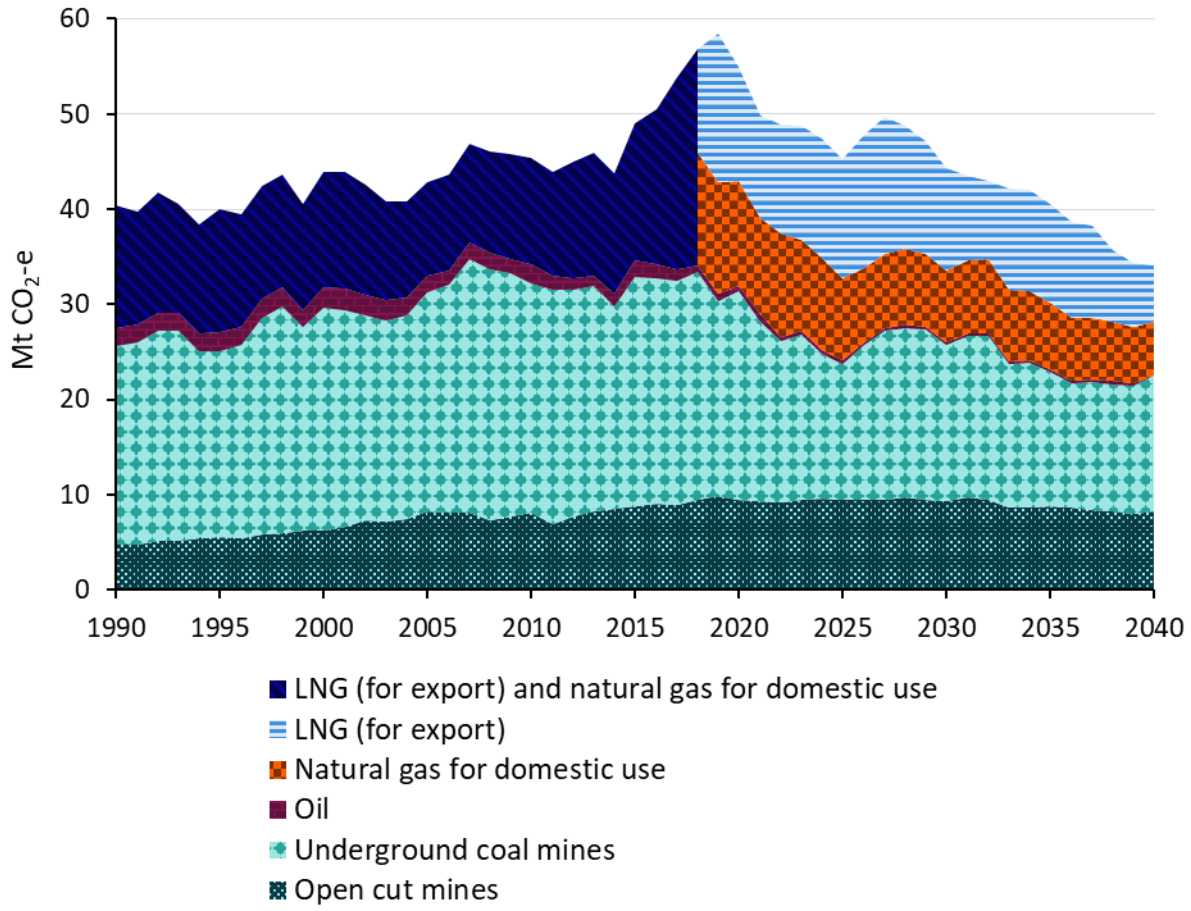


Figure 22 – Fugitive emissions, 1990 to 2040, Mt CO_2-e

Coal fugitive emissions trends

Fugitive emissions from coal were 24 Mt CO_2-e in 2025 and accounted for 52% of all fugitive emissions. From 2022 to 2025, coal production and emissions were at lower levels compared to recent history as several mines were impacted by operational outages. As these outages are resolved, emissions are projected to increase in 2026–27 as coal production increases. After 2028 emissions are projected to decline due to reduced demand for Australian thermal coal, increased on-site abatement activities incentivised by the Safeguard Mechanism, and the closure of several large, gassy underground mines.

Fugitive emissions of carbon dioxide and methane are released during the extraction of coal. There is wide variation in the gas content across Australian coal basins and between coal fields within the basins. This is due to distinct geological and biogenic processes, such as how the coal was formed, tectonic history, and groundwater flows. This variability results in a small number of underground mines in the Southern, Hunter and Newcastle basins in NSW, and the Bowen Basin in Queensland, accounting for a large share of total fugitive emissions. There are around 100 operating coal mines in Australia, however the 10 largest emitting mines account for around half of total coal fugitive emissions.

Fugitive emissions from operating mines are a function of the amount of coal produced, the emissions intensity of the mine, and the amount of methane captured. The projections also include emissions from abandoned underground coal mines that continue to emit at a declining rate after they cease production.

In 2023, 56% of the methane generated from underground coal mines was captured for flaring or electricity generation.[39] This proportion is projected to increase as coal mines covered by the Safeguard Mechanism[40] are projected to increase methane capture to reduce their emissions. Abatement is also projected from ventilation pipework maintenance in underground mines, degasification for flaring and electricity generation and oxidation of ventilation air methane. On-site abatement from Safeguard facilities is projected to reduce coal fugitive emissions by 4 Mt CO_2-e in 2030, 6 Mt CO_2-e in 2035 and 8 Mt CO_2-e in 2040.

Australia's coal production peaked in 2015 and is projected to decline to 2040 (Table 23 and Figure 23) as demand for thermal coal and brown coal, used for electricity generation, is projected to fall. Demand for metallurgical coal, used in global steel production, is projected to remain around current levels to 2040. Projected coal production is predominantly met from existing coal mines however some new mines are projected to come on-line to meet projected demand.

The coal production estimates in this report differ from other modelling such as the Treasury's report: *Australia's Net Zero Transformation: Treasury Modelling Analysis*. This is in part due to different assumptions around global climate action. The Treasury scenarios show potential pathways for Australia to net zero by 2050 in the context of global action to limit warming to well below 2 °C. Whereas these emissions projections conservatively reflect current policies and measures in Australia and overseas. As the world moves towards net zero and countries strengthen and adopt additional policies and measures this will impact on estimates of Australian coal production included in future emissions projections.

Table 23 – Run-of-mine coal production in Australia, million tonnes [41]

	2020	2025	2030	2035	2040
Black coal	563	529	542	450	420
Thermal coal	*310*	*307*	*305*	*237*	*194*
Metallurgical coal	*254*	*222*	*237*	*214*	*226*
Brown coal	42	38	16	3	2
Total	**605**	**567**	**558**	**454**	**422**

Note: totals may not sum due to rounding.

[39] DCCEEW, National Inventory Report 2023 Volume 2 p41, DCCEEW, accessed 22 October 2025.

[40] In the 2023–24 reporting year 72 safeguard facilities were coal mines which accounted for the majority of coal fugitive emissions.

[41] Run-of-mine coal production relates to the amount of raw material extracted from the mine. In their Resources and Energy Quarterly, the Office of the Chief Economist publishes forecasts of saleable coal, which is less than run-of-mine coal production. Saleable coal tends to average 80% of run-of-mine production, but this can differ from mine to mine.

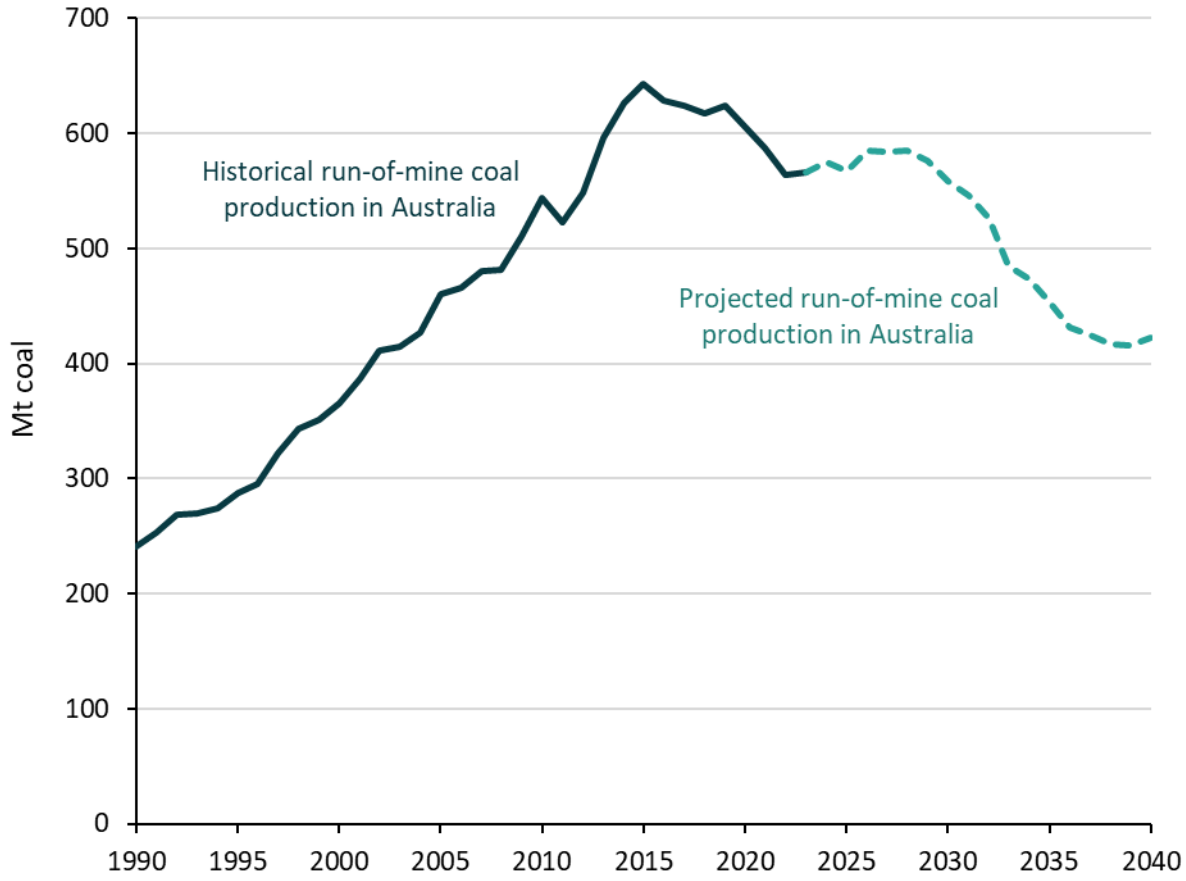


Figure 23 – Historical and projected run-of-mine coal production in Australia, 1990 to 2040, Mt coal

Oil and gas fugitive emissions trends

Fugitive emissions from oil and gas are estimated to be 22 Mt CO_2-e in 2025 and are projected to decrease by 14% to 19 Mt CO_2-e in 2030. From 2025 to 2040 emissions are projected to decrease by 46% to 12 Mt CO_2-e in 2040. In 2025, oil and gas fugitive emissions accounted for 48% of total fugitive emissions. The main drivers of oil and gas fugitive emissions are levels of production, the geological characteristics of the basin, levels of flaring and venting at individual facilities and capture of CO_2. On-site emissions reduction at Safeguard facilities is projected to reduce oil and gas fugitive emissions by 3 Mt CO_2-e in 2030, and by 8 Mt CO_2-e in 2040.

Oil

Fugitive emissions from oil were estimated to be less than 1 Mt CO_2-e in 2025 and are projected to remain around that level through to 2040. Crude oil and condensate production is projected to decrease until 2030 and remain at that level through to 2040. Refinery production is projected to remain relatively stable over the period from 2026 to 2040. The 2 petroleum refineries in Australia, Lytton (Queensland) and Geelong (Victoria), are assumed to operate near capacity to 2040.

Domestic gas

Fugitive emissions from natural gas consumed in Australia (domestic gas) were estimated to be 9 Mt CO_2-e in 2025. They are projected to decrease by 12% to 8 Mt CO_2-e in 2030, by 19% to 7 Mt CO_2-e in 2035, by and by 35% to 6 Mt CO_2-e in 2040.

On-site emissions reductions at Safeguard facilities are projected to reduce domestic gas fugitive emissions by around 2 Mt CO_2-e in 2030 and remaining at this level to 2040, mostly through CCS, reduced flaring at gas extraction facilities and leak detection and repair. Santos's CCS project at the Moomba plant commenced operating in 2025 with the potential to store up to 1.7 Mt CO_2 per year.[42]

Domestic demand for natural gas is expected to decrease by an average of around 3% per year from around 900 PJ in 2026 to around 600 PJ in 2040. This reflects the reduction in demand over the projections period for domestic gas as the result of fuel use changes incentivised by the Safeguard Mechanism. The 2025 emissions projections assume new gas extraction and production from the second half of the 2030s, including the development of gas fields in Narrabri, Beetaloo and Queensland, as well as associated pipeline developments to meet demand.

Liquefied natural gas (LNG)

Fugitive emissions from LNG (gas produced for export) have grown rapidly since 2015 as Australia's LNG industry has expanded.

Fugitive emissions at LNG facilities were estimated to be 13 Mt CO_2-e in 2025. Emissions are projected to decrease by 15% to 11 Mt CO_2-e in 2030, by 17% to 10 Mt CO_2-e in 2035, and by 53% to 6 Mt CO_2-e in 2040.

LNG production in Australia is projected to reach a peak in 2028 of 82 Mt of LNG and then decrease to 75 Mt in 2035 and 60 Mt in 2040. Demand for LNG from Australia's traditional customer base of Japan, South Korea and Taiwan is projected to decline over the longer term to 2040 as countries decarbonise their power and industrial sectors.[43] However, LNG demand is projected to grow from China, and other countries in South Asia and Southeast Asia, to meet growing energy demand. Meanwhile, newly approved LNG projects in the United States and Qatar are projected to significantly increase global LNG supply at lower prices by 2030, decreasing the demand for Australian LNG.[44]

On-site emissions reductions incentivised by the Safeguard Mechanism are projected to reduce LNG fugitive emissions by around 1 Mt CO_2-e in 2030, and by around 6 Mt CO_2-e in 2040. LNG Safeguard facilities are assumed to implement CCS, leak detection and repair, and reduced flaring to reduce on-site emissions.

The CCS project at the Gorgon LNG plant has been capturing and storing CO_2 since August 2019.

[42] Santos 2024, Santos Moomba Carbon Capture and Storage, Santos.

[43] DISR 2024, Future Gas Strategy Analytical Report [PDF 2.08 MB], page 60, DISR.

[44] IEA 2025, World Energy Investment 2025, IEA.

Map 1 – LNG projects in Australia in 2025

The Darwin LNG facility is assumed to resume production in 2026 with gas from the Barossa field. The Pluto LNG expansion is assumed to go ahead in 2027. The expansion includes the construction of a second train at the Pluto LNG onshore facility with gas sourced from the Scarborough field, which is a relatively low CO_2 field compared with most other fields currently supplying offshore gas. In 2028, the Crux field is assumed to provide backfill to the Prelude Floating LNG project.

In 2033, the Browse basin is assumed to provide backfill gas to the North West Shelf LNG facility. Under the Safeguard Mechanism, new gas fields supplying LNG facilities have a zero baseline allocation for reservoir CO_2 emissions.[45]

[45] Section 35A of Schedule 1, National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule.

Box 2 – LNG-related emissions in the baseline scenario

Emissions related to LNG extraction and production are accounted for in 3IPCC sectors in the emissions projections:

- electricity
- stationary energy (excluding electricity sector)
- fugitive emissions from oil and gas.

LNG-related emissions accounted for in the electricity and stationary energy sectors are emissions from the combustion of raw natural gas to run equipment, for example for driving compressors or generating electricity on-site.

Fugitive emissions from LNG are emissions released unintentionally – for example, from leaks from parts of equipment like valves, connectors, and flanges – or intentionally from venting and flaring in the exploration, extraction, production, processing, storage, and delivery of LNG. In Australia, emissions from gas venting and gas flaring have historically made up around 70% of total fugitive oil and gas emissions.

Venting emissions are the intentional release of methane and CO_2 as waste gas or process by-products, usually from routine operations. Flaring is the burning of excess gases that cannot be recovered or reused during plant operations; and for managing the pressure, flow, and composition of the gas in the production process.

Table 24 – LNG-related emissions

	2020	2025	2030	2035	2040
LNG production (Mt)	**79**	**79**	**78**	**75**	**60**
Total LNG-related emissions (Mt CO_2-e)	**37**	**35**	**33**	**31**	**22**
Electricity	*6*	*5*	*5*	*4*	*3*
Stationary energy	*19*	*17*	*17*	*16*	*12*
Fugitive emissions	*12*	*13*	*11*	*10*	*6*

Note: totals may not sum due to rounding.

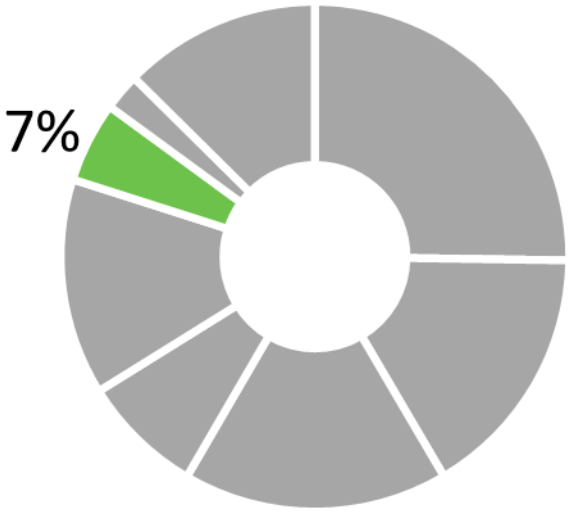
Comparison to previous projections

Compared with the baseline scenario from the 2024 projections, fugitive emissions from coal are projected to be 2 Mt CO_2-e lower in 2030, 1 Mt CO_2-e higher in 2035, and 2 Mt CO_2-e higher in 2040. This reflects lower production of metallurgical coal, but higher production of thermal coal, in part to meet increased coal generation in Australia, compared with the 2024 projections.

Compared with the previous projections, fugitive emissions from oil and gas are projected to be 1 Mt CO_2-e higher in 2030, 2 Mt CO_2-e higher in 2035 and 1 Mt CO_2-e higher in 2040. This increase in projected emissions is the net result of lower assumed on-site emissions reductions at Safeguard facilities, changes in emissions intensity assumptions and gas production forecasts.

Industrial processes and product use

7% of Australia's emissions in 2025
↓ <1 Mt CO_2-e 2005 to 2025
↓ 3 Mt CO_2-e 2025 to 2030



The IPPU sector includes emissions from non-energy related production processes. Emissions from this sector include by-product gases from chemical reactions in production processes, the release of synthetic greenhouse gases from commercial and household equipment, combustion of lubricant oils not used for fuels, and carbon dioxide used in food and beverage production. Energy-related emissions are accounted for in the stationary energy sector. Table 25 lists the sub-sectors that comprise the IPPU sector and the main production processes that drive emissions from these sub-sectors.

Table 25 – Production processes in the industrial processes and product use sector

IPPU sub-sector	Main production processes
Metal industry	Iron and steel, and aluminium production
Chemical industry	Ammonia, nitric acid and titanium dioxide production
Mineral industry	Cement clinker and lime production
Product uses as substitutes for ozone depleting substances	HFCs used in refrigeration and air conditioning equipment, foam blowing, fire protection and aerosols
Non-energy products from fuel and solvent use	Emissions from lubricant oils not used for fuel
Other production	CO_2 used in food production
Other product manufacture and use	Sulphur hexafluoride used in electrical switchgear

Emissions trends

IPPU emissions are estimated to be 30 Mt CO_2-e in 2025 and are projected to decrease by 11% to 27 Mt CO_2-e in 2030. From 2025 to 2040 emissions are projected to decrease by 35% to 20 Mt CO_2-e in 2040. These projected reductions primarily reflect on-site emissions reductions at Safeguard facilities and a decline in emissions from HFCs. The projected on-site emissions reductions at Safeguard facilities are 2 Mt CO_2-e in 2030, increasing to 5 Mt CO_2-e in 2040.

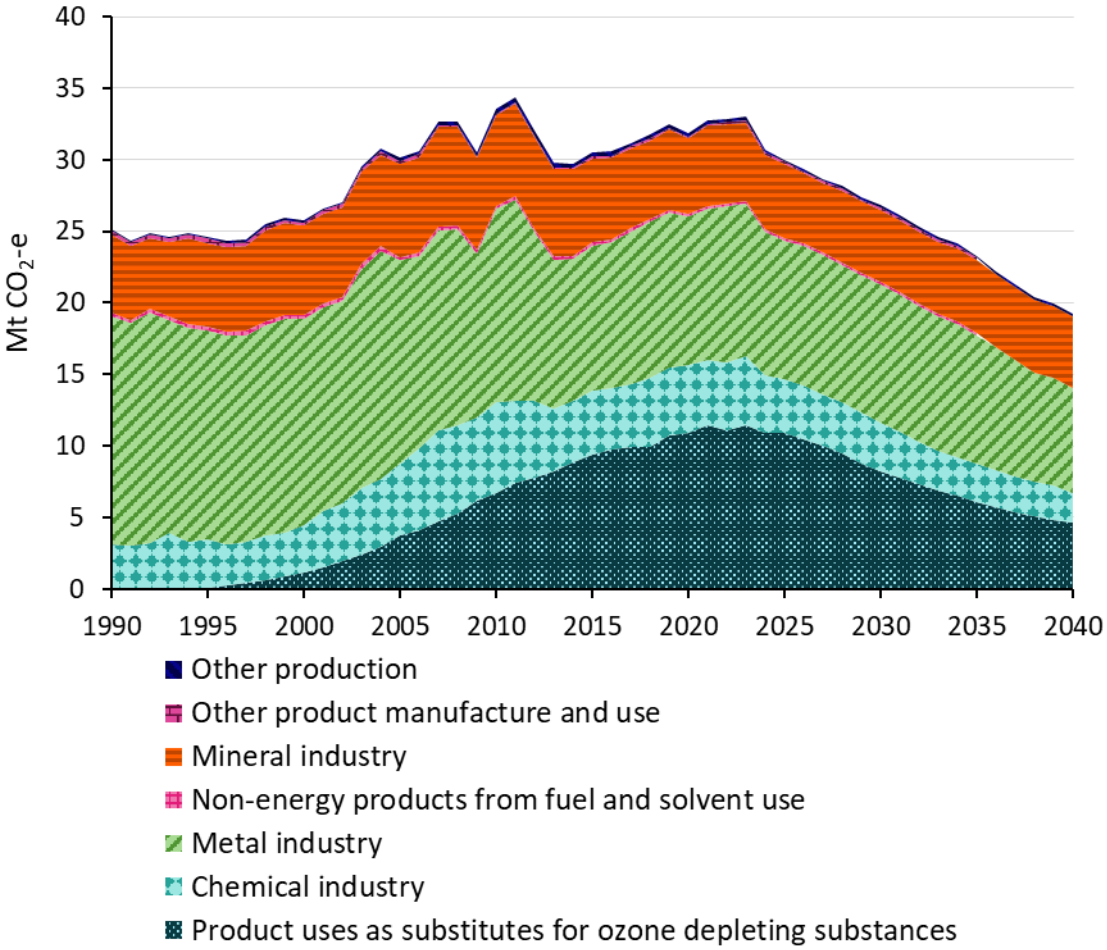


Figure 24 – Industrial processes and product use emissions, 1990 to 2040, Mt CO_2-e

Table 26 – Industrial processes and product use emissions, Mt CO_2-e

Emissions by sub-sector	2005	2020	2025	2030	2035	2040
Product uses as substitutes for ozone depleting substances	4	11	11	8	6	5
Metal industry	14	10	10	10	9	7
Chemical industry	5	5	4	3	3	2
Mineral industry	6	5	5	5	5	5
Non-energy products from fuel and solvent use	<1	<1	<1	<1	<1	<1
Other production	<1	<1	<1	<1	<1	<1
Other product manufacture and use	<1	<1	<1	<1	<1	<1
Total	**30**	**32**	**30**	**27**	**23**	**20**

Note: totals may not sum due to rounding.

Hydrofluorocarbon (HFC) emissions

The largest source of emissions in the IPPU sector in 2025 is the product uses as substitutes for ozone depleting substances sub-sector (or HFCs), which contributes 11 Mt CO_2-e of emissions (36% of total IPPU emissions).

Emissions from HFCs are projected to decline from 11 Mt CO_2-e in 2025 to 5 Mt CO_2-e in 2040. This is primarily the result of the projected impact of several measures implemented through the *Ozone Protection and Synthetic Greenhouse Gas Management Act 1989* and supporting regulations:

- The HFC phase-down measure legislates a reduction of the annual import quota on bulk imports of HFCs until 2036.
- The ban on the import and manufacture of small air conditioning equipment using HFC refrigerants with a GWP over 750 from 1 July 2024.
- The ban on the import and manufacture of multi-head split system air conditioning equipment using HFC refrigerants with a GWP over 750 from 1 July 2025.

Metal industry emissions

The metal industry is the second largest source of emissions in the IPPU sector in 2025, contributing 10 Mt CO_2-e of emissions (32% of total IPPU emissions). Emissions are projected to remain at 10 Mt CO_2-e in 2030, decreasing to 9 Mt CO_2-e in 2035 and to 7 Mt CO_2-e in 2040.

This decrease in emissions is driven by projected on-site emissions reductions at Safeguard facilities in the metal industry of 1 Mt CO_2-e in 2030 and 3 Mt CO_2-e in 2040. Emissions reductions are expected to occur mainly through technological improvements in steelworks facilities, such as the uptake of biochar to replace coal as a reductant in the steel-making process. Additional emissions reductions are assumed to be achieved through the increased use of scrap content, blast furnace relining and efficiency improvements.

Other industry emissions

Emissions from the chemical industry sub-sector accounted for 13% of emission in the IPPU sector in 2025. They are projected to decrease from 4 Mt CO_2-e in 2025 to 2 Mt CO_2-e in 2040. This decrease is mainly driven by the projected impact of the Safeguard Mechanism (1 Mt CO_2-e in 2030 and 2 Mt CO_2-e in 2040), through the use of green hydrogen for fertiliser production, catalytic reduction of nitrous oxide (N_2O) in the production of ammonium nitrate and efficiency improvements.

Mineral industry emissions made up 17% of emissions in the IPPU sector in 2025 and are projected to remain at around 5 Mt CO_2-e per year over the period from 2026 to 2040. This reflects relatively low levels of projected on-site emissions reductions at Safeguard facilities (less than 1 Mt CO_2-e in 2040). At present, there remains limited scope for emissions reductions in the cement industry (which accounted for 53% of emissions in the mineral industry sub-sector in 2025) due to economic and technical challenges.[46, 47]

[46] Journal of Environmental Sciences 2021, Challenges against CO_2 abatement strategies in cement industry: A review, Vol 104, June 2021, pages 84-101.

[47] IEA 2023, Cement, International Energy Agency, Paris.

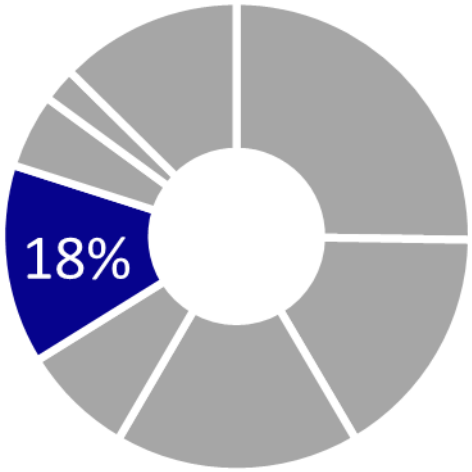
The remaining sub-sectors made up 2% of emissions in the IPPU sector in 2025 and are projected to remain at less than 1 Mt CO_2-e per year over the period from 2026 to 2040.

Comparison to previous projections

Compared with the baseline scenario from the 2024 projections, IPPU emissions are projected to be 0.2 Mt CO_2-e lower in 2030, 0.7 Mt CO_2-e lower in 2035 and 0.5 Mt CO_2-e lower in 2040. This decrease in emissions is primarily driven by updates in the National Inventory with lower estimated emissions than last year's projection for the year 2025 across most sub-sectors. Compared with the previous projections, IPPU emissions are 2 Mt CO_2-e lower in 2025, with the largest contributors being the metal and chemical industries, reflecting lower levels of production in these subsectors in 2025 than forecast as well as commencement of on-site emissions abatement in the chemical industry.

Agriculture

18% of Australia's emissions in 2025
↓ 6 Mt CO_2-e 2005 to 2025
↑ <1 Mt CO_2-e 2025 to 2030



Agriculture sector emissions relate to the biological processes associated with agricultural commodity production. This includes emissions from enteric fermentation (the production of methane through the digestive processes of ruminant animals such as sheep and cattle), agricultural soils, manure management, liming and urea application, rice cultivation, and field burning of agricultural residues. The agriculture sector does not include emissions from energy used by farm machinery or electricity use, which are included in the stationary energy and electricity sectors.

Most agricultural emissions are methane and nitrous oxide from livestock digestion processes, fertiliser application, and the decay or combustion of living and dead biomass. There are also small amounts of carbon dioxide emitted from the application of lime and urea.

Table 27 – Agriculture emissions, Mt CO_2-e

Emissions by sub-sector	2005	2020	2025	2030	2035	2040
Grazing beef	44	39	43	44	43	42
Grain fed beef	1	1	2	2	2	2
Dairy	11	9	7	7	7	7
Sheep	21	14	14	15	15	15
Pigs	2	2	2	2	2	2
Other animals	1	1	1	1	1	1
Crops	2	1	3	2	3	3
Fertilisers	3	3	4	4	4	4
Lime and urea	2	3	3	3	4	4
Other	1	1	1	1	1	1
Total	**87**	**74**	**80**	**81**	**81**	**81**

Note: totals may not sum due to rounding.

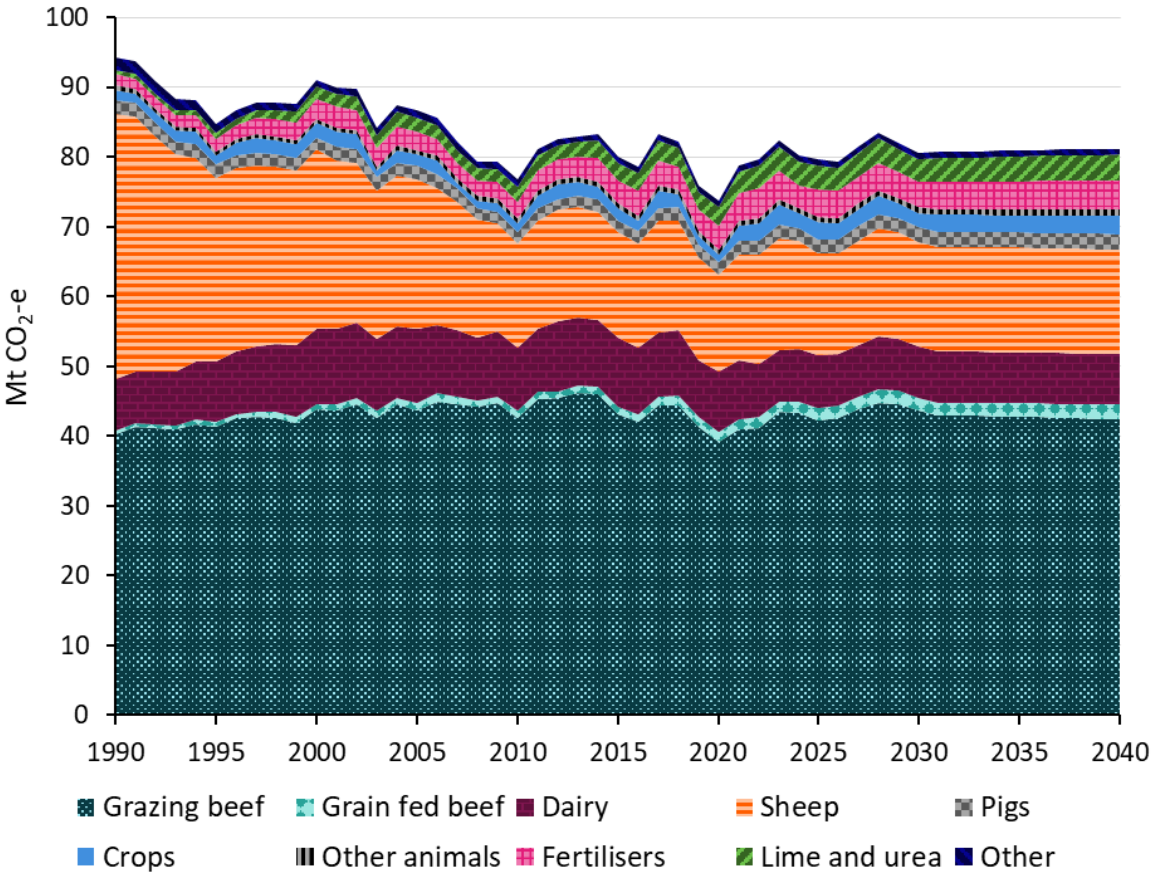


Figure 25 – Agriculture emissions, 1990 to 2040, Mt CO_2-e

Emissions trends

Agriculture emissions are estimated to be 80 Mt CO_2-e in 2025 and are projected to increase by <1% to 81 Mt CO_2-e in 2030. From 2025 to 2040 emissions increase by 1% to 81 Mt CO_2-e.

Short-term fluctuations in agriculture emissions are heavily influenced by climate variations. For example, peak agricultural emissions in 2023 were followed by reduced emissions in 2024 due to the El Niño conditions. Moving into 2025, improved seasonal conditions drove strong crop production and, in turn, crop emissions. However, there was a slight decline in the beef herd and associated emissions in 2025. Strong global demand and higher turn-off of the maturing herd, built during the favourable conditions from 2021 to 2023, influenced this decline. Based on the observed impacts of short-term climate variations, the projected agricultural activity to 2030 is affected by oscillations between wet and dry climate drivers.

Emissions in later years are modelled to follow average seasonal conditions using a continuation of historical activity trends or recent averages.[48] From 2031 to 2040, emissions are projected to remain relatively stable, increasing by <1 Mt CO_2-e to 81 Mt CO_2-e in 2040.

[48] Short and medium-term growth rates (to 2030) are based on the Australian Bureau of Agricultural Resource Economics and Science (ABARES) Agricultural commodity forecasts and outlook where available. Long-term growth rates are largely based on historical trends or recent averages. More information is available in the *Methodology for the 2025 Projections* report on the department's website.

Agriculture emissions are prepared by commodity and IPCC categories. The IPCC categories relate to the direct processes that produce emissions, such as methane produced from the digestion process of animals (enteric fermentation).[49] Enteric fermentation emissions from livestock accounts for the majority of agriculture emissions (58 Mt CO_2-e, or 72% in 2025, and 58 Mt CO_2-e or 71% in 2040). The second largest process that livestock contribute is the productions of methane and nitrous oxide emissions from manure management (8 Mt CO_2-e in 2025). Changes to enteric fermentation and manure management emissions are primarily driven by changes to livestock numbers. Figure 26 shows the projected proportion of livestock emissions by commodity in 2030, with grazing beef producing 62% of all livestock emissions. Beef cattle are projected to remain the largest contributor to agricultural emissions to 2040, followed by sheep and dairy cattle.

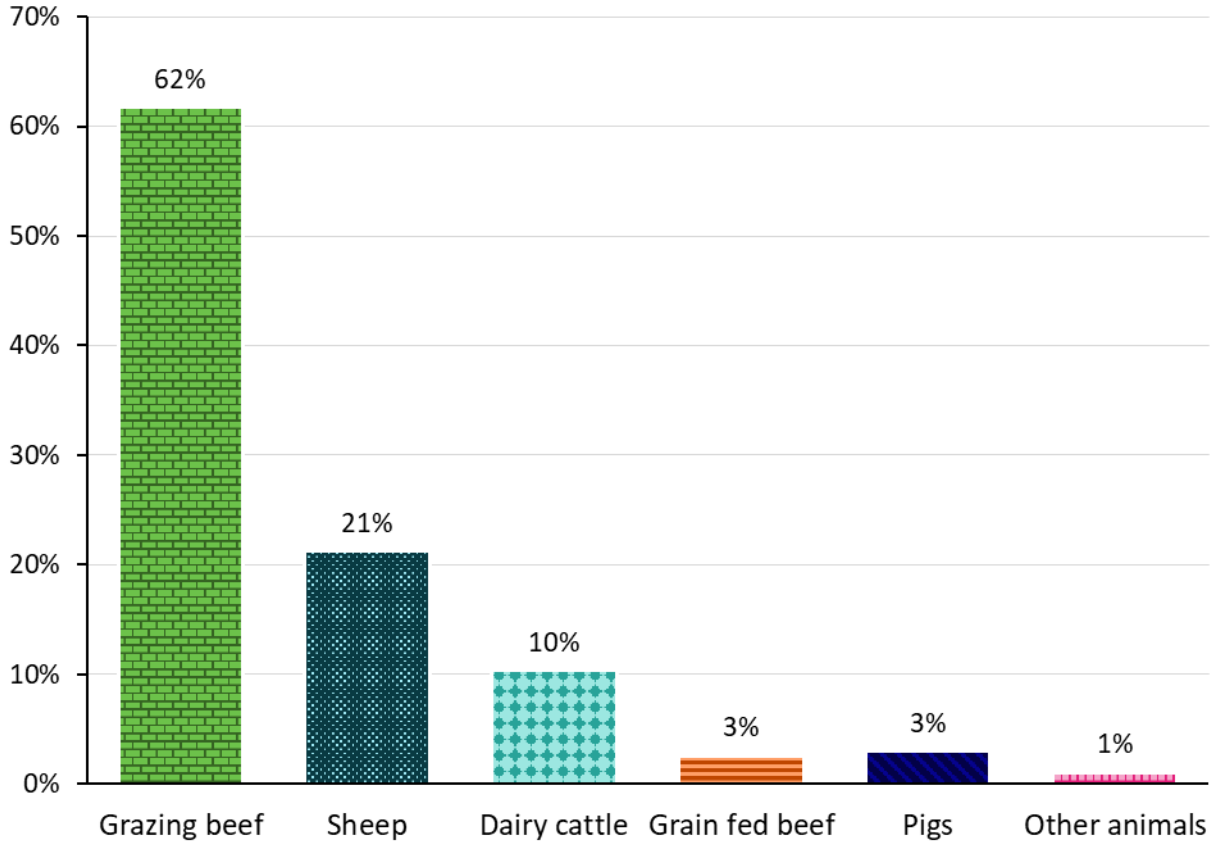


Figure 26 – Livestock emissions in 2030, commodity categories, %
Note: totals may not sum due to rounding.

[49] Individual agricultural commodities (such as grazing beef cattle) can contribute emissions to more than one IPCC sub-sector due to the differing biological and production processes of commodities. More information on the alignment between agricultural commodities and agriculture IPCC sectors is available in the *Methodology for the 2025 Projections* report on the department's website.

Livestock trends

Livestock emissions peaked in 2023 at 71 Mt CO_2-e following above-average rainfall driven by the 2020 – 2023 La Niña events. More recently, drier conditions and lower pasture availability, as well as strong turn-off of animals reaching maturity has seen the beef cattle herd and sheep flock decline to 2025.[50,51] Livestock emissions are projected to remain stable in 2026 at 69 Mt CO_2-e and increase slightly to 70 Mt CO_2-e in 2040.

Grazing beef cattle are projected to remain the largest contributor to agricultural emissions throughout the projections period. Grazing beef cattle emissions reached a recent high of 44 Mt CO_2-e in 2023. Emissions are projected to fluctuate to 2030 in response to seasonal conditions and pasture availability.[50, 51] Grazing beef emissions are then projected to decline to 42 Mt CO_2-e in 2040.

Historically, the number of grain-fed beef cattle has trended upwards with recent unprecedented growth in the industry.[52] The number of cattle in feedlots is expected to increase, reaching a projected 1.7 million annual equivalent head in 2040, which is 5% of the total beef cattle herd as grazing cattle is projected to reach 26 million head in 2040. Grain-fed cattle emissions are projected to increase 13% from 1.9 Mt CO_2-e in 2025 to 2.1 Mt CO_2-e in 2040.

Sheep are the second largest contributor to agriculture emissions at 14 Mt CO_2-e in 2025. Sheep emissions are projected to be 5% higher in 2030 than in 2025 and projected to plateau from 2031 to 2040 at 15 Mt CO_2-e. Dairy cattle emissions are projected to decline by 2% from 2025 to 7 Mt CO_2-e in 2040 due to continued farm exits as a result of pressure from intense global competition and high input costs.

The 'other animals' sub-sector includes emissions from poultry and range-fed livestock (goats, horses, deer, buffalo, donkeys, emus, alpacas and camels). With the exception of poultry, activity of these livestock is held constant due to limited data on growth potential. Emissions from poultry are projected to grow steadily over the medium to long-term. High levels of domestic demand, productivity improvements and population growth support the growth of poultry emissions, reaching 0.5 Mt CO_2-e in 2040.[51, 53] Emissions from poultry occur due to the management of manure and application of manure to agricultural soils.

Crop trends

Historical emissions from crops peaked in 2023 at 2.7 Mt CO_2-e. Crop production is heavily dependent on seasonal conditions, including soil moisture and rainfall levels. Contrasting seasonal conditions across each cropping zone, as well as a return to neutral El Niño–Southern Oscillation (ENSO) conditions over 2024 and 2025, has seen crop emissions dipping and rising again to 2.6 Mt CO_2-e in 2025. From 2026 to 2030, the projection of crop emissions is based on the Australian Bureau of

[50] ABARES 2025, Agricultural Commodities Report: June quarter 2025, Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra.

[51] ABARES 2025, Agricultural Commodities Report: March quarter 2025, Australian Bureau of Agricultural Resource Economics and Science, Canberra.

[52] Australian Lot Feeders' Association and Meat & Livestock Australia 2025, Lot Feeding Brief August 2025, accessed 26 September 2025.

[53] OECD-FAO (2025), OECD-FAO Agricultural Outlook 2025-2034, Organisation for Economic Co-operation and Development - Food and Agriculture Organization of the United Nations, Paris and Rome.

Agricultural Resource Economics and Science (ABARES) 5-year agricultural commodity outlook. Despite variations in seasonal conditions, production outcomes are expected to remain above average.[51] From 2031 onwards, crop projections are primarily based on historical trends and recent averages. Crop emissions are projected to reach 2.6 Mt CO_2-e in 2040.

Comparison to previous projections

Compared with the baseline scenario from the 2024 projections, emissions are projected to be 3 Mt CO_2-e lower in 2030, 3 Mt CO_2-e lower in 2035, and 3 Mt CO_2-e lower in 2040. This is predominantly due to lower beef cattle emissions throughout the time series.

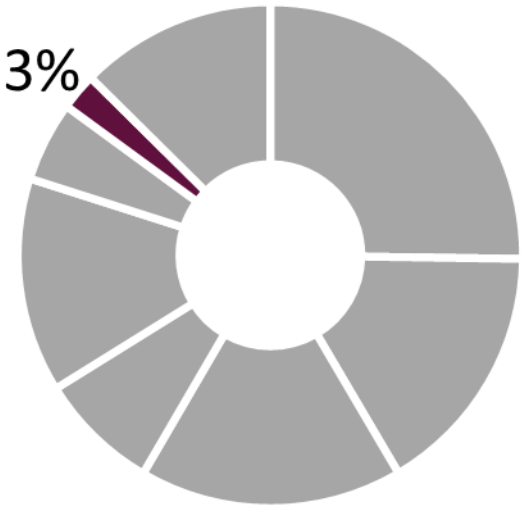
Grain-fed beef, or feedlot beef, emissions have been recalculated downward, primarily as a result of a new Australian specific methane equation for enteric fermentation emissions from feedlot cattle adopted in the most recent National Inventory Report.[54] Record growth in the industry results in a projected 1.7 million annual equivalent grain-fed cattle in 2040, compared to 1.6 million in the previous emissions projections. Despite this growth, grain-fed emissions are lower in 2040 at 2.1 Mt CO_2-e, compared to 4.0 Mt CO_2-e in the 2024 projections. This is a reduction of 1.9 Mt CO_2-e, owing to the recalculation of emissions with the new equation.

Historical grazing beef emissions are lower due to a more comprehensive calculation of emissions in the National Inventory Report in comparison to the 2024 emissions projections.[54] Additionally, a lower than expected grazing beef herd in 2025 is carried across the projections time series.

[54] DCCEEW 2025, National Inventory Report 2023 Volume I, Department of Climate Change, Energy, the Environment and Water, accessed 26 September 2025.

Waste

3% of Australia's emissions in 2025
↓ 2 Mt CO_2-e 2005 to 2025
↓ 1 Mt CO_2-e 2025 to 2030



The waste sector covers emissions from: the disposal of organic materials to landfill; wastewater emissions from domestic, commercial, and industrial sources; the biological treatment of solid waste; and clinical and solvent waste incineration. Emissions are mostly methane, generated from the anaerobic decomposition of organic matter. Small amounts of carbon dioxide and nitrous oxide are also generated by incineration and the decomposition of human waste.

Table 28 – Waste emissions, Mt CO_2e

Emissions by sub-sector	2005	2020	2025	2030	2035	2040
Solid waste to landfill	12	10	10	9	9	8
Solid waste – composting	<1	<1	<1	<1	<1	<1
Incineration	<1	<1	<1	<1	<1	<1
Domestic and commercial wastewater	2	2	2	2	2	2
Industrial wastewater	2	1	1	1	1	1
Total	**16**	**13**	**14**	**13**	**12**	**12**

Note: totals may not sum due to rounding.

Emissions trends

Waste emissions are estimated to be 14 Mt CO_2-e in 2025 and are projected to decrease by 8% to 13 Mt CO_2-e in 2030. From 2025 to 2040 emissions decline by 13% to 12 Mt CO_2-e. This trend is primarily driven by declining emissions in the solid waste to landfill sector.

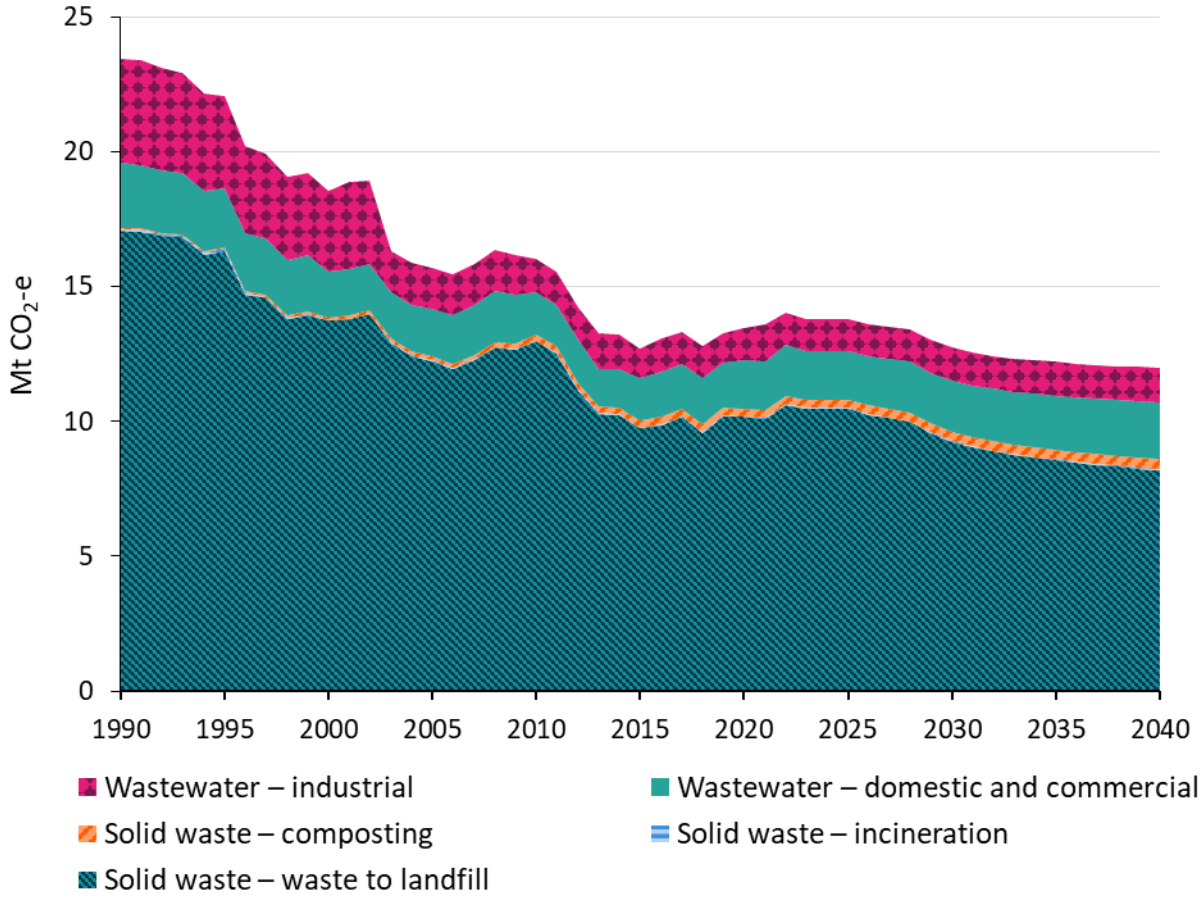


Figure 27 – Waste emissions, 1990 to 2040, Mt CO_2-e

Solid waste trends

The landfill sector is the largest contributor to waste emissions. It produced 10 Mt CO_2-e in 2025 and is projected to decline by 22% to 8 Mt CO_2-e in 2040. The projected decline in emissions is similar to the historical emissions trend, with increased levels of recycling and resource recovery helping to offset the impact of population growth on the volume of waste disposal.

Waste deposited in landfills is classified according to 3 waste streams: municipal solid waste, commercial and industrial waste, and construction and demolition waste. Each of these streams is further disaggregated into a mix of individual waste categories: food, paper and cardboard, garden and park, wood, textiles, sludge (including biosolids), nappies, rubber and leather, and inert (concrete, metal, plastics, glass, soil etc.). All these waste categories produce emissions when in landfill and are modelled in the projections, with the exception of inert waste. The amount of non-inert waste deposited in landfills is projected to decline across all 3 waste streams from 2025 to 2040 due to reduced waste being deposited at landfills, in particular, a declining proportion of food and organic waste in the municipal solid waste stream. The planned commencement of Energy from Waste facilities in 2026 and 2027 is expected to further contribute to the reduction of waste deposited in landfills by diverting combustible waste.

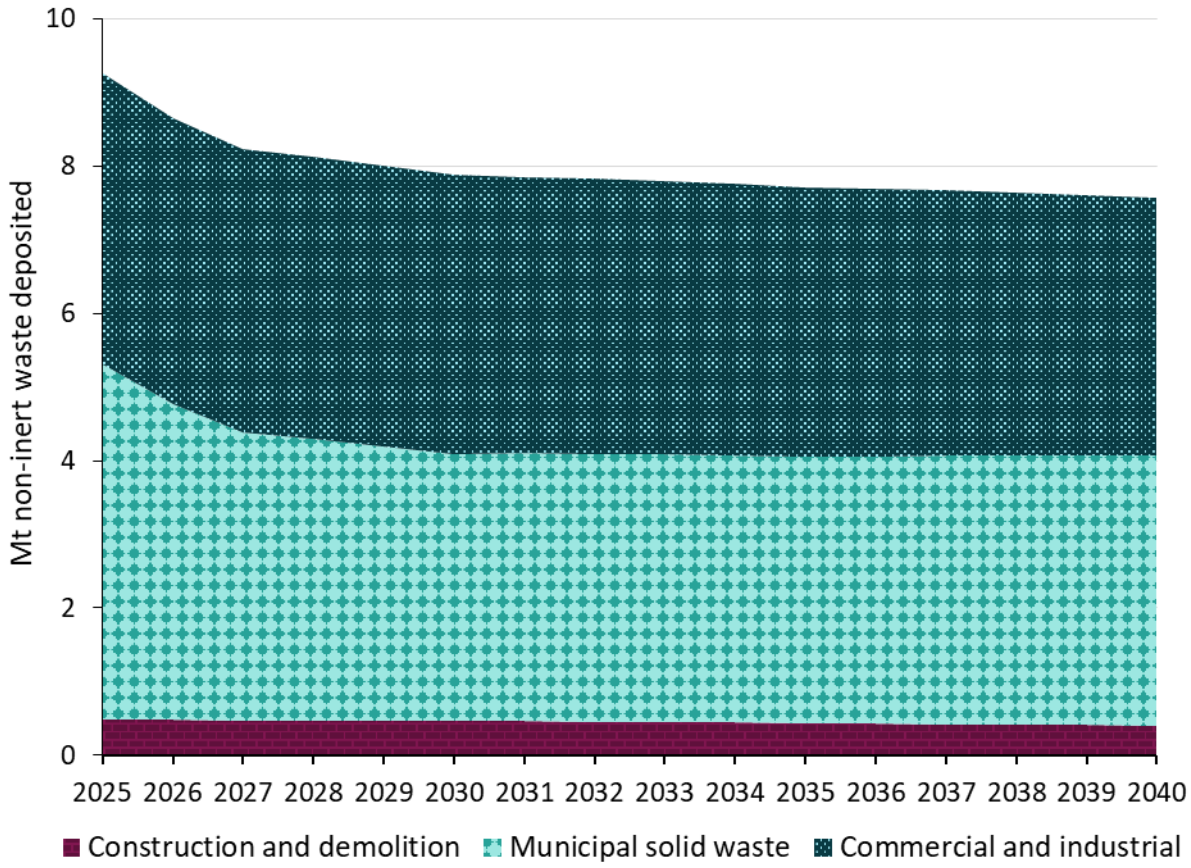


Figure 28 – Non-inert waste deposited at landfills, by stream, 2025 to 2040, Mt

The projections model the amount of each category of non-inert waste deposited in landfills. The amount of waste generated is generally projected to grow with population, while the proportion of each waste category sent to landfill is adjusted to account for policies and trends within the sector. For example, many jurisdictions plan to continue to introduce FOGO bins for households, which will divert substantial quantities of food and garden waste from landfill. Food and garden waste currently makes up around 68% of non-inert waste deposited in landfills. The projected uptake in the use of FOGO bins is projected to decrease food and garden landfill emissions by around 21% from 2025 to 2040. The projections also account for the impact of projects funded through the Recycling Modernisation Fund and approved Energy from Waste projects.

Waste projects under the ACCU scheme contribute to reducing emissions in the solid waste to landfill sector. A small amount of additional reductions are achieved through the Safeguard Mechanism driving process efficiency improvements.

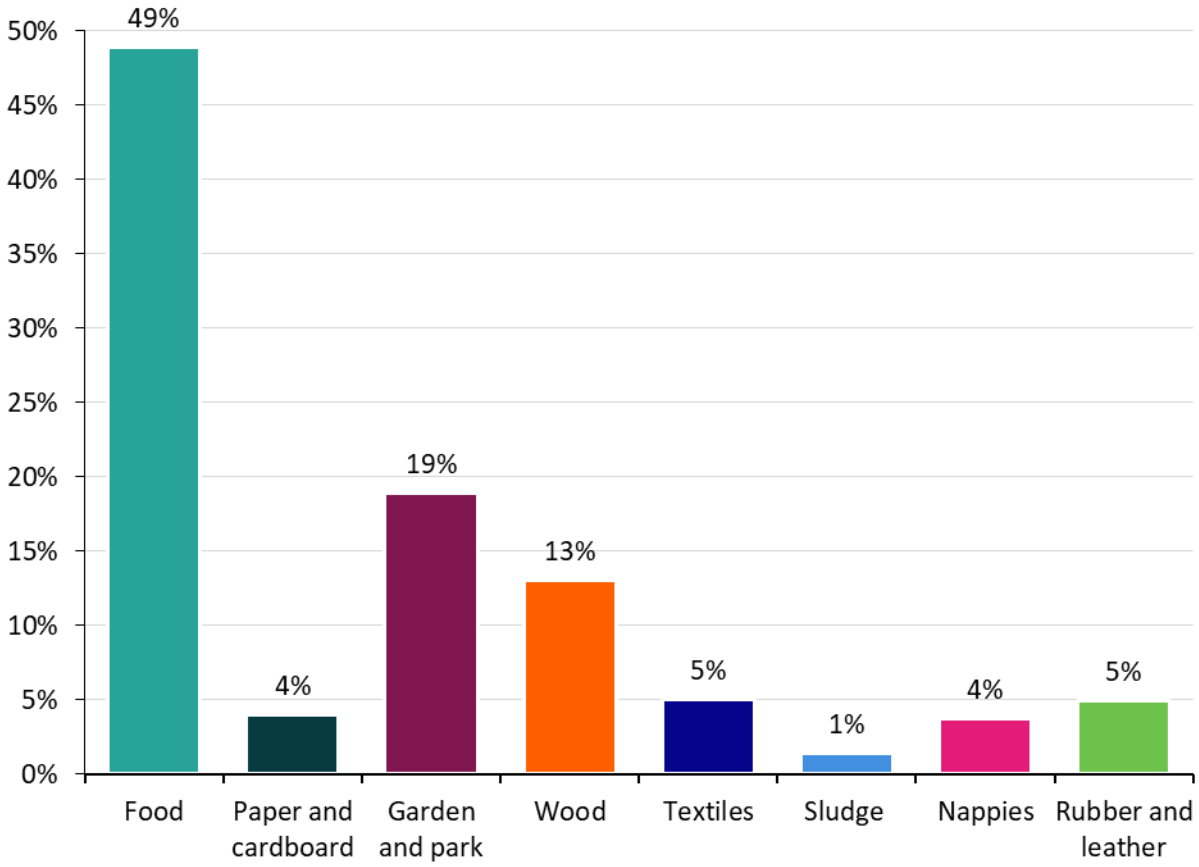


Figure 29 – Non-inert waste deposited at landfills in 2025, by commodity, %

Wastewater trends

Domestic and commercial wastewater emissions result from the anaerobic decomposition of organic matter in sewerage facilities, as well as some emissions from areas not connected to sewerage systems. Emissions in this sector are projected to increase in line with population. This increase is mitigated slightly by small projected increase in the proportion of the population connected to sewerage systems, as sewage emits less when processed in municipal wastewater facilities. The reforms to the Safeguard Mechanism contribute a small amount of abatement in the domestic and commercial wastewater sector from process efficiency improvements.

Emissions from industrial wastewater come from the decomposition of organic matter from industrial production processes such as the production of beer, meat, and organic chemicals. Emissions from this sector are projected to remain relatively unchanged from 2025 to 2040, with small increases in response to changes in commodity production levels.

Comparison to previous projections

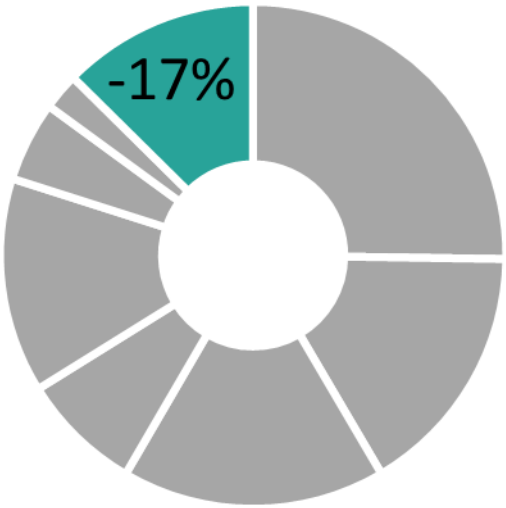
Compared with the baseline scenario from the 2024 projections, waste emissions are projected to be 0.4 Mt CO_2-e lower in 2030, 0.5 Mt CO_2-e lower in 2035 and 0.6 Mt CO_2-e lower in 2040. This reflects the latest National Greenhouse Gas Inventory updates having reported lower emissions than last year's projection for 2025, and slightly lower growth rate of population than projected in 2024.

Land use, land-use change and forestry

-17% (net sink equivalent) of Australia's emissions in 2025

↓ 151 Mt CO_2-e 2005 to 2025

↑ 22 Mt CO_2-e 2025 to 2030



The LULUCF sector includes both sources of greenhouse gas emissions and sinks that remove carbon dioxide from the atmosphere, sequestering it as carbon in living biomass, debris, and soils. Changes to land management practices have had significant impacts on Australia's vegetation since 1990. Reductions in vegetation clearing, especially primary forest clearing (clearing of forest that has not previously been cleared), the fostering of vegetation growth, and the use of shelter belts have all contributed to improved carbon stock outcomes in Australia's forests and on Australia's grazing lands.

The LULUCF sector projections are based on the UNFCCC inventory structure as described in Australia's most recent National Inventory Report. The major land categories used include:

Forest land, including forest land remaining forest land (harvested native forests, pre-1990 plantations, wildfires and prescribed burns, and fuelwood) and land converted to forest land (hardwood and softwood plantations, environmental plantings, natural regeneration, regrowth on previously cleared land, controlled burns, and wildfire).

Cropland, including cropland remaining cropland (changes in soil carbon under herbaceous crops and woody horticulture) and land converted to cropland (forests and wetlands).

Grasslands, including grassland remaining grassland (changes in soil carbon through pastoral activities, fire management in savanna rangelands, and changes in shrubby vegetation extent on grasslands) and land converted to grassland (forest and wetlands).

Wetlands, including wetland remaining wetland (flooded lands, other wetlands, aquaculture activities, dredging of seagrasses, and mangrove and tidal marsh conversions) and land converted to wetland (forests and reservoirs).

Settlements, including settlements remaining settlements (sparse woody vegetation) and land converted to settlements (forests conversions).

Harvested wood products, including paper, solid wood, and wood products waste.

Emissions trends

Emissions from LULUCF, while highly variable, have broadly decreased since 1990 and are estimated to be a net sink of -74 Mt CO_2-e in 2025. The land sector is projected to remain a net sink to 2040 (that is, it sequesters more carbon than it emits). However, emissions are projected to increase and sequestration moderates by a net 30% to -52 Mt CO_2-e in 2030. From 2025 to 2040 the net increase is 29% to -53 Mt CO_2-e. Much of the change relates to a return to average climate conditions from an above-average net sink in the three years to 2023; this effect is somewhat offset by the increasing sequestration from ACCU projects.

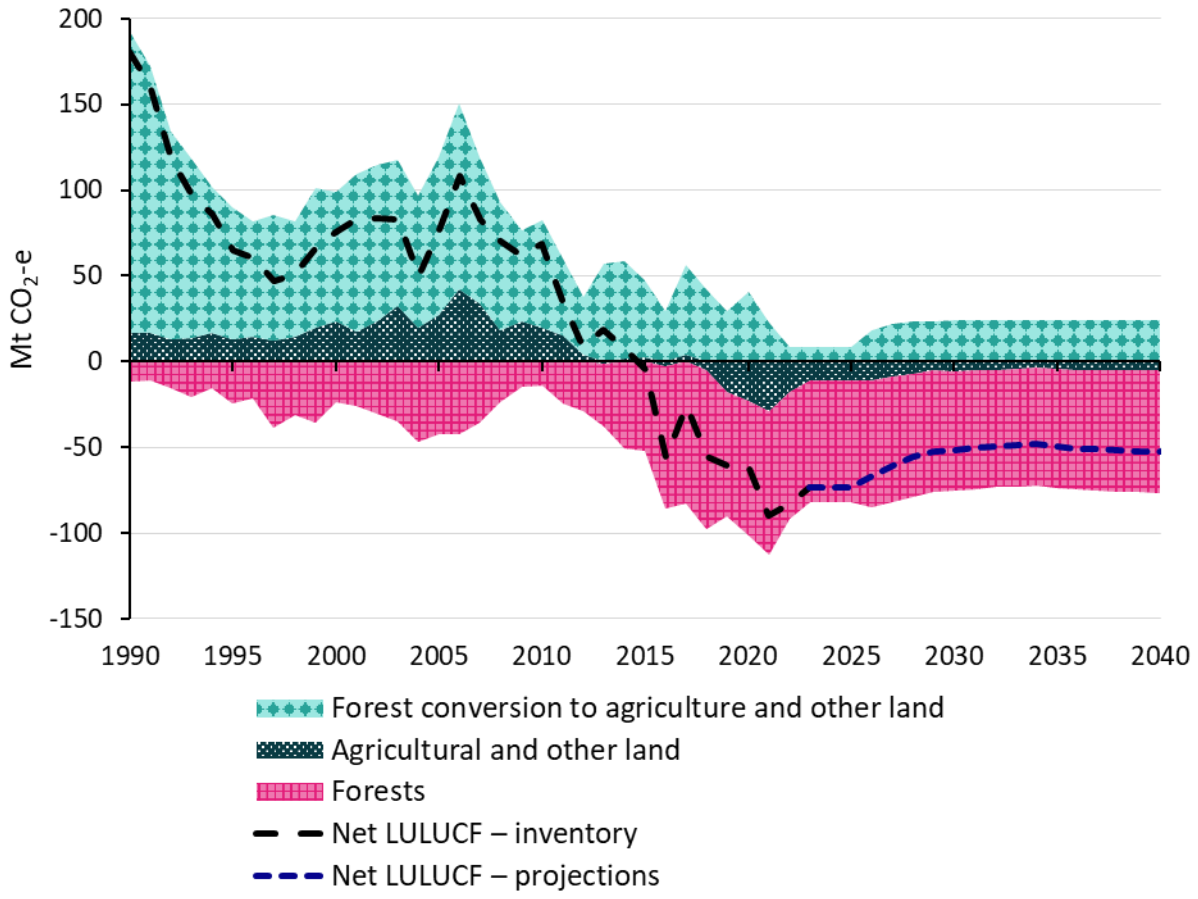


Figure 30 – Emissions and removals from LULUCF, 1990 to 2040, Mt CO_2-e

Table 29 – LULUCF emissions, Mt CO_2e

Emissions by sub-sector	2005	2020	2025	2030	2035	2040
Forests	-42	-78	-71	-70	-69	-72
Agricultural and other lands	27	-23	-11	-6	-4	-5
Forest conversion to agricultural and other lands	92	41	9	24	24	24
Total	**77**	**-61**	**-74**	**-52**	**-50**	**-53**

Note: totals may not sum due to rounding.

Forests

The forest category includes forest land remaining forest land, land converted to forest, and harvested wood products.

The primary drivers of the forest lands emissions in the near-term are the return to average climate conditions after a period of La Niña, which contributed to the significant sink in 2024, particularly for regeneration and forest regrowth, but also resulted in higher emissions from soil carbon decay in harvested native forests.

In the long term, the emissions from the declining sink in regeneration and regrowth will be offset by increasing sequestration under the ACCU scheme, and continuing sequestration in native forests, primarily driven by the cessation of harvesting in Victoria and Western Australia resulting in forest emissions stabilising around a -70 Mt CO_2-e sink in the years from 2025 to 2040.

Agricultural and other lands

Agricultural and other lands includes cropland remaining cropland, grassland remaining grassland, wetland remaining wetland, and settlements remaining settlements.

This category is sensitive to climatic variability and has been significantly affected by the greater than average soil carbon sequestration through the 2020, 2021, and 2022 La Niña events. This period of above-average rainfall and below-average temperatures and pan evaporation resulted in increased soil carbon sequestration. This sequestered soil carbon is projected to reverse somewhat as the climatic conditions return to average, resulting in increasing emissions from agricultural and other lands from -11 Mt CO_2-e in 2025 to -6 Mt CO_2-e in 2030 and then stabilising to 2040. Emissions in agricultural and other lands are projected to be partially offset by abatement from agricultural carbon farming projects under the ACCU Scheme.

Forest conversions to agricultural and other lands

This category includes land converted to cropland, grassland, wetland, and settlements. Historically this has been the largest source of emissions in the LULUCF sector through the loss of vegetation, burning of residues and decay of soil when land is cleared. Most forest conversion activity in Australia is to provide pastures for grazing activities, although some forest conversion occurs to support cropping, settlements, infrastructure, and reservoirs.

Emissions are expected to return to historical levels by 2030, increasing from the weather-impacted low clearing and high sequestration observed in 2022, and remain constant to 2040 at 24 Mt CO_2-e, well above the historically low level of 9 Mt CO_2-e in 2025 as reported the latest National Inventory Report.

Comparison to previous projections

Compared with the baseline scenario from the 2024 projections, the LULUCF net sink is projected to be 12 Mt CO_2-e smaller in 2030, 11 Mt CO_2-e smaller in 2035, and 1 Mt CO_2-e smaller in 2040.

Decreases in the sink in 2025 for agricultural and other lands are driven by methodological improvements to savanna fire modelling in the National Greenhouse Gas Inventory, and projections

modelling updates related to plantations harvesting and cropland and grassland emissions. These improvements have contributed to a smaller net sink compared to the 2024 emissions projections and are described in the updated National Greenhouse Gas Inventory and Methodology for Australia’s Emissions Projections Report 2025, respectively. Higher estimates of ACCU supply from 2032 have offset this lower projected sink from agricultural and other lands and is projected to result in ongoing increases to the sink in the projections period.

Projected emissions from forest conversions to agricultural and other lands are almost identical to the 2024 emissions projections due to delays in improvements to the forest cover dataset used to monitor forest conversions. In the 2023 National Inventory Report (published in May 2025) these emissions were held constant at the levels in the 2022 National Inventory Report (published in April 2024) that underpinned the 2024 emissions projections for forest conversions to agricultural and other lands.

Emissions projections by gas

Australia's emissions projections are prepared by gas and by sector. As greenhouse gases vary in their radiative activity and in their atmospheric residence time, converting emissions into CO_2-e allows for the integrated effect of emissions of the various gases to be compared.[55]

Of the greenhouse gases, carbon dioxide accounts for the largest share of emissions. Carbon dioxide emissions are projected to decline by 49% between 2025 and 2040, from 280 Mt CO_2-e in 2025 to 199 Mt CO_2-e in 2030, 173 Mt CO_2-e in 2035 and 144 Mt CO_2-e in 2040. The major sources of carbon dioxide in Australia are the electricity, transport and stationary energy sectors. Emissions from these sectors are all projected to decline to 2040. The largest decline in carbon dioxide emissions is a result of strong uptake of renewables reducing emissions in the electricity sector. The LULUCF sector is a source of carbon dioxide emissions as well as a sink that removes carbon dioxide from the atmosphere.

Methane emissions are projected to increase from 127 Mt CO_2-e in 2025 to 128 Mt CO_2-e in 2030 and then decreasing to 123 Mt CO_2-e in 2035 and to 121 Mt CO_2-e in 2040. They remain below the peak of 169 Mt CO_2-e in 1990 throughout the projections period. Fugitive emissions from coal mines dipped in 2025 as a number of gassy mines experienced extended outages. As these outages are resolved, emissions are projected to increase. From 2029 fugitive methane emissions from fossil fuel extraction are projected to decline as facilities covered by the Safeguard Mechanism undertake abatement activities while methane emissions from other major sources including agriculture, waste and LULUCF are largely unchanged to 2040.

Emissions from HFCs are projected to decline by 57% between 2025 and 2040, from 11 Mt CO_2-e in 2025 to 8 Mt CO_2-e in 2030, to 6 Mt CO_2-e in 2035 and 5 Mt CO_2-e in 2040. The decline is due to the *Ozone Protection and Synthetic Greenhouse Gas Management Act 1989* and associated regulations which legislate an annual import quota on bulk imports of HFCs and a ban on the import and manufacture of small air conditioning equipment and multi-head split system units that use high global warming potential HFC refrigerants. HFCs are used in air conditioners, refrigeration, foam blowing, aerosols, and fire protection equipment.

[55] The department applied the 100-year global warming potential values from the IPCC Fifth Assessment Report (AR5) to estimate emissions, consistent with rules adopted under the Paris Agreement (Decision 18/CMA.1 Annex 2.D Paragraph 37).

Table 30 – Emissions projections by gas, Mt CO_2-e

Emissions projections by gas	2005	2020	2025	2030	2035	2040
Carbon dioxide (CO_2)	435	318	280	199	173	144
Methane (CH_4)	150	130	127	128	123	121
Nitrous oxide (N_2O)	21	18	19	18	18	18
Hydrofluorocarbons (HFCs)	4	11	11	8	6	5
Perfluorocarbons (PFCs)	2	<1	<1	<1	<1	<1
Sulphur hexafluoride (SF_6)	<1	<1	<1	<1	<1	<1
Total	**612**	**478**	**437**	**354**	**321**	**289**

Note: totals may not sum due to rounding; Australia's emissions of nitrogen trifluoride (NF_3) are considered negligible and are not estimated.

Table 31 – Carbon dioxide (CO_2) emissions projections by sector, Mt CO_2-e

CO_2 emissions projections	2005	2020	2025	2030	2035	2040
Electricity	196	171	147	55	46	45
Stationary energy	79	97	94	91	83	71
Transport	80	92	98	91	83	76
Fugitives	7	17	16	13	13	8
Industrial processes and product use	22	19	18	17	16	14
Agriculture	2	3	3	3	4	4
Waste	<1	<1	<1	<1	<1	<1
Land use, land-use change and forestry	50	-80	-96	-73	-70	-74
Total	**435**	**318**	**280**	**199**	**173**	**144**

Note: totals may not sum due to rounding.

Table 32 – Methane (CH_4) emissions projections by sector, Mt CO_2-e

CH_4 emissions projections	2005	2020	2025	2030	2035	2040
Electricity	<1	<1	<1	<1	<1	<1
Stationary energy	2	1	1	1	1	1
Transport	1	<1	<1	<1	<1	<1
Fugitives	36	38	29	31	28	26
Industrial processes and product use	<1	<1	<1	<1	<1	<1
Agriculture	74	61	65	66	65	65
Waste	15	13	13	12	12	12
Land use, land-use change and forestry	22	16	18	17	17	17
Total	**150**	**130**	**127**	**128**	**123**	**121**

Note: totals may not sum due to rounding.

Table 33 – Nitrous oxide (N_2O) emissions projections by sector, Mt CO_2-e

N_2O emissions projections	**2005**	**2020**	**2025**	**2030**	**2035**	**2040**
Electricity	1	1	<1	<1	<1	<1
Stationary energy	1	1	1	1	1	<1
Transport	2	1	1	1	1	<1
Fugitives	<1	<1	<1	<1	<1	<1
Industrial processes and product use	2	2	1	1	<1	<1
Agriculture	10	10	12	11	12	12
Waste	<1	<1	<1	<1	<1	<1
Land use, land-use change and forestry	5	4	4	4	4	4
Total	**21**	**18**	**19**	**18**	**18**	**18**

Note: totals may not sum due to rounding.

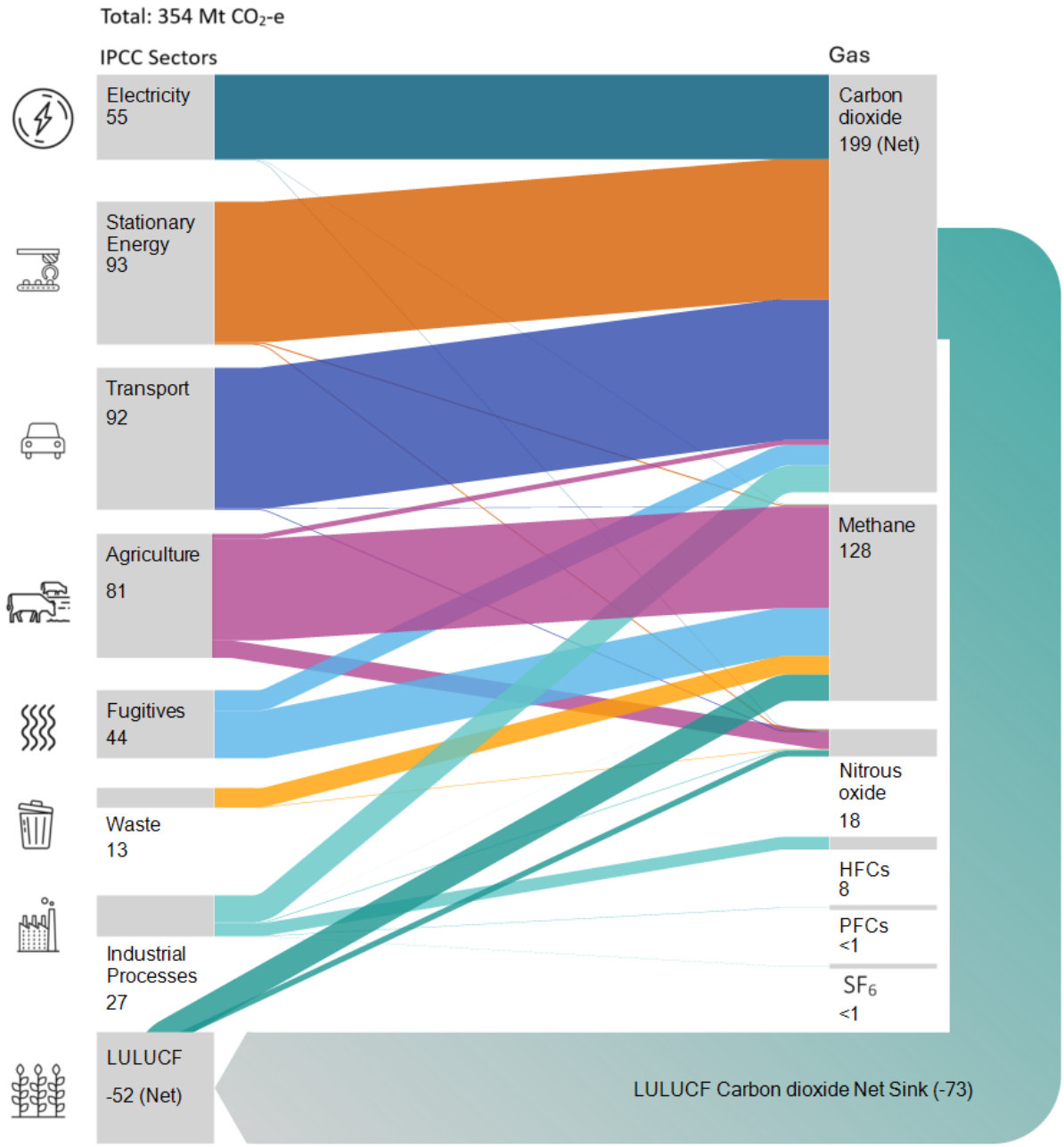


Figure 31 – Australia's emissions projections by gas, 2030, Mt CO_2-e

Emissions projections by economic sector

Introduction

The emissions projections are prepared under the UNFCCC reporting rules. The categories used in UNFCCC reporting are the IPCC categories, which relate to the direct processes that produce emissions, such as methane produced from the digestion process of animals in the agriculture sector. The IPCC categories are used to present the results in the main body of this report.

This section provides an alternative presentation by disaggregating emissions by Australian and New Zealand Standard Industrial Classification (ANZSIC) which may be more familiar for some readers. These classifications relate to recognisable industries and business activities, such as mining.

Direct emissions (scope 1 emission) trends

Based on ANZSIC classifications, the electricity, gas, water and waste services sector and the primary industries sector are the largest sources of emissions in 2025. Emissions from the **electricity, gas, water and waste services** sector are projected to decline from 153 Mt CO_2-e in 2025 to 68 Mt CO_2-e in 2030, 59 Mt CO_2-e in 2035 and 58 Mt CO_2-e in 2040. Emissions from the electricity, gas, water and waste services sector are mostly due to the combustion of fossil fuels at power stations to produce electricity.

The primary industries under the ANZSIC include the agriculture, forestry and fishing sector and the mining sector. Emissions from **agriculture, forestry and fishing** are projected to increase across the projections period, from 21 Mt CO_2-e in 2025 to 42 Mt CO_2-e in 2030, 44 Mt CO_2-e in 2035 and 42 Mt CO_2-e in 2040. The largest drivers of this sector are enteric fermentation emissions from cows and sheep and emissions from land management. Increased emissions from this sector are due to a reduction in the sink from forest land in the LULUCF IPCC sector.

Emissions from **mining** are projected to decline from 103 Mt CO_2-e in 2025 to 94 Mt CO_2-e in 2030, 81 Mt CO_2-e in 2035 and 67 Mt CO_2-e in 2040. The projected decline is due to increased electrification, reduced consumption of diesel and reduced fugitive emissions due to lower coal production and abatement activities at coal mines and oil and gas facilities.

Despite declining emissions from the mining sector, the primary industries emissions share of total emissions is projected to grow from 28% in 2025 to 38% in 2040, due to more rapid decarbonisation of other sectors.

Emissions from **manufacturing** are projected to decline from 51 Mt CO_2-e in 2025 to 50 Mt CO_2-e in 2030, 47 Mt CO_2-e in 2035 and 42 Mt CO_2-e in 2040 as companies are incentivised to take up a range of abatement opportunities by the Safeguard Mechanism.

Emissions from the **residential** and **services, construction and transport** sectors are projected to decline through to 2040 from 108 Mt CO_2-e in 2025 to 100 Mt CO_2-e in 2030, 89 Mt CO_2-e in 2035, largely due to reduced emissions from light duty vehicles primarily driven by the NVES.

Table 34 – Emissions projections by economic sector, Mt CO_2-e

Emissions by economic sector	2005	2020	2025	2030	2035	2040
Primary industries	228	141	124	136	126	109
Agriculture, forestry and fishing	167	28	21	42	44	42
Mining	61	113	103	94	81	67
Coal mining	*36*	*42*	*37*	*37*	*29*	*27*
Oil and gas extraction	*15*	*51*	*46*	*40*	*38*	*28*
Metal ore and non-metallic mineral mining and quarrying	*9*	*19*	*21*	*17*	*14*	*12*
Manufacturing	74	59	51	50	47	42
Electricity, gas, water and waste services	212	175	153	68	59	58
Services, construction and transport	47	52	61	59	54	50
Residential	51	52	47	42	35	30
Total	**612**	**478**	**437**	**354**	**321**	**289**

Note: totals may not sum due to rounding.

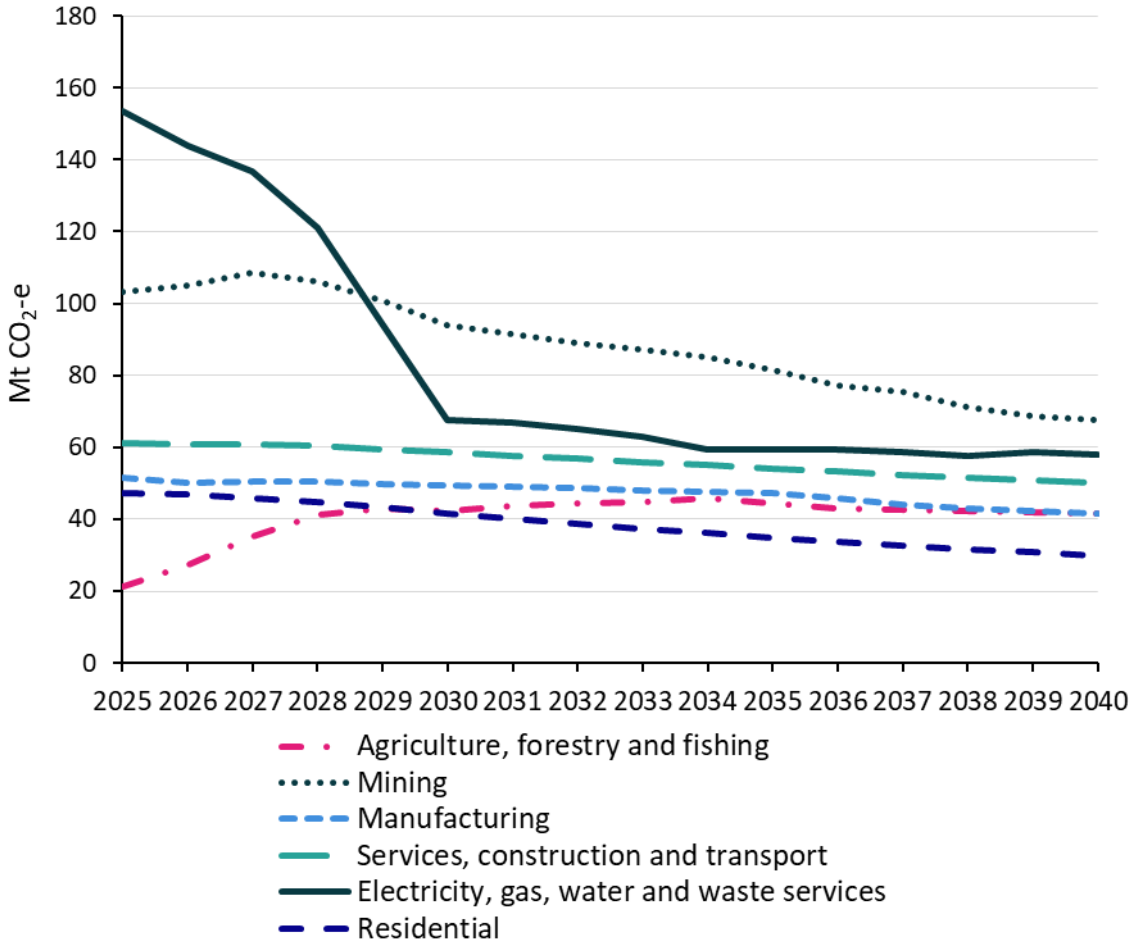


Figure 32 – Emissions projections by economic sector, 2025 to 2040, Mt CO_2-e

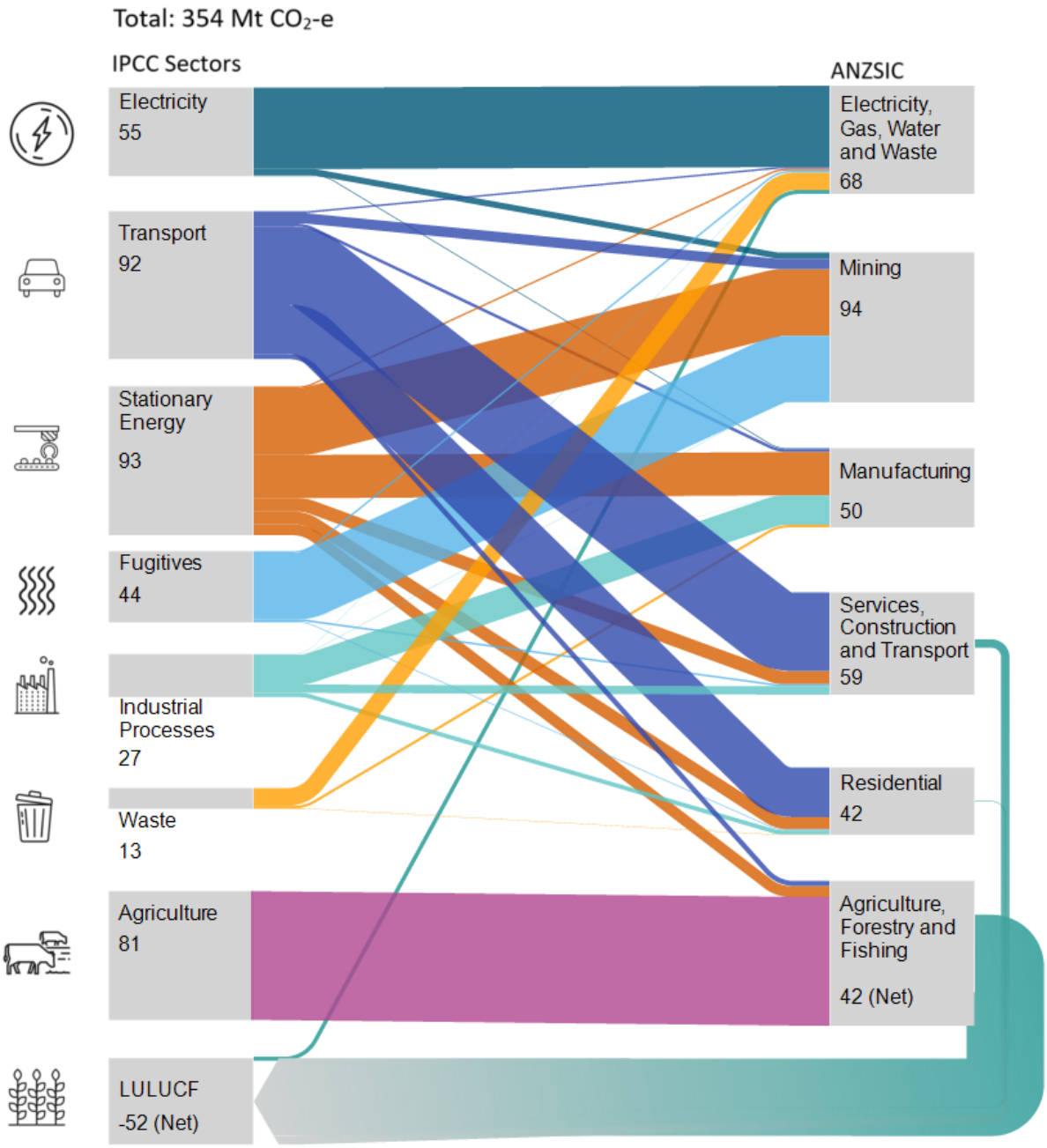


Figure 33 – Australia's emissions projections by economic sector, 2030, Mt CO_2-e
Note: totals may not sum due to rounding.

To illustrate the impact of Safeguard Mechanism on emissions of economic sector, Table 35 and Figure 34 show on-site emissions reductions by economic sector (ANZSIC). These projections include on-site emissions reductions across all Safeguard facilities, including those where emissions temporarily fall below the Safeguard Mechanism threshold of 100,000 t CO_2-e due to changes in production.

Table 35 – Projected on-site emissions reductions under Safeguard Mechanism by economic sector, Mt CO_2-e

	2030	2035	2040	2026–2040
Primary industries	13	25	31	282
Agriculture, forestry and fishing				
Mining	13	25	31	282
Coal mining	*5*	*11*	*14*	*119*
Oil and gas extraction	*4*	*8*	*11*	*98*
Metal ore and non-metallic mineral mining and quarrying	*4*	*5*	*6*	*65*
Manufacturing	5	8	13	106
Electricity, gas, water and waste services	<1	<1	1	7
Services, construction and transport	1	3	5	35
Residential				
Total	**19**	**35**	**51**	**430**

Note: totals may not sum due to rounding.

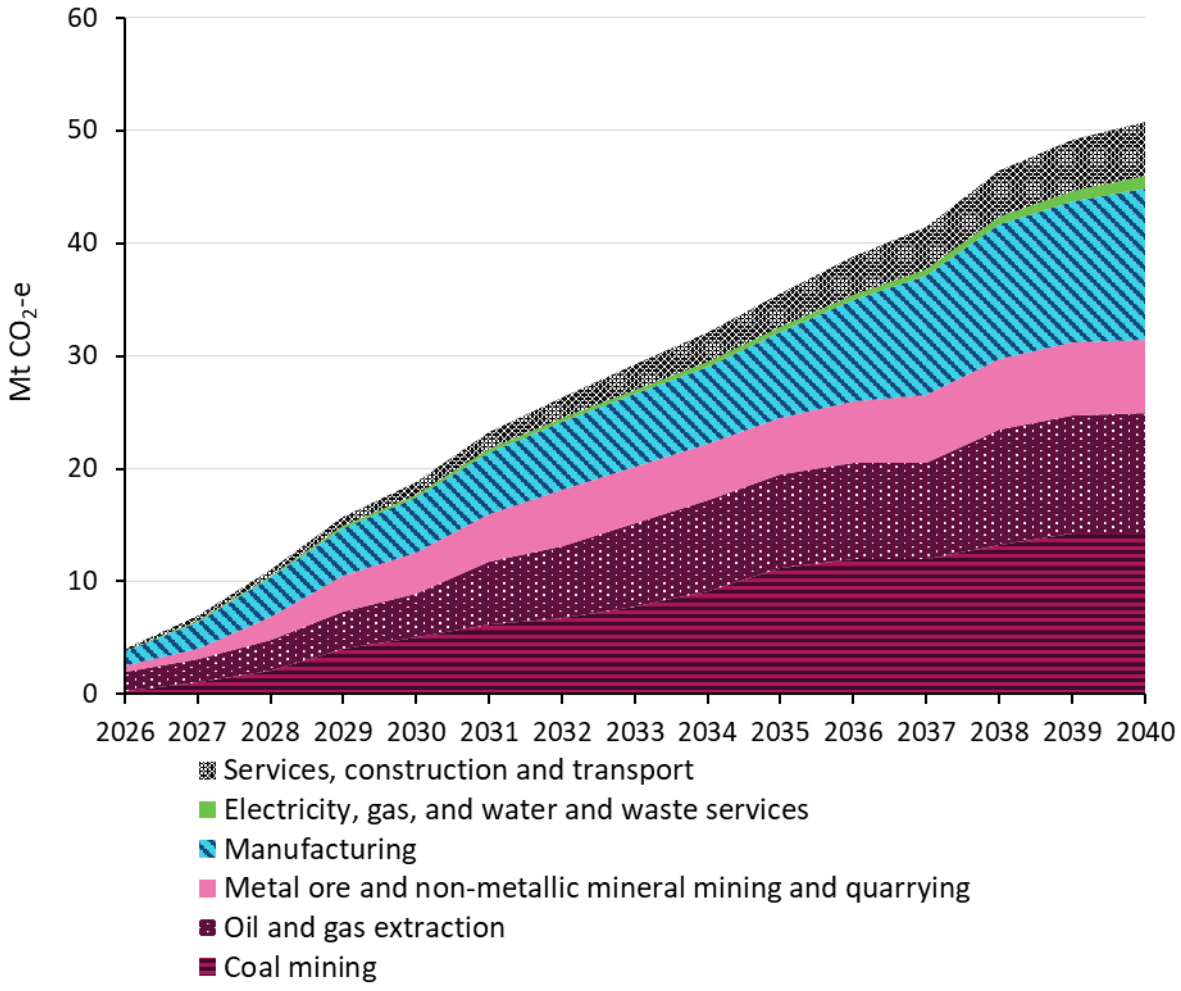


Figure 34 – Projected on-site emissions reductions under Safeguard Mechanism by economic sector, 2026 to 2040, Mt CO_2-e

Electricity emission projections by economic sector (scope 2 emissions)

In 2025, the electricity sector accounted for around 34% of Australia's emissions. Electricity is transmitted and distributed to a variety of electricity end-users, such as businesses and households.

To better understand how emissions from electricity generation relate to the end-users of that electricity, emissions in this section have been further allocated according to the share of electricity consumption of each economic sector. The emissions projections results have been mapped to economic sectors using the same methodology as is applied for the preparation of the *National Inventory by Economic Sector 2023*.[56]

All economic sectors see a decline in emissions from electricity use from 2025 to 2040 as the emissions intensity of electricity generation declines (see the electricity chapter and Appendix D for more details).

The share of economic sectors' contributions to total scope 2 emissions changes over the projections period, as some sectors see faster declines than others. The largest decline is in the residential sector, as households reduce their reliance on electricity purchased from the grid by installing rooftop PV and household batteries driven by their cost saving opportunities and supported by state and territories programs. In 2025 the residential sector accounted for 34 Mt CO_2-e of indirect electricity emissions. This is projected to decline by 88% to 4 Mt CO_2-e in 2040 and reduce its share of indirect emissions from 23% in 2025 to 9% in 2040.

By 2030, the mining sector becomes the largest contributor to indirect electricity emissions, despite emissions declining from 26 Mt CO_2-e in 2025 to 16 Mt CO_2-e in 2030 and 13 Mt CO_2-e in 2040. The mining sector increases its share of indirect electricity emissions from 17% in 2025 to 29% in 2030 and 30% in 2040. This is because electricity demand in the mining sector is projected to grow through the electrification of various mining processes, supported by the Safeguard Mechanism. Much of this increased electricity demand relates to off-grid electricity, which does not see the same emissions intensity improvements as on-grid electricity.

Table 36 – Indirect emissions from the consumption of electricity by economic sector, Mt CO_2-e

Emissions by economic sector	2020	2025	2030	2035	2040
Primary Industries	28	27	16	14	14
Agriculture, forestry and fishing	*1*	*1*	*<1*	*<1*	*<1*
Mining	*27*	*26*	*16*	*14*	*13*
Manufacturing	35	29	11	9	9
Electricity, gas, water and waste services	20	17	6	5	5
Services, construction and transport	47	40	14	12	12
Residential	42	34	8	5	4
Total	**172**	**148**	**55**	**46**	**45**

Note: totals may not sum due to rounding.

[56] DCCEEW 2025, National Inventory by Economic Sector 2023, Department of Climate Change, Energy, the Environment and Water, accessed 22 October 2025.

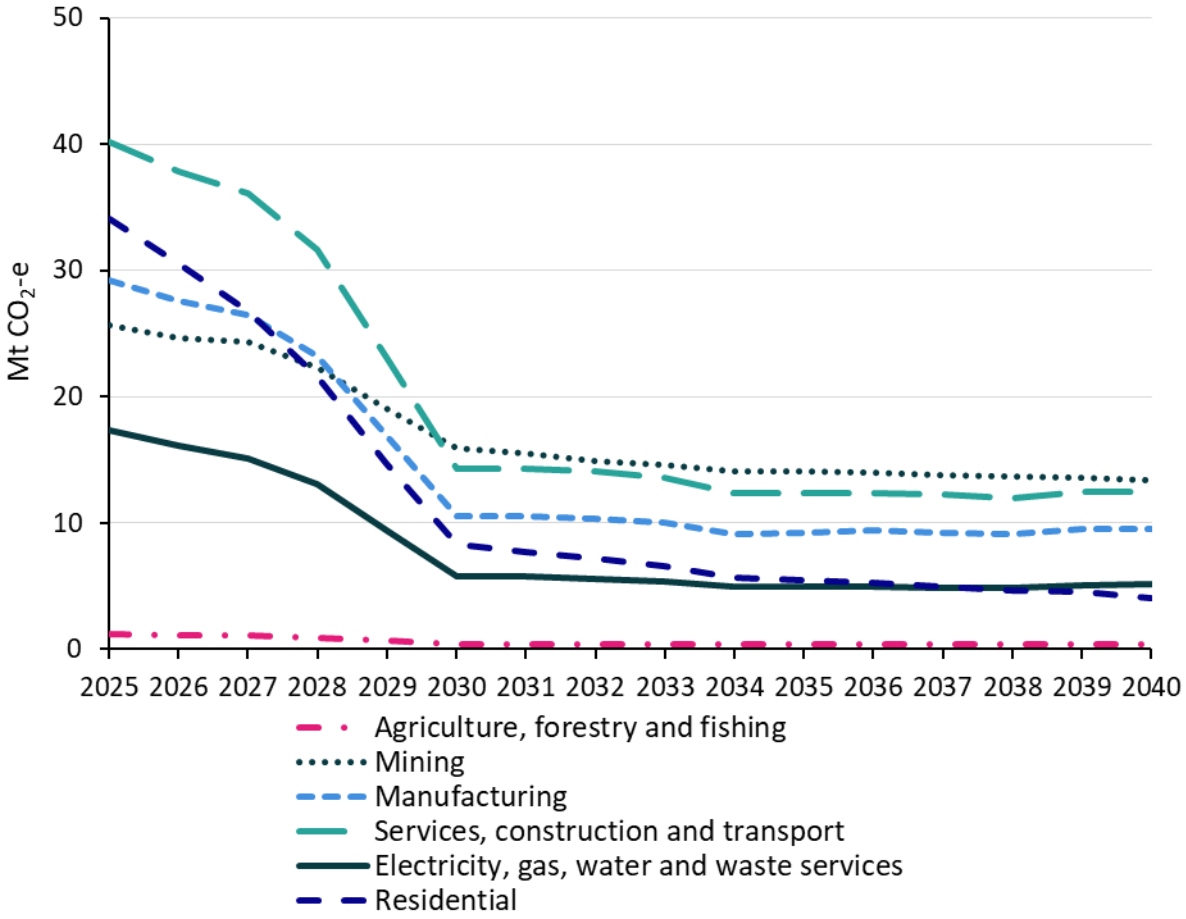


Figure 35 – Emissions from the consumption of electricity by economic sector, 2025 to 2040, Mt CO_2-e

Emissions projections by sector classification used in the Net Zero Plan

On 18 September 2025, the Australian Government announced Australia's 2035 emissions target and released a series of supporting documents, including the Net Zero Plan and sector plans. This section provides a presentation of Australia's emission projections by sector classification used in the Net Zero Plan. These sectors are electricity and energy, agriculture and land, built environment, industry, resources, and transport.

The sector emissions in this chapter differ from the emissions results modelled by the Treasury to support the development of the Net Zero Plan (as discussed in the Executive summary and Overview of the emissions projections results sections of this report). The Net Zero Plan modelling examined different scenarios to provide insights into how Australia can efficiently achieve emissions reductions and includes future directions to review and strengthen policies over time. In comparison, the emission projections presented here take account of currently implemented policies only.

Of the Net Zero Plan sectors, the **electricity and energy** sector accounts for the largest share of emissions in 2025, at 32% of emissions. Emissions from the electricity and energy sector are projected to decline from 145 Mt CO_2-e in 2025 to 60 Mt CO_2-e in 2030 and 52 Mt CO_2-e in 2035. Emissions in this sector are projected to decline by 65% from 2025 to 2040, reaching 50 Mt CO_2-e in 2040, which is an 11% share of Australia's projected emissions. The decline in this sector is driven by the decarbonisation of electricity generation across the country.

Emissions from the **agriculture and land** sector are projected to increase from 14 Mt CO_2-e in 2025 to 36 Mt CO_2-e in 2030 and 38 Mt CO_2-e in 2035. Increased emissions in this sector are primarily driven by a reduction in the net sink in the land sector which is somewhat offset by abatement from ACCUs. Emissions are then projected to decline to 36 Mt CO_2-e in 2040 as the net sink stabilises. Across this time period, agriculture and land sector emissions fluctuate from a 3% share of Australia's emissions in 2025 to an 8% share in 2040.

Emissions from the **built environment** sector are projected to decline from 21 Mt CO_2-e in 2025, to 19 Mt CO_2-e in 2030, 16 Mt CO_2-e in 2035 and 14 Mt CO_2-e in 2040. The built environment sector is projected to contribute 3% of Australia's emissions in 2040. The main drivers for the decline in emissions are electrification and energy efficiency improvements, as well as the phase down of bulk imports of hydrofluorocarbons reducing emissions from refrigeration and air conditioning.

Emissions from the **industry** sector are projected to decline from 60 Mt CO_2-e in 2025, to 57 Mt CO_2-e in 2030, 54 Mt CO_2-e in 2035 and 49 Mt CO_2-e in 2040. Emissions declines in this sector are driven by abatement activities at large facilities incentivised by the Safeguard Mechanism.

Emissions from the **resources** sector are projected to decline from 97 Mt CO_2-e in 2025 to 88 Mt CO_2-e in 2030, 76 Mt CO_2-e in 2035 and 62 Mt CO_2-e in 2040. On site abatement incentivised by the Safeguard Mechanism and declining production of coal and gas are projected to drive this decline. Reductions in this sector are also due to the projected continued decarbonisation of electricity generation used for mining and oil and gas extraction.

Emissions from the **transport** sector are projected to decline from 100 Mt CO_2-e to 94 Mt CO_2-e in 2030, 84 Mt CO_2-e in 2035 and 77 Mt CO_2-e in 2040. Despite this decline, the transport sector is projected to become the largest emitting Net Zero Plan sector in 2040, representing 17% of Australia's emissions. The decline in emissions across the projections period is largely driven by the reduction in light vehicle emissions due to the NVES.

Table 37 – Emissions projections by sector classification used in the Net Zero Plan, Mt CO_2-e

Emissions by net zero plan sector	2005	2020	2025	2030	2035	2040
Electricity and energy	206	168	145	60	52	50
Agriculture and land	170	19	14	36	38	36
Built environment	16	23	21	19	16	14
Industry	79	66	60	57	54	49
Resources	58	107	97	88	76	62
Transport	82	94	100	94	84	77
Total	**612**	**478**	**437**	**354**	**321**	**289**

Note: totals may not sum due to rounding.

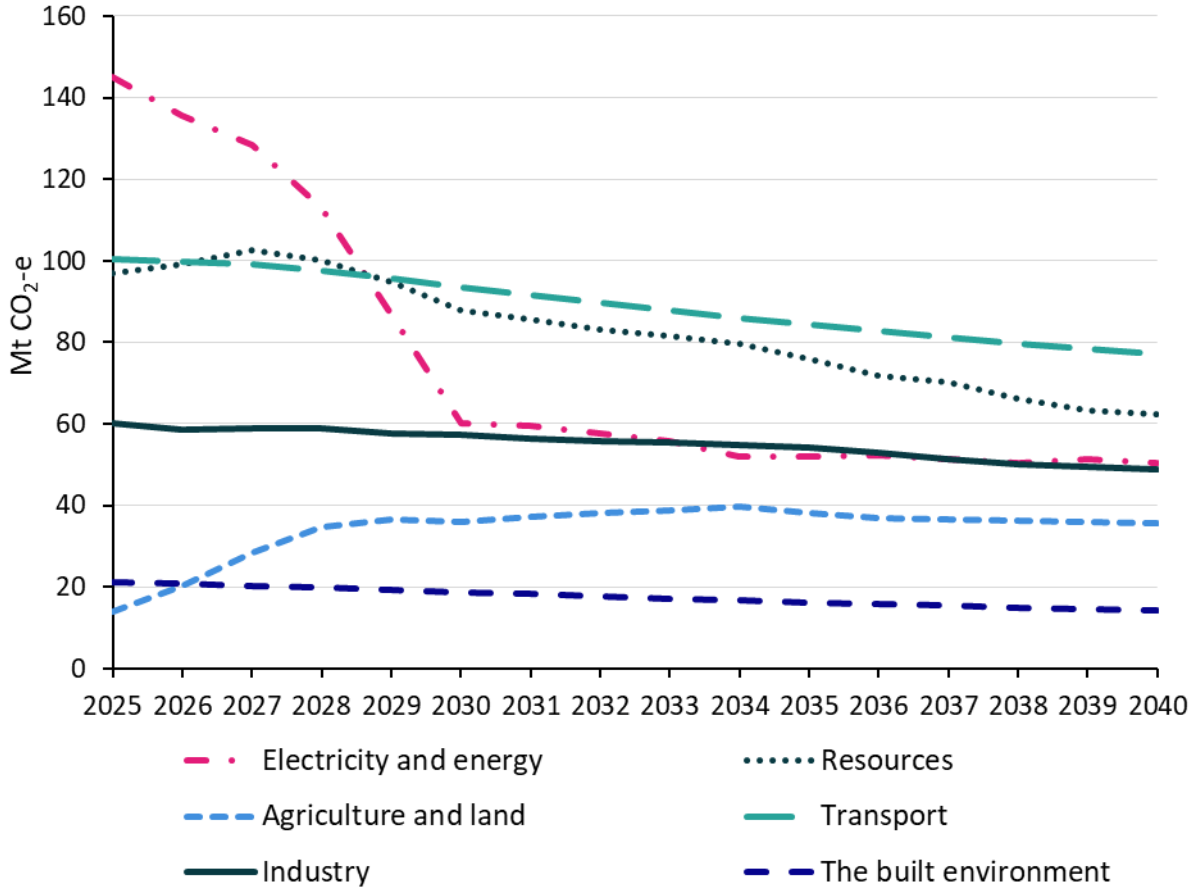


Figure 36 – Emissions projections by sector classification used in the Net Zero Plan, 2025 to 2040, Mt CO_2-e

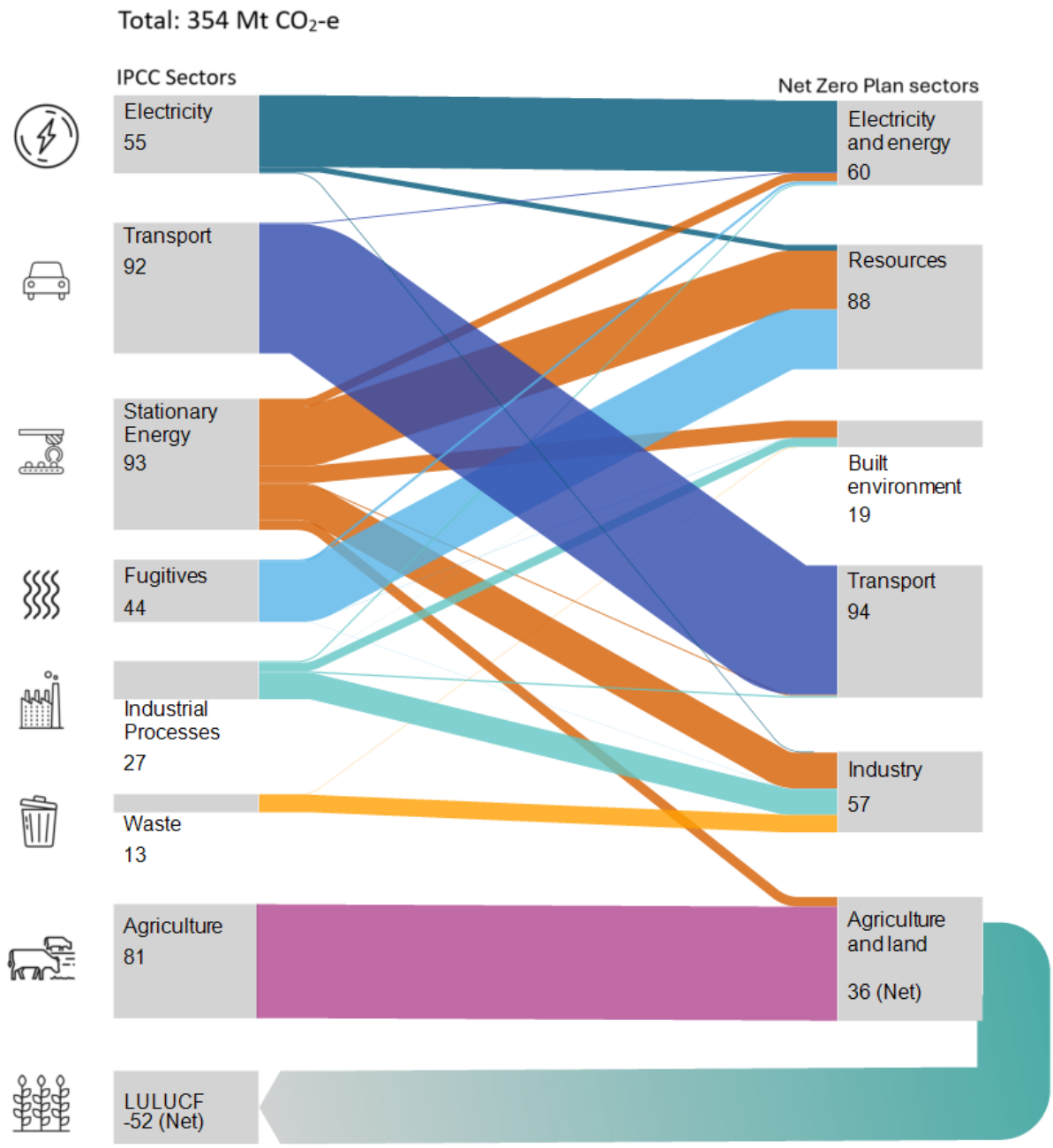


Figure 37 – Australia's emissions projections by sector classification used in the Net Zero Plan, 2030, Mt CO_2-e
Note: totals may not sum due to rounding.

Appendix A: Methodology summary

The detailed methodology for Australia's emissions projections is provided as a separate document alongside this report. The *Methodology for the 2025 projections* report can be found on the department's website.

Accounting approaches

The emissions projections are estimated using Paris Agreement accounting approaches consistent with Australia's accounting towards its 2030, 2035 and 2050 targets. Reporting years for all sectors correspond to Australian financial years as key data sources are published on this basis. For example, '2030' refers to the financial year 2029–30.

Australia's 2030 target, 2035 target and the emissions projections cover all greenhouse gases that must be reported in Australia's annual national greenhouse gas inventory submitted under the Paris Agreement (CO_2, CH_4, N_2O, HFCs, PFCs, SF_6 and NF_3). Consistent with Paris Agreement rules, anthropogenic sources and sinks of these gases that occur within Australia's jurisdiction are covered by Australia's annual national greenhouse gas inventory, and by extension, its targets and the emissions projections. This approach ensures Australia's accounting is complete.

Emissions from the energy, IPPU, agriculture, and waste sectors are included. The LULUCF sector has both emission sources and sinks that remove or sequester CO_2 from the atmosphere.

Emissions estimates are prepared in accordance with the rules and guidelines agreed under the Paris Agreement, including the IPCC 2006 Guidelines for the Preparation of National Greenhouse Gas Inventories and, where applicable, the 2019 IPCC Refinement to the 2006 IPCC Guidelines.

The department applies the 100-year global warming potential values from the IPCC Fifth Assessment Report (AR5) to estimate emissions, consistent with rules adopted under the Paris Agreement (Decision 18/CMA.1 Annex 2.D Paragraph 37, Decision 5/CMA.3 Paragraph 25).

Methodology for calculating Australia's cumulative emissions reduction task to 2030

Australia assesses progress against its 2030 target of 43% below 2005 levels using both a point target approach and an emissions budget approach (see Figure 38 and Table 38).

Point target

The point target is calculated as a 43% reduction in the year 2030 from 2005 levels. The indicative value of emissions in 2005 is 612 Mt CO_2-e making the 2030 target equal to 349 Mt CO_2-e. Australia's progress is assessed as the difference between the target emissions and the projected emissions in 2030.

Emissions budget

Australia's emissions budget for the 2030 target is a 10-year commitment from 2021 to 2030. A trajectory to achieve the emissions budget (4,394 Mt CO_2-e) is calculated by taking a linear decline from 2020 to 2030, beginning from the 2020 target of 5% below 2000 levels and finishing at 43%

below 2005 levels in 2030. Australia's progress is assessed as the difference in cumulative emissions between projected emissions and the target trajectory from 2021–2030.

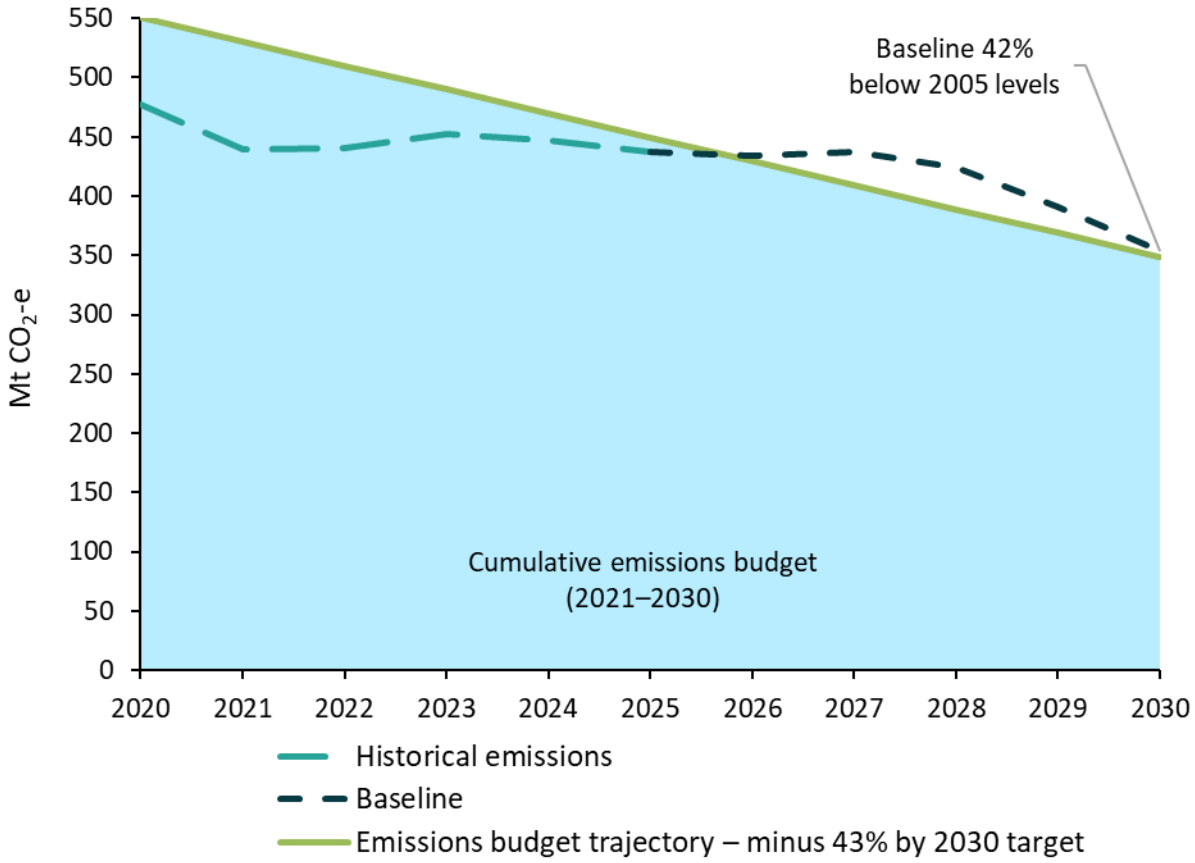


Figure 38 – Tracking against the 2030 emissions reduction target trajectory, 2020 to 2030, Mt CO_2-e

Table 38 – Emissions budget trajectory for the 2030 target compared to the projections, Mt CO_2-e

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2021–2030
Budget trajectory (43% target)	530	510	490	470	450	429	409	389	369	349	4,394
Baseline	440	441	453	447	437	434	437	424	390	354	4,258

Methodology for calculating Australia's cumulative emissions reduction task to 2035

Australia assesses progress against its 2035 target of 62–70% below 2005 levels by 2035 using an emissions budget approach (see Figure 39 and Table 39).

Australia's emissions budget for the 2035 target is a 5-year commitment from 2031 to 2035. A trajectory to achieve the emissions budget (1,248 – 1,395 Mt CO_2-e) is calculated by taking a linear decline from 2030 to 2035, beginning from the 2030 target of 43% below 2005 levels and finishing at 62-70% below 2005 levels in 2035. Australia's progress is assessed as the difference in cumulative emissions between projected emissions and the target trajectory from 2031–35.

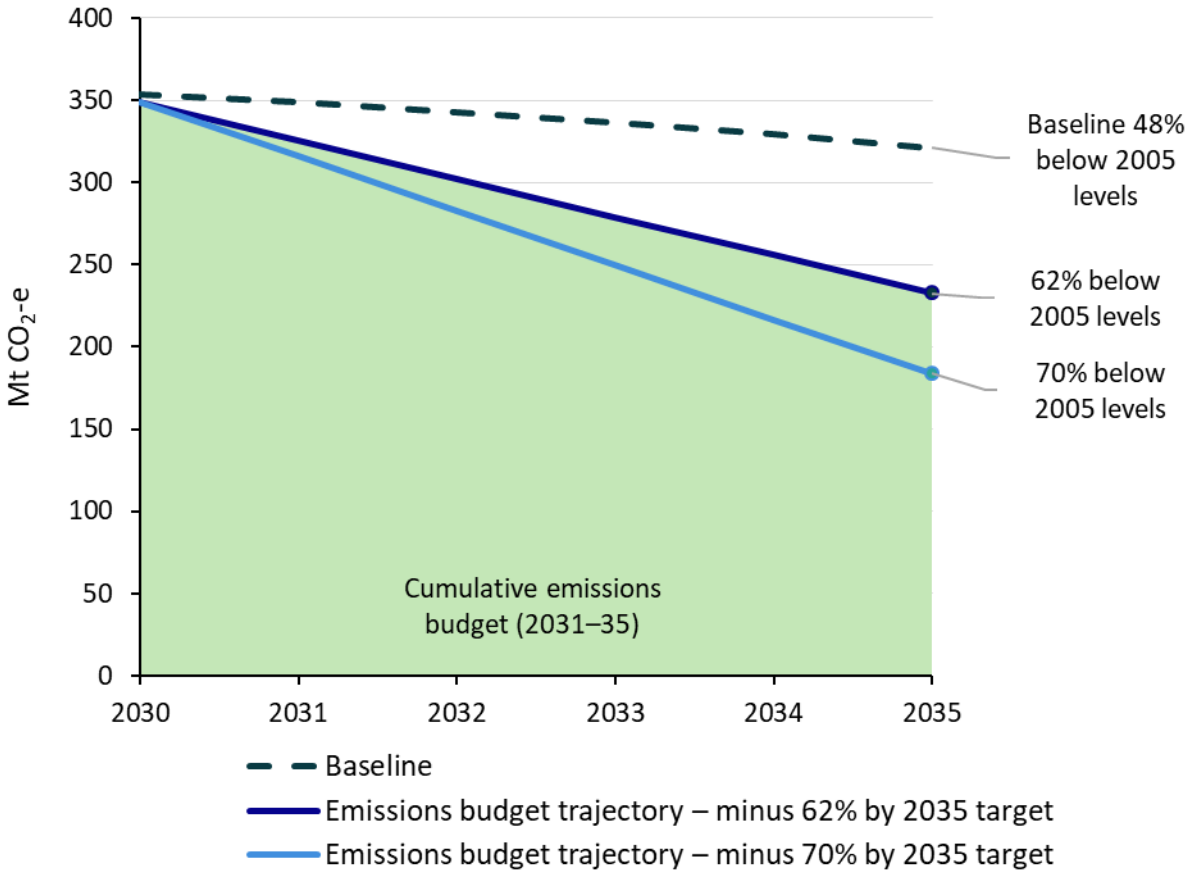


Figure 39 – Tracking against the 2035 emissions reduction target trajectory, 2031–35, Mt CO_2-e

Table 39 – Emissions budget trajectory for the 2035 target compared to the projections, Mt CO_2-e

	2031	2032	2033	2034	2035	2031–35
Budget trajectory (62% target)	326	302	279	256	233	1,395
Budget trajectory (70% target)	316	283	250	217	184	1,248
Baseline	349	342	336	329	321	1,678

Emissions projections by economic sector

The report uses the ANZSIC hierarchy from the Australia and New Zealand Standard Industrial Classification 2006 (ABS cat no. 1292.0). The mappings applied are based on the allocation used for the *National Inventory by Economic sector 2023*.

Key data sources

Key data sources include:

- historical emissions data from the *Quarterly Update of Australia's National Greenhouse Gas Inventory: June 2025*
- commodity forecasts and activity levels informed by publications and data from government agencies and other bodies, including:
    - the Office of the Chief Economist within DISR
    - the ABARES
    - the AEMO
    - the CER.

The department applies consistent assumptions across all sectors of these projections. Sector specific data sources are outlined in the *Methodology for the 2025 emissions projections*.

Institutional arrangements and quality assurance

The projections are prepared by DCCEEW using the best available data and independent expertise to analyse Australia's future emissions reduction task. The department engages with a technical working group comprising of representatives from Australian Government agencies to test the methodologies, assumptions, and projections results. Australia makes formal submissions on its emissions projections to the UNFCCC, and these are subject to review from an expert review team coordinated by the UNFCCC secretariat. The last review was undertaken in 2025.

Statement of uncertainty

The department prepares emissions projections annually using the best data of activity in the economy, information about current policy settings and technology change available at the time of publication. The projections indicate what Australia's future emissions could be if the assumptions that underpin the projections occur. A range of factors, some interrelated, may influence actual emission outcomes in the future. These include:

Economic outlook – the emissions projections use macroeconomic parameters and activity data consistent with the 2025–26 Budget and Treasury's 2023 Intergenerational Report. There can be uncertainty due to changes to the outlook for domestic and global growth and inflation, impacts from rising trade tensions, energy and commodity price volatility and global conflicts. This has consequences for demand for goods and services in the domestic economy and demand for Australia's exports globally, which in turn impact the emissions outlook. To date, increased activity in the economy has led to increased emissions as well as the inverse; however, the rollout of lower emissions technologies can moderate this impact. Impacts on the demand for Australia's mining, manufacturing and agricultural products have a greater impact on emissions than other sectors

because they are a larger source of Australia's emissions than the rest of the economy, which is predominantly made up of the services sector.

Implementation of government policies and measures – the emissions projections assume that policies and the deployable measures announced to realise policy targets are implemented in the timeframe announced. The emissions projections do not attempt to forecast the impact of potential frictions to successful delivery of policies such as unforeseen delays, supply chain bottlenecks, labour shortages, changes in government policy or regulatory conditions. The projections also do not attempt to take account of potential changes in policy settings resulting from a change of government at the national or state/territory level.

Technology change – there are technologies that can abate or reduce greenhouse gas emissions in different sectors of the economy. The uptake and deployment of new technologies is driven by technology readiness, cost, availability and policy and consumer incentives. The price, availability and adoption of technologies such as batteries, CCS, low emissions transport and hydrogen are included in these projections based on the current outlook and expectations for these technologies. Emission outcomes are sensitive to the pace and scale of technology deployment which are uncertain.

Unforeseen delays – large capital projects can take many years to plan, approve and execute. Delivery timeliness can be delayed due to challenges in project execution, financing, supply chain bottlenecks, delays in environmental approvals, legal challenges to projects and access to relevant labour and expertise. Unforeseen delays could increase projected emissions (for example due to slower than expected build of renewable generation infrastructure or new abatement technologies) or decrease emissions (for example from delays in the build and ramp up of new fossil fuel, mining and manufacturing projects).

Risk associated with climate change – there is uncertainty about the impacts that climate change will have on Australia. These include the physical impacts of climate change, particularly on the agriculture and the LULUCF sectors where emissions sources and sinks are sensitive to more frequent and intense climate events. It is also evident in the emissions in other sectors based on recent history: temporary closures or disruptions at coal and LNG facilities because of flooding and cyclones, increased demand for electricity during extreme heat, and low levels of hydro generation during drought.

Appendix B: Consideration of policies

The emissions projections take account of current policies and measures announced as of July 2025, where there is sufficient detail to make robust assumptions in the modelling. Key policies included in the emissions projections are listed in Table 40.

Table 40 – Key policies in the emissions projections

Jurisdiction	Policies
Commonwealth	82% renewable on-grid electricity target supported by the expanded Capacity Investment Scheme, Renewable Energy Transformation Agreements and Rewiring the Nation
	Australian Carbon Credit Unit Scheme
	Cheaper Home Batteries Program
	Critical Minerals Production Tax Incentive
	Hydrogen Headstart
	Hydrogen Production Tax Incentive
	Large-scale Renewable Energy Target
	New Vehicle Efficiency Standard (NVES)[57] and other measures under the National Electric Vehicle Strategy
	Phase down of bulk imports of Hydrofluorocarbons
	Powering the Regions Fund
	Regional Hydrogen Hubs program
	Regulatory bans on the import and manufacture of small air conditioning equipment and multi-head unit split systems using refrigerants with a global warming potential (GWP) over 750
	Safeguard Mechanism[58]
	Small-scale Renewable Energy Scheme
State and territory	NSW Electricity Infrastructure Road Map
	South Australia's state renewable target (100% in 2027)[59]
	State and territory commitments to food organics and garden organics bin rollout

[57] The NVES specifies emission limits to 2029. After 2029, the projections assume annual improvements will revert to the historical trend. A statutory review of the NVES is required to commence in 2026 to consider future NVES policy settings, including emissions limits after 2029.

[58] Safeguard baselines are assumed to decline by the default rate of 4.9% each year to 2030, and the indicative rate of 3.285% each year beyond 2030. The actual decline rate beyond 2030 will be set in 5-year blocks, consistent with updates to Australia's Nationally Determined Contribution (NDC) under the Paris Agreement. The Safeguard baseline projections in this report also incorporate estimates of facilities expected to qualify for a lower baseline decline rate under trade-exposed baseline-adjusted (TEBA) arrangements.

[59] South Australia's net renewable energy target for 2027 calendar year accounts of exports. The target is formulated such that total exports must be greater than fossil-fuel generation from 2027 onwards.

Jurisdiction	Policies
State and territory	Tasmania's state renewable target (150% in 2030 and 200% in 2040)[60]
	Victoria - cessation of native forest harvesting
	Victoria's Energy Storage Targets and Offshore Wind Targets
	Victoria's Gas Substitution Roadmap
	Victoria's state renewable energy target (65% by 2030, and 95% by 2035)
	Western Australia – cessation of native forest harvesting
	Western Australia Residential Battery Scheme

There are some national, state and territory policies and measures that have been announced but have not been included in the 2025 projections. This is because they are at an earlier stage of design, there is insufficient detail to enable reasonable assumptions to be made to model the impact (e.g., timing, location, funding, pace of deployment), or estimating their impact is dependent on grant rounds that have not been run or investment decisions that have not been made. These include:

- a new $5 billion Net Zero Fund in the National Reconstruction Fund, to help industrial facilities decarbonise and scale up more renewables and low emissions manufacturing
- up to $2 billion for the Clean Energy Finance Corporation
- $1.1 billion to encourage more production and use of Low carbon liquid fuels here in Australia
- $40 million to accelerate the roll-out of kerbside and fast EV charging across our suburbs and regions
- $85 million for frameworks and tools to help households and businesses understand and improve their energy performance
- $50 million for community sporting facilities to support local climate action
- policies to further the 5 decarbonisation priorities outlined in the Net Zero Plan and flagged in the 6 sector plans
- support to accelerate the development of Australia's green metals industry, including the green iron investment fund and the green aluminium production credit
- projects funded under the Future Made in Australia Innovation Fund
- new government purchases of ACCUs under the Powering the Regions Fund.

The emissions projections reflect currently implemented policies and do not include potential future measures outlined in the Net Zero Plan and 6 sector plans. Future policy settings for the Safeguard Mechanism and NVES will be incorporated into projections following their respective statutory reviews.

The 2025 emissions projections reflect state and territory policies and programs as of July 2025. The Queensland Energy Roadmap 2025, released in October 2025, is not included. However, the projections assume that coal-fired generation in Queensland will remain operational to its technical life, longer than previously announced in the former government's Queensland Energy and Jobs Plan.

[60] The TRET is based on Tasmania's 2020 demand i.e. 15,750 GWh for the interim target of 150% by 2030, and 21,000 GWh for the 200% target by 2040.

Appendix C: Emissions projections by year

The data presented in Table 41 shows Australia's annual emissions projections for each year from 2025 to 2040 in Mt CO_2-e and as a percentage change on 2005 (as the base year of Australia's 2030 and 2035 targets) and 2025 (current) levels.

Table 41 – Australia's emissions projections, Mt CO_2-e, percentage change on 2005 and 2025

Year	Baseline Mt CO_2-e	Baseline % change on 2005	Baseline % change on 2025
2005	**612**		
2025	437	-29%	
2026	434	-29%	-1%
2027	437	-29%	0%
2028	424	-31%	-3%
2029	390	-36%	-11%
2030	**354**	**-42%**	**-19%**
2031	349	-43%	-20%
2032	342	-44%	-22%
2033	336	-45%	-23%
2034	329	-46%	-25%
2035	**321**	**-48%**	**-27%**
2036	312	-49%	-29%
2037	306	-50%	-30%
2038	298	-51%	-32%
2039	293	-52%	-33%
2040	**289**	**-53%**	**-34%**

Appendix D: Projected emissions factors for Australia's electricity grid

Table 42 and Table 43 contain emission factors for Australia's electricity grid, consistent with the results presented in the electricity chapter of this report.

Table 42 – Indirect scope 2[61, 62] emissions factors, tonnes CO_2-e per MWh

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Australia, all grid connected	0.56	0.50	0.42	0.29	0.17	0.16	0.15	0.14	0.13	0.12	0.12	0.12	0.11	0.11	0.11
National Electricity Market	0.57	0.52	0.43	0.29	0.17	0.16	0.15	0.14	0.12	0.12	0.12	0.11	0.11	0.11	0.11
NSW/ACT	0.55	0.50	0.38	0.24	0.11	0.09	0.09	0.08	0.07	0.07	0.08	0.08	0.08	0.08	0.08
Queensland	0.58	0.49	0.41	0.32	0.19	0.19	0.17	0.19	0.21	0.25	0.26	0.24	0.23	0.23	0.23
South Australia	0.17	0.17	0.15	0.11	0.06	0.06	0.05	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Victoria	0.76	0.73	0.64	0.43	0.29	0.28	0.26	0.21	0.12	0.05	0.03	0.04	0.04	0.04	0.03
Tasmania	0.18	0.18	0.15	0.01	0.01	0.03	0.04	0.03	0.02	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Western Australia's Wholesale Electricity Market	0.47	0.40	0.35	0.24	0.13	0.12	0.12	0.13	0.13	0.13	0.13	0.10	0.10	0.09	0.09
North West Interconnected System	0.53	0.52	0.49	0.46	0.43	0.40	0.37	0.34	0.31	0.28	0.25	0.23	0.20	0.17	0.14
Darwin-Katherine Interconnected System	0.52	0.49	0.41	0.40	0.39	0.39	0.39	0.38	0.38	0.37	0.37	0.36	0.35	0.35	0.35

[61] Scope 2 emissions are from the generation of the electricity purchased and consumed by an organisation. Scope 2 emissions are produced by the burning of fuels (coal, natural gas, etc.) at the power station.

[62] This table presents emissions factors consistent with the modelled results presented in the electricity chapter of this report, by financial year. These may differ from the emissions factors that will be required for NGER reporting in future years. The 2025 National Greenhouse Accounts Factors includes amendments made by the NGER (Measurement) Amendment (2025 Update) Determination 2025, which applies to NGER reports for the 2025–26 NGER reporting year.

Table 43 – Indirect scope 2 and 3[63] combined emissions factors, tonnes CO_2-e per MWh

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Australia, all grid connected	0.62	0.56	0.46	0.32	0.19	0.18	0.17	0.16	0.14	0.14	0.14	0.13	0.12	0.13	0.12
National Electricity Market	0.63	0.57	0.47	0.32	0.19	0.18	0.17	0.16	0.14	0.13	0.13	0.13	0.12	0.13	0.12
NSW/ACT	0.57	0.52	0.40	0.25	0.12	0.09	0.10	0.09	0.07	0.08	0.08	0.08	0.08	0.08	0.08
Queensland	0.66	0.56	0.47	0.36	0.21	0.22	0.20	0.22	0.24	0.29	0.29	0.28	0.26	0.26	0.26
South Australia	0.21	0.21	0.18	0.13	0.07	0.07	0.05	0.04	0.04	0.03	0.03	0.03	0.03	0.04	0.04
Victoria	0.85	0.81	0.71	0.48	0.33	0.31	0.29	0.23	0.14	0.06	0.03	0.04	0.04	0.04	0.04
Tasmania	0.21	0.21	0.18	0.02	0.01	0.03	0.05	0.03	0.02	0.01	<0.01	0.01	0.01	<0.01	<0.01
Western Australia's Wholesale Electricity Market	0.52	0.45	0.39	0.27	0.14	0.14	0.14	0.14	0.15	0.15	0.15	0.11	0.11	0.10	0.10
North West Interconnected System	0.62	0.61	0.57	0.54	0.50	0.47	0.43	0.40	0.36	0.33	0.30	0.26	0.23	0.19	0.16
Darwin-Katherine Interconnected System	0.60	0.57	0.48	0.47	0.46	0.45	0.45	0.44	0.44	0.43	0.43	0.41	0.41	0.40	0.40

[63] Scope 2 emissions are from the generation of the electricity purchased and consumed by an organisation. Scope 2 emissions are produced by the burning of fuels (coal, natural gas, etc.) at the power station. Scope 3 emissions are indirect emissions from the extraction, production and transport of fuel burned at generation and the indirect emissions attributable to the electricity lost in delivery in the transmission and distribution network. (Source: National Greenhouse Accounts Factors 2025).

Appendix E: Overview of Safeguard Mechanism targets and progress

Safeguard targets

The Safeguard Mechanism requires large industrial facilities to deliver a proportional share of Australia's 2030 climate targets. This includes meeting specific targets for net and gross emissions legislated in the *National Greenhouse Energy Reporting Act 2007*. Below is a summary of each target and progress as modelled in the 2025 emissions projections.

Safeguard net emissions target

Net emissions reflect the covered emissions of Safeguard facilities, adjusted for the surrender of ACCUs and SMCs, as well as ACCU add backs and deemed surrenders. To achieve the net emissions target, net emissions from all Safeguard facilities must not exceed:

- 100 Mt CO_2-e in 2029–30
- 1,233 Mt CO_2-e over the decade from 1 July 2020 to 30 June 2030
- zero emissions from 2049-50.

Table 44 and Table 45 show that net emissions from Safeguard facilities are projected to be 90 Mt CO_2-e in 2030 and 1,181 Mt CO_2-e over the decade from 2021 to 2030.

Table 44 – Net emissions Safeguard 2030 target and progress target, Mt CO_2-e

FY ending	Projected	Target
2030	90	100

Table 45 – 2021-30 net emissions Safeguard budget target and progress, Mt CO_2-e

FY ending	2024	2025	2026	2027	2028	2029	2030	Total (2021–2030)	Target (2021–2030)
Net emissions	128	118	115	112	107	99	90	1,181	1,233

Safeguard gross emissions target

There is also a requirement for gross emissions from all Safeguard facilities to reduce over time, measured on a 5-year rolling average basis from 1 July 2024.

From 1 July 2024, the rolling average of Safeguard-covered emissions over the previous 5-years is required to be lower than the 5-year rolling average from 3 years earlier. From 1 July 2027, the 5-year rolling average of Safeguard-covered emissions is required to be lower than the 5-year rolling average from 2 years earlier.

The 2025 emissions projections show Safeguard gross emissions are projected to decline when assessed on a 5-year rolling average basis (Table 46).

Table 46 – Gross emissions five-year rolling average, Mt CO_2-e

FY ending	2025	2026	2027	2028	2029	2030
	3 years prior			2 years prior		
Gross emissions (annual)	132.7 [a]	132.0	135.0	132.9	128.5	122.1
Gross emissions (5-year rolling average [b])	139.0	136.4	135.4	134.9	133.7	132.2
[Past 5-year rolling average reference point [c]]	140.8	141.7	141.2	139.0	136.4	135.4
Change relative to specified reference period	-1.3%	-3.8 %	-4.1%	-1.1%	-1.2%	-2.0%

Notes:

[a] 2025 gross emissions are based on published preliminary data (November 2025) from the Clean Energy Regulator and may change. Final covered emissions will be published by the Clean Energy Regulator in April 2026.

[b] The 5-year rolling average for assessing whether the gross emissions target for a given year is the average gross emissions for the 5 previous financial years (i.e. does not include the gross emissions for the given year).

[c] The past 5-year rolling average for a given year is the average gross emissions for the period of 5 financial years that ended either 3 or 2 years before the given year. For example, for 2027, the past 5-year rolling average is based on the average gross emissions of 2019-2023. This is compared to the rolling average that includes 2022-2026.