CLIMATE ANALYTICS

# Past its fossil fuel export date

## Australia's fossil fuel export carbon footprint

*November 2026*



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### About Climate Analytics

Climate Analytics is a global climate science and policy institute. Our mission is to deliver cutting-edge science, analysis and support to accelerate climate action and keep warming below 1.5°C.


### Acknowledgements

Climate Analytics Australia Ltd acknowledges the Traditional Custodians of the lands where we work and live, the Whadjuk people of the Noongar nation. We celebrate the diversity of Aboriginal and Torres Strait Islander peoples and their ongoing cultures and connections to land, sea and community



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How to cite: Climate Analytics (2026). Past its fossil fuel export date - Australia's fossil fuel export carbon footprint

### Support

This report has been supported by Bloomberg Philanthropies and the ClimateWorks Foundation. The analysis itself is solely the work of Climate Analytics.

# Executive summary

It is often argued in Australia that the country is a minor contributor to climate change, responsible for just over 1% of global greenhouse gas emissions based on its domestic emissions.

But Australia's total carbon footprint globally is much larger: it is the world's third- or fourth-largest fossil fuel exporter, the second-largest coal exporter and third-largest liquefied natural gas (LNG) exporter.

This report quantifies Australia's fossil fuel export carbon footprint, and how it would change over the next 15 years based on the government's forecasts. We then benchmark Australia's fossil fuel production trajectory under current policies against Paris-aligned trajectories that set the pace of decline needed to limit overshoot of 1.5°C.

We find that Australia's fossil carbon footprint, combining $CO_2$ emissions within its borders and from its fossil fuel exports, represented 4.3% of global fossil fuel $CO_2$ emissions in 2025.

Australia's exported fossil $CO_2$ emissions peaked in 2020 at 1.3 $GtCO_2$ and were around 1.2 $GtCO_2$ in 2025. The government's current policy forecasts for fossil fuel exports see a plateau to 2030, even increasing by less than 1% over this period, before entering a slow decline to 1 $GtCO_2$ by 2035, remaining at over 0.9 $GtCO_2$ by 2040.

The government still expects the country's coal exports to remain at around 350 million tonnes a year to 2030, then ease to around 300 million tonnes by 2035 and 280 million tonnes by 2040. LNG exports are expected to stay close to 80 million tonnes a year to 2035 before entering a slow decline.

There is a deep contradiction in a government position that champions climate ambition abroad but plans for continued fossil fuel exports, with approvals for coal mines and gas fields that lock in production for decades. The Albanese government has given the green light to at least 37 new or expanded coal, oil and gas projects, with coal mine permits running as late as 2088 - nearly 40 years after the year it has pledged to reach net zero.

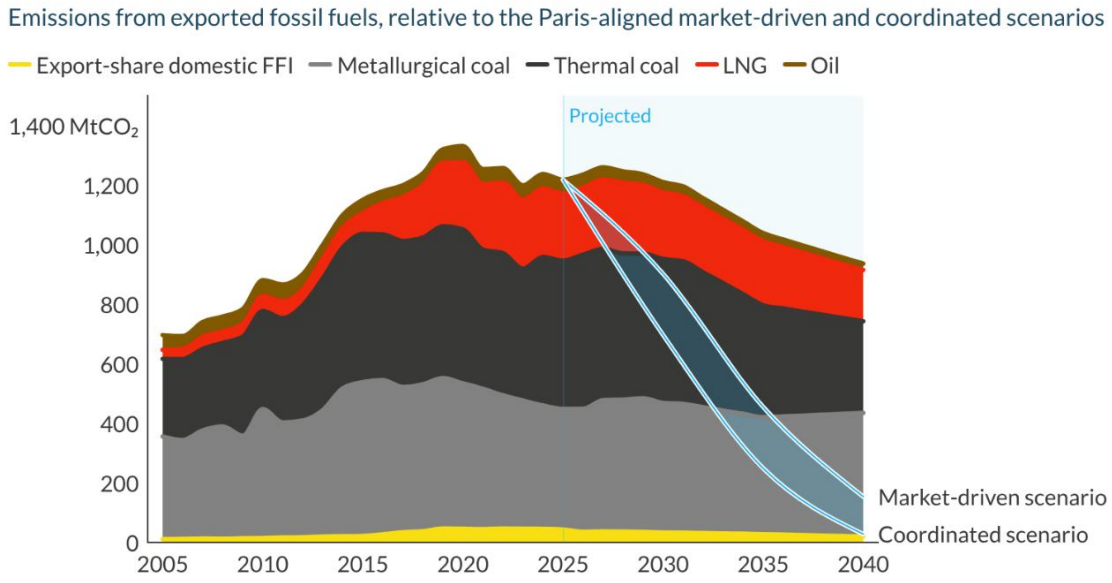
A Paris-aligned pathway requires fossil fuel production to fall steeply and immediately. Under the Highest Possible Ambition scenario, which limits both the magnitude and duration of overshoot and brings temperatures back well below 1.5°C by 2100, Australian coal production falls 32-50% below 2025 levels by 2030, 72-86% by 2035 and 94-100% by 2040. This requires a deep reduction in coal extraction for exports.

Fossil gas production, and therefore LNG exports, falls 16-35% by 2030 and 52-76% by 2035, for a phase-out in the 2040s. Oil production falls 11-13% by 2030 and 30-46% by 2035, and is phased out on a similar timeline.

The government should not wait to begin aligning with this trajectory. The gap between the government's current policies and Paris alignment widens every year. Between 2025 and 2040, Australia's cumulative export footprint under current policies adds up to 17.9 $GtCO_2$. This is between 62% and 116% more than under Paris-aligned trajectories.

That would also represent four times Australia's cumulative emissions to 2040, if Australia's domestic emissions were to follow a 1.5°C-aligned fossil fuel phase-out trajectory, or three times those under the government's less ambitious net-zero plan.

Under a 1.5°C-aligned pathway for fossil fuel production, Australia's cumulative exported emissions would be 38% to 54% lower to 2040, avoiding emissions of 6.9-9.6 $GtCO_2$.




Compared with current policies, following the Paris-aligned trajectories would mean 4.0-5.7 million fewer people exposed to unprecedented heat and 2.8-3.9 million more people kept within the human climate niche. It would also mean 126-176 million more coral colonies on the Great Barrier Reef surviving each future mass bleaching event.

To address that gap, Australia needs to transition away from fossil fuels. Designing and implementing a roadmap for a fossil fuel phase-out would let Australia diversify its economy on its own terms, and plan a just transition for workers and communities.

Domestically, the government should immediately halt approvals of new fossil fuel projects, extensions and expansions, since every new approval locks in emissions, and the

harms quantified above, for decades beyond 2040. Its transition away from fossil fuels roadmap should set clear timelines for retiring extraction and processing assets.

Clean electrification and renewables are the two tools that will allow Australia to eliminate coal, gas and oil consumption and production. The roadmap must be integrated with deep, whole-of-economy electrification of industry, transport and buildings, powered by renewable energy. It needs to go beyond the 35% by 2035 global electrification goal proposed for COP31, and commit to ambitious renewable energy targets.

Internationally, Australia should use its COP31 co-presidency to support the institution of annual dialogues on transitioning away from fossil fuels, so the work started under the Brazilian COP30 Presidency continues beyond COP31. It should call on all countries to develop national roadmaps that feed into the second Global Stocktake in 2028 and the next round of NDCs, due in 2030.

Taken together, these steps would show that a major fossil fuel exporter can plan its own way out of fossil fuel production.

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# Introduction

In 2015, in the Paris Agreement, the world's governments collectively committed to limit global warming to 1.5°C and reach global net zero emissions in the second half of the century. As one of its signatories, the Australian government is morally and legally bound to align its national actions and policies with the Paris Agreement, and contribute its fair share to limiting warming to 1.5°C.

Due to insufficient global climate action to date, global temperature increase will cross 1.5°C by the early 2030s at the latest. In this context, maintaining Paris alignment, limiting the magnitude and duration of overshoot and getting back below 1.5°C before 2100 is the only pathway back towards a safe climate. This can only be achieved with a rapid phase-out of the primary source of greenhouse gas emissions, fossil fuels.

Australia's domestic greenhouse gas emissions in 2024, excluding those from land use, land-use change and forestry (LULUCF), were 518 $MtCO_2e$.[1] This represents slightly over 1% of global greenhouse gas (GHG) emissions.[2] Despite this seemingly small contribution to global greenhouse gas emissions, often used rhetorically to justify inaction, Australia's contribution to climate change far exceeds that of its domestic emissions because of the footprint of its fossil fuel exports, shown in Figure 1 for coal and gas.

In 2025, for example, the country ranked second in the world for coal exports, and third for LNG exports.[3] Most emissions originating from its fossil fuel industry take place abroad, where combustion and use of resources extracted in Australia take place.

[1] DCCEEW, “Australia’s National Greenhouse Accounts.”
[2] Gütschow et al., “The PRIMAP-Hist National Historical Emissions Time Series.”
[3] Energy Institute, “Statistical Review of World Energy 2026.”

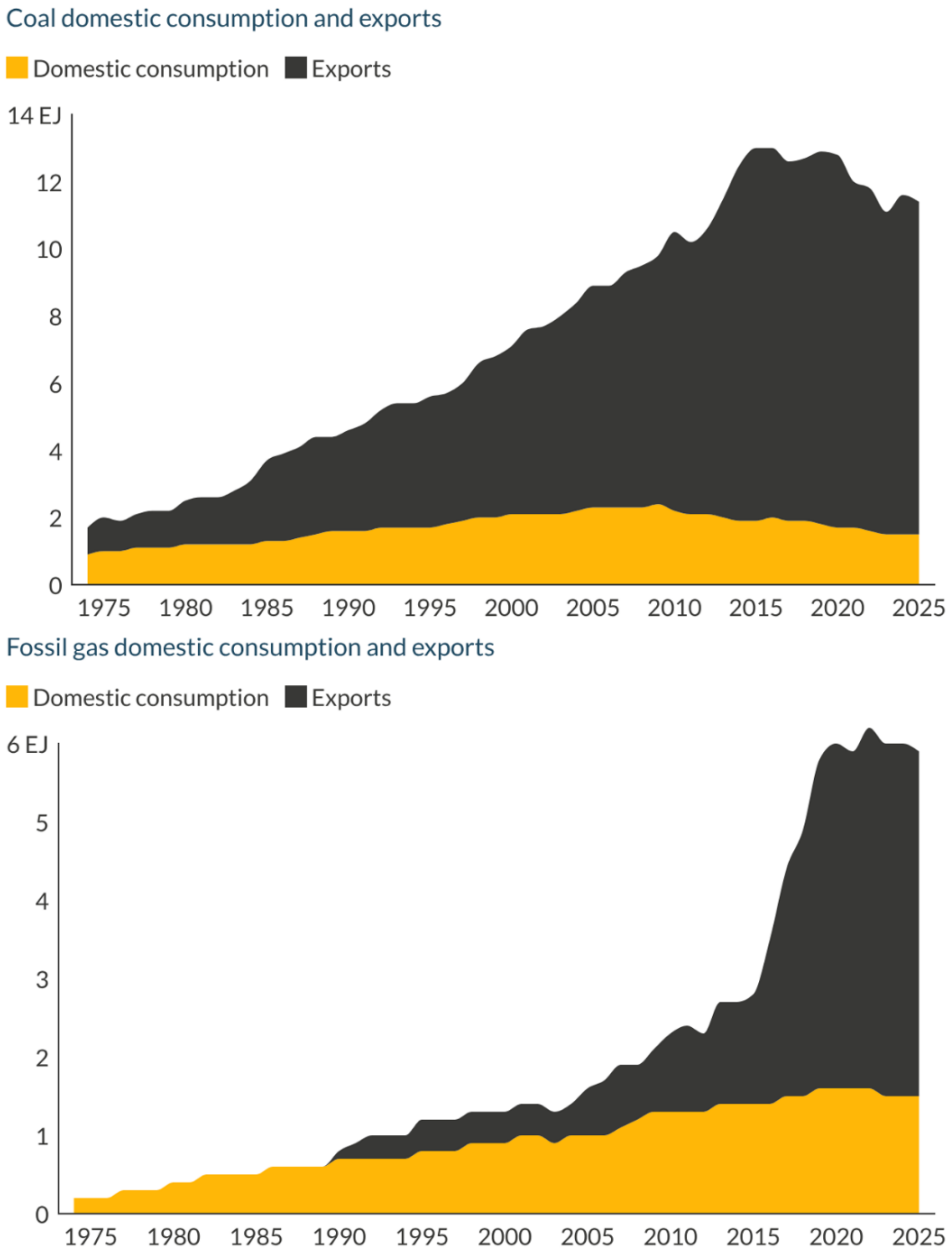



*Figure 1: Coal and fossil gas domestic consumption and exports*

As a result, for Australia, exported emissions constitute the country's principal contribution to global climate change. We estimate that Australia's domestic $CO_2$ emissions and the $CO_2$ emissions from burning its fossil fuel exports together made up 4.3% of global fossil $CO_2$ emissions in 2025. This is slightly less than the 2022 value we calculated in our previous report, due to the rise in global emissions and a small decline in metallurgical coal exports.[4]

[4] Grant and Hare, "Australia's Global Fossil Fuel Carbon Footprint."

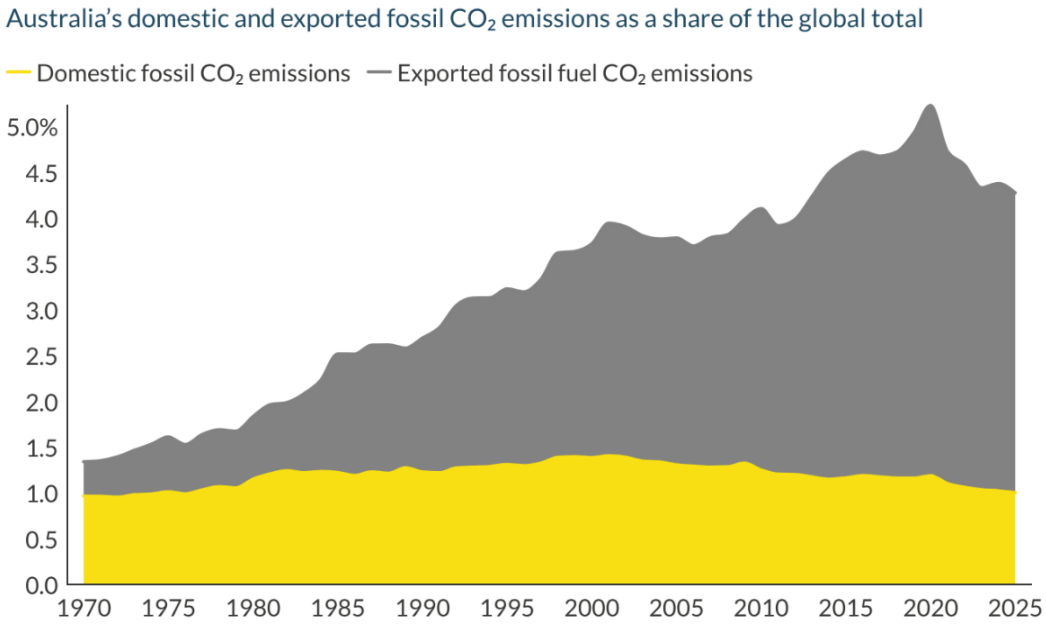



*Figure 2: Australia's domestic and exported fossil $CO_2$ emissions as a share of the global total.*

Any attempt by policymakers, industry leaders and media to claim the apparent insignificance of Australian emissions on a global scale is wilfully ignoring that reality. Conventional accounting treats these exported emissions as the responsibility of the importing state. However, a growing body of international legal reasoning now challenges that position.

The most prominent example is the International Court of Justice. In its historic 2025 Advisory Opinion on the Obligations of States in Respect of Climate Change, it determined that the "failure of a State to take appropriate action to protect the climate system from GHG emissions - including through fossil fuel production, fossil fuel consumption, the granting of fossil fuel exploration licences or the provision of fossil fuel subsidies - may constitute an internationally wrongful act which is attributable to that State".[5]

A joint declaration by two of the judges went even further, considering that achieving the 1.5°C goal requires that no new fossil fuel extraction projects be developed, and that environmental impact assessments for such projects must account for the scope 3 emissions released when the fuels are eventually burned.[6]

In parallel to these moral and legal considerations, Australia's fiscal and institutional capacity, along with its comparatively low dependence on fossil fuel revenue and high potential to diversify, including to higher-value supply chains, makes it one of the most

[5] International Court of Justice, "Obligations of States in Respect of Climate Change."
[6] International Court of Justice, "Joint Declaration of Judges Bhandari and Cleveland."

transition-ready countries. Like other developed nations, it can and must lead that transition.[7]

In this report, we quantify the current full emissions impact of Australia's fossil fuel production for export, both inside its borders and abroad. We also provide projections of how these emissions would evolve based on the government's export projections. Finally, we explore the pace at which Australia's fossil fuel production and associated emissions need to decline under a Paris-aligned transition away from fossil fuels, and the associated policy recommendations.

## Taking responsibility for exports

Australia's position on fossil fuel exports also contrasts with the way it treats other exported commodities capable of causing harm in the importing country. Uranium is the clearest example.

As a party to the Treaty on the Non-Proliferation of Nuclear Weapons, and through its bilateral safeguards agreements, Australia accepts binding obligations governing the end-use of the uranium it exports, supplying it only for peaceful purposes and subject to safeguards on where and how it may be used.[8]

In that domain, the principle that an exporting State bears responsibility for the downstream use of a hazardous export, on another State's territory, is already well established and uncontroversial. There is little basis for fossil fuels to be treated differently.

In June 2026, ten Australians who have suffered harm from climate-driven disasters lodged a case against the government before the UN Human Rights Committee.[9] It is the first case of its kind to challenge a country's fossil fuel exports specifically on international human rights grounds. The claimants argue that Australia has evaded responsibility for the pollution caused by its exports, and seek a declaration that it is unlawful for Australia to continue approving and subsidising new export projects without a plan to protect people from their harm.

*Textbox 1: Taking responsibility for exports*

[7] Climate Analytics and University College London, "End of the Pipeline: Managed vs Market-Driven Routes to Ending Fossil Fuel Production."
[8] DFAT, "Australia's Uranium Export Policy."
[9] Hard Truths, "Ten Australians File Historic 'Hard Truths' Case Over Australian Coal and Gas Exports at the United Nations."

# Current policy projections

Under current policies, the government only forecasts a moderate decline in fossil fuel production and has no active phase-out plan. Since it was elected in 2022, the Albanese government has mostly focused on replacing fossil fuels in the domestic electricity sector, and has not set plans for the elimination of fossil fuel production. On the contrary, the government has approved many new and expanded coal and gas projects.

In March 2026, the Climate Council placed its count at 37 approvals for new or expanded coal, oil and gas projects. New approvals continued well into 2026.[10]

The government is approving both new projects and expanding existing ones. Whether coal and fossil gas come from new production or from extending existing operations, the climate outcome is the same: the longer Australia keeps producing and selling fossil fuels, the more carbon ends up in the atmosphere. These expansions are also far from marginal. Analysis has found that allowing the North West Shelf, one of the country's largest LNG plants, to operate until 2070 could generate 3.9 $GtCO_2e$ of emissions, including from exported gas, or more than 8 years of Australia's current annual net emissions.[11]

In total, as of October 2025, there were 432 major resource and energy projects under development in Australia across all extractive supply chains, up from 407 projects a year earlier. This includes 63 committed projects (where a final investment decision has been taken) and 68 projects at the advanced feasibility stage.[12]

This section discusses the government's projections for coal and LNG production and exports. Although most of Australia's coal and all its LNG are exported, extracting these still generates significant domestic emissions from the energy consumed and the methane that leaks at various stages of the process. Combining the exported emissions from combustion abroad with those from the domestic export-oriented extraction industry, we estimate the total emissions impact of Australia's fossil fuel exports to 2040.

[10] Climate Council, “The Albanese Government’s Fossil Fuel Approvals.”
[11] Climate Analytics, “The Full Implications of Australia’s North West Shelf Decision.”
[12] DISR, “2025 Resources and Energy Major Projects.”

## Project pipeline

The Department of Industry, Science and Resources (DISR) compiles its Resources and Energy Major Projects (REMP) list every year, which lists all projects at various stages of development nationwide.[13] As of the end of October 2025, there were 432 major resource and energy projects under development, up from 407 a year earlier. Of these, 42 were coal projects and 45 were oil and gas projects.

The coal pipeline is dominated by life extensions and expansions of existing mines in the Hunter Valley in New South Wales (NSW) and Queensland's Bowen and Galilee Basins. Meanwhile, oil and gas dominate the "committed" (financed and under construction) segment of the pipeline by value, though the REMP report notes that the number of new oil and gas projects entering the pipeline is declining.

The REMP dataset should not be read as a list of projects that will be built but as an investment tracker. Many are at early stages, some only announced. Analysis has found that some companies seek approvals for projects they have no intention of developing, for accounting reasons.[14] Perhaps more importantly, for the scope of the present report, the REMP is heterogeneous in its classification of the various projects and the units of production or capacity it provides for each project. For this reason, we preferred to rely on the Department of Climate Change, Energy, the Environment and Water (DCCEEW) emissions projections and the short-term production and export forecasts from DISR Resources and Energy Quarterly, two documents that we estimate to be more representative of the government's views of which projects would go ahead, and of where fossil fuel production is headed.[15,16]

*Textbox 2: Project pipeline.*

# Coal

### Current context

In 2025, Australia produced 419 Mt of black coal from nearly one hundred black coal mines, and 39 Mt of brown coal from three coal mines. That year, 352 million tonnes of black coal were exported.[17] It made Australia the world's second-largest coal exporter,

[13] DISR, "2025 Resources and Energy Major Projects."
[14] IEEFA, "Digging in: Why BHP Wants Approvals for Mines It Says It Won't Build."
[15] DCCEEW, "Australia's Emissions Projections 2025."
[16] DISR, "Commonwealth of Australia Resources and Energy Quarterly June 2026."
[17] DCCEEW, "Energy Update 2026."

accounting for 25% of global exports.[18] Most of Australia's black coal is produced in Queensland (57%) and NSW (42%), while the small remainder (1%) is mined in Western Australia and Tasmania.[19]

Black coal can be categorised as thermal or metallurgical, and Australia produces both. Thermal coal is mostly used for power generation, while metallurgical coal is used in steelmaking or for industrial uses that require higher-purity fuel. Trade data, which does not perfectly match energy statistics, shows 255 Mt of thermal coal produced, of which Australia exported 205 Mt, and 151 Mt of metallurgical coal, of which it exported 147 Mt.[20] Meanwhile, the much smaller brown coal output is used only domestically, to supply Victoria's lignite-fired power generators, the most emissions-intensive in Australia.

Despite this massive output, the industry is a small job creator: as per the Australian Bureau of Statistics, it employed fewer than 50,000 people as of March 2026, 0.3% of the national workforce.[21] That a poll found Australians put that figure at 10% shows the industry's ability to paint itself as central to socioeconomic stability.[22]

### Outlook under current policies

Official Australian projections show total black coal exports remaining broadly stable through to 2030 before entering a slow decline to roughly 300 Mt by 2035 and 280 Mt by 2040, as shown in Figure 3.

[18] Geoscience Australia, “Australia’s Energy Commodity Resources 2026.”
[19] Geoscience Australia, “Australia’s Energy Commodity Resources 2026.”
[20] DISR, “Commonwealth of Australia Resources and Energy Quarterly June 2026.”
[21] Jobs and Skills Australia, “Occupation and Industry Profiles.”
[22] The Australia Institute, “Climate of the Nation 2024: Tracking Australia’s Attitudes towards Climate Change and Energy.”

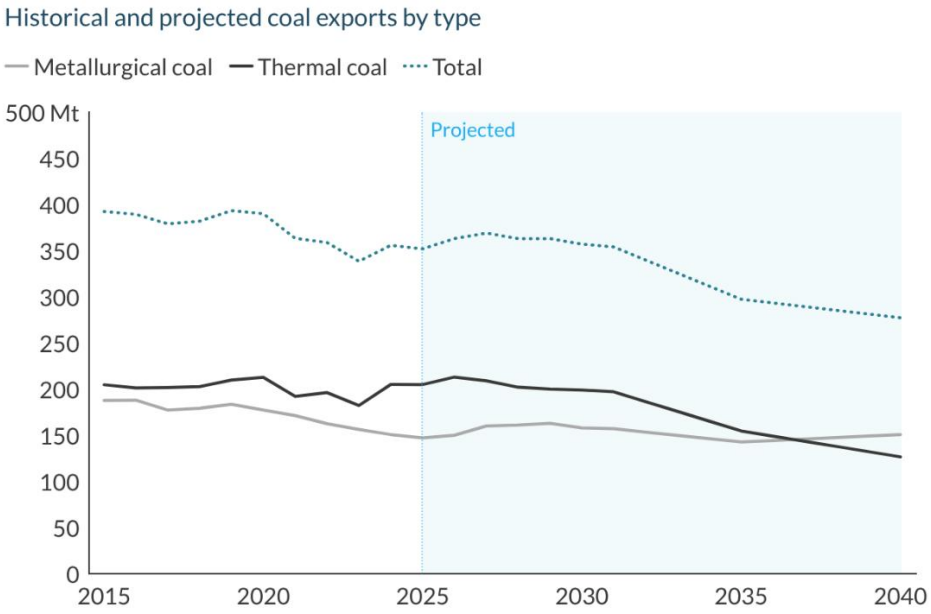



*Figure 3: Australian government projections of coal exports, based on DISR's June 2026 Resources and Energy Quarterly (to 2031) and DCCEEW's Australia's Emissions Projections 2025 (2032-2040).*

The government forecasts Australia's metallurgical coal exports to rise over the next two years before plateauing. After that, projections by DCCEEW show production remaining relatively stable to 2040. DCCEEW notes that new mines are assumed to start operating to meet demand.[23]

These are in line with global analyses. The International Energy Agency (IEA) also expects Australia's metallurgical coal exports to increase, from 149 Mt in 2025 to 155 Mt in 2027, before declining slightly to 152 Mt in 2030 under current policies. Most of these exports are directed to the Chinese and Indian markets, with the former seeing a clear contraction in demand.[24]

The government projects a slightly steeper decline in thermal coal output than in metallurgical coal, as it assumes its trade partners will achieve a limited switch away from that fuel. Export volumes are forecast to remain elevated at 209 Mt in 2027 before gradually falling to 199 Mt by 2031, and declining gently to 2040.

Even if forecasts show a moderate decline in thermal coal output, thermal coal production has been revised upwards compared to previous projections because of the lack of progress in phasing out coal in the domestic power sector. Even as the power sector is to reach the 82% on-grid renewable energy target by 2030, the phase-out of the thermal coal-fired power fleet has not progressed as expected in previous years, so the remaining drop in domestic power sector emissions has become steeper. In the same way,

[23] DCCEEW, "Australia's Emissions Projections 2025."
[24] IEA, *World Energy Outlook 2025*.

DCCEEW's Emissions Projections have run-of-mine brown coal, used in Victoria's lignite plants, dropping from 38 Mt in 2025 to 16 Mt by 2030 and 2 Mt by 2040, whereas the 2024 Projections had it phased out between 2030 and 2035.[25,26]

Unlike thermal coal, for which the rapid expansion of cheaper renewable energy offers alternatives, metallurgical coal has fewer substitutes that can be deployed at scale today. They are, however, maturing fast. Electric arc furnaces using scrap or direct reduced iron are commercially mature, and prototypes of direct reduction using 100% electrolytic hydrogen have already operated in real conditions.[27]

### Project pipeline

As mentioned, the above projections assume that some mines will start operating or be extended to meet that demand. The government does not disclose which mines it has accounted for in its projections, but Australia holds the largest coal mine development pipeline of any major coal-exporting country.[28]

As of March 2026, the government has approved at least 16 coal mines.[29] Analysis finds that thermal coal projects seeking approval would add roughly 1.8 billion tonnes of cumulative thermal coal production capacity between 2025 and 2050, with seven individual projects each seeking approval for more than 100 Mt of additional thermal coal.[30]

New and expanded coal mines present stranded asset risks. Even if near-term projections are flat, they are contingent on assumptions about trade partners' decarbonisation that could prove too conservative. Through its forecasts, implicitly, the government expects Australian coal to resist decline better than coal from other exporters such as Russia, Indonesia and Colombia, an assumption that could also prove wrong.[31]

In East Asia, where most of Australia's coal goes, renewables are a source of energy security, in contrast to imported fossil fuels, whose supply chains are vulnerable to global volatility. Australia has not joined the Powering Past Coal Alliance, which seeks to transition away from unabated coal power by the 2030s or 2040s, unlike South Korea.

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[25] DCCEEW, “Australia’s Emissions Projections 2025”; DCCEEW, *Australia’s Emissions Projections 2024*; DCCEEW, *Australia’s Emissions Projections 2023*.
[26] The 2025 projected production figures for brown coal are estimates, which explains their mismatch with the 39 Mt in the Energy Update 2026, released almost a year later.
[27] Climate Analytics, “Decarbonising Iron and Steel in Albania, Bosnia and Herzegovina and Serbia”; IEA, “ETP Clean Energy Technology Guide.”
[28] Global Energy Monitor, “Still Digging.”
[29] Climate Council, “The Albanese Government’s Fossil Fuel Approvals.”
[30] IEEFA, “Australia Pursues Adding 1.8 Billion Tonnes of Thermal Coal despite Declining Market Conditions.”
[31] DISR, “Commonwealth of Australia Resources and Energy Quarterly June 2026.”

One of Australia's largest coal markets, South Korea joined the alliance in 2025 and committed to retiring 40 of its 61 coal units by 2040.[32] This will ultimately affect demand for Australian coal. To mitigate the impact of coal mine stranding on the Australian economy and avoid dependence on the policies of countries keen to move away from the dirtiest fuel, the phase-out of coal mining needs to be managed rather than forced.

## Is Australian coal cleaner?

Supporters of coal exports often argue that Australian coal is cleaner than its competitors' coal, so that Australian supply lowers global emissions. Former Prime Minister Scott Morrison made the statement that "because Australian coal compared to the coal that is sourced from other countries, the other countries have 50 per cent higher emissions than Australian coal [sic]".[33]

The Minerals Council of Australia made a similar case for metallurgical coal, presenting it as the "greener" choice: "By using Australian metallurgical coals, blast furnace operators can maximise productivity and reduce the amount of $CO_2$ produced".[34]

Australia exports only higher-energy bituminous thermal coal, meaning slightly less coal by weight may be burned to produce the same amount of electricity, whereas Indonesia, for example, mostly exports lower-grade sub-bituminous coal.

Despite this higher quality, the carbon released per unit of energy barely changes with grade. Per unit of energy, the two grades emit almost the same: Intergovernmental Panel on Climate Change (IPCC) default factors differ by only 1.6%, and Australia's own National Greenhouse Accounts Factors treat them as identical.[35] A tonne of Australian coal delivers more energy than a tonne of Indonesian coal, and releases correspondingly more $CO_2$ when burned.

Any climate advantage from Australia's higher-grade coal amounts to a few percentage points at most, negligible against the scale of emissions from Australia's coal exports. Coal remains the most carbon-intensive option for power generation.

[32] Powering Past Coal Alliance, “Republic of Korea and Bahrain Join the Powering Past Coal Alliance at COP30.”
[33] AAP, “PM’s Claim Australian Coal Produces Much Lower Emissions Is ‘Nonsense.’”
[34] Minerals Council of Australia, “Best in Class: Australia’s Bulk Commodity Giants”; Martus, “‘The Road to Net Zero Runs through the Resources Sector.’”
[35] DCCEEW, “Australia’s National Greenhouse Accounts.”

## Oil and gas

### Current context

Australia produces both oil and fossil gas. Its oil production has been declining since peaking in 2000, as new development projects failed to offset declines in mature fields. With six domestic refineries closed since 2003, over 80% of Australia's liquid fuel demand is now met through imports.[36]

Fossil gas production, by contrast, has tripled since 2010, driven by the LNG boom of the 2010s, which saw new LNG plants start operating in Queensland, the Northern Territory and Western Australia (Figure 4). LNG exports rose from 18 Mt in 2010 to 79 Mt in 2025 after reaching record-high levels in 2022, making Australia the third-largest LNG exporter in the world.[37]

Around 80% of the gas Australia produces goes towards LNG plants. In addition to the gas that is exported, LNG plants also consume gas, whether for generating the electricity to sustain their operation or in the different processes needed for processing the gas.[38] Because of the industry's size, the LNG sector is one of the largest consumers of gas in Australia. The country's 10 plants use 30% of the gas consumed domestically (437 PJ, compared to 1453 PJ from all sectors domestically, and 4,425 PJ exported as LNG).[39]

[36] DCCEEW, "Energy Update 2026."
[37] DCCEEW, "Energy Update 2026"; Geoscience Australia, "Australia's Energy Commodity Resources 2026."
[38] DCCEEW, "Energy Update 2026."
[39] DCCEEW, "Energy Update 2026."




*Figure 4: LNG projects in Australia in 2025, as shown by DCCEEW in the 2025 Emissions Projections.*[40]

Out of the 1,016 PJ that flowed towards the economy, excluding LNG, 294 PJ went towards power generation, where gas is a major source of electricity in Western Australia's South West Interconnected System, 370 PJ towards manufacturing, 139 PJ towards mining, and the rest towards buildings and other sectors.[41]

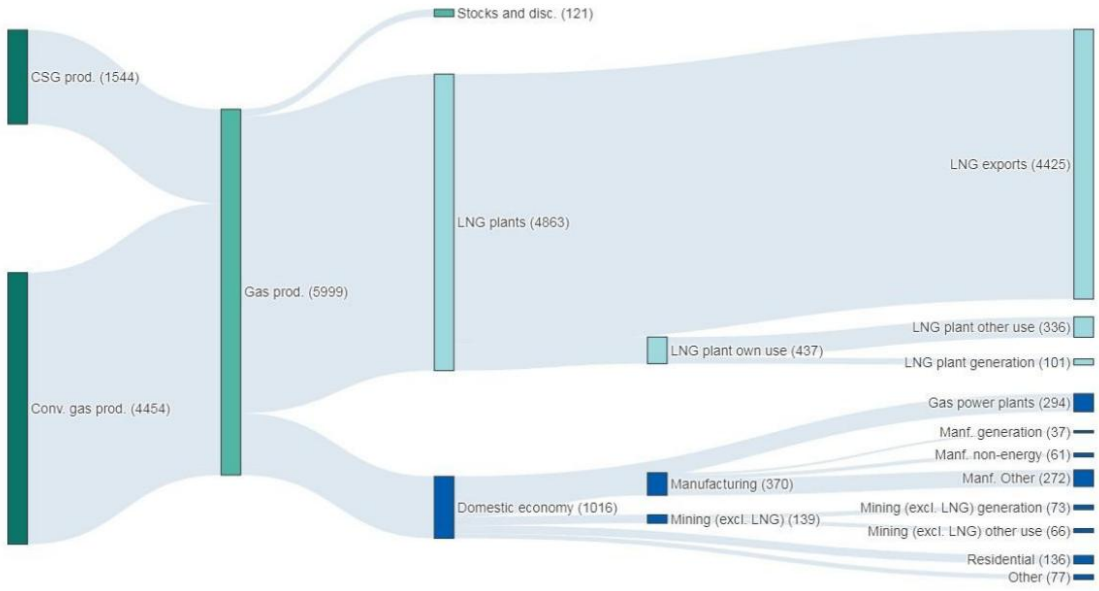



*Figure 5: Natural gas flows in 2024/25, in petajoules. Sourced from the DCCEEW Australian Energy Statistics Update report 2026.*[42]

[40] DCCEEW, "Australia's Emissions Projections 2025."
[41] DCCEEW, "Energy Update 2026."
[42] DCCEEW, "Energy Update 2026."

## Outlook under current policies

The government anticipates LNG exports to remain broadly flat at around 80 Mt per year to 2035, close to their historical peak, with a small short-term bump that DISR attributes to the completion of a few brownfield projects (Figure 6).[43] As we will see below, sustaining current levels of exports to 2035 is at odds with a Paris-aligned pathway. To align with such a scenario, global gas demand must contract over the same period.

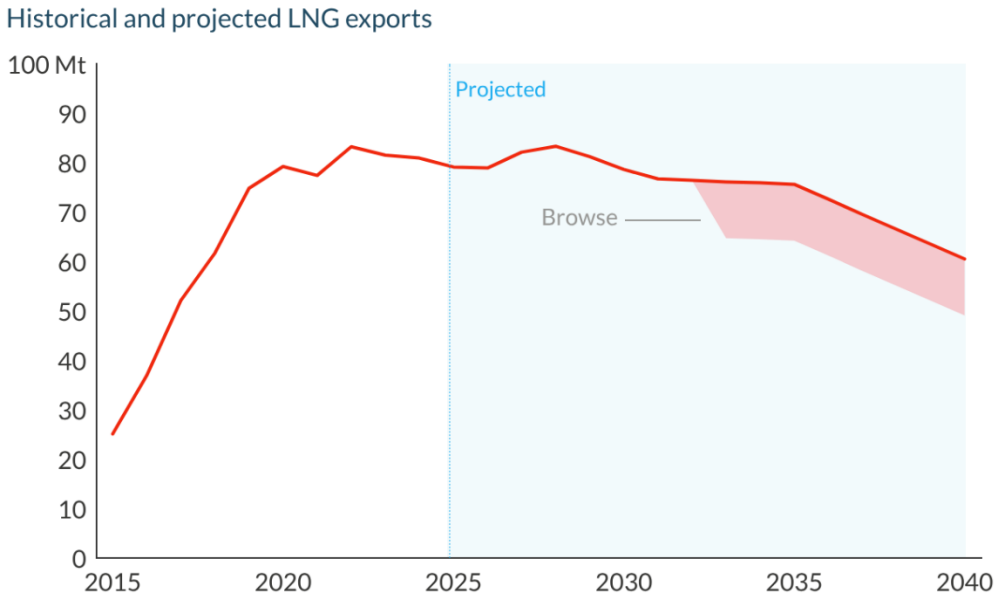



*Figure 6: Australian government projections of LNG exports, based on DISR's June 2026 Resources and Energy Quarterly (to 2031) and DCCEEW's Australia's Emissions Projections 2025 (2032-2040). The production from Woodside's Browse project is highlighted in red.*

As with coal, these projections are heavily contingent on demand from Japan, South Korea, China and Taiwan. The Institute for Energy Economics and Financial Analysis (IEEFA) has argued that Australia's high costs, an impending global supply glut from the United States and Qatar, and declining domestic reserves will constrain LNG exports "particularly from 2030 onwards", with volumes increasingly diverted to the domestic market as local supply dwindles and social licence pressures increase.[44]

## Project pipeline

The project pipeline contains a smaller number of very large, capital-intensive projects. These include the Jansz-Io Compression Project, Crux LNG and the Surat project. The

[43] DISR, "Commonwealth of Australia Resources and Energy Quarterly June 2026."
[44] IEEFA, *The Future of Australian LNG*.

government's own analysis points out that completion of these over the next few years should sustain Australia's gas production and exports into the 2030s.[45]

Major projects of increasing technical complexity and $CO_2$ content have already gone ahead as the lowest-hanging fruit get exhausted. Santos's Barossa project, described as potentially the most carbon-intensive gas development in Australia and labelled "A $CO_2$ factory with LNG as a by-product", shipped its first LNG cargo to Japan in early 2026.[46] In the Northern Territory, Tamboran Resources is advancing the onshore Beetaloo Basin project.[47] The project has long-term ambitions to supply the east coast and, via a proposed Northern Territory LNG facility, export markets in Asia.[48] In the same way, the Browse project, accounted for in the LNG export projections, would allow Woodside's Western Australia operations to continue for decades (see Textbox 4).

## Browse and Woodside's Burrup Hub

The Burrup Hub is an integrated cluster of LNG-related infrastructure that Woodside is developing in the northwest of Western Australia. The project is already well underway. The first major phase is the Scarborough gas project, which is over 98% complete. Scarborough will add 8 Mt a year to the Pluto LNG plant, with its first cargo due in Q4 2026.[49]

Connected with Pluto is Australia's oldest and second-largest LNG facility, the North West Shelf (NWS) at Karratha, which currently has a gas deficit. In September 2025, the federal government granted final approval for Woodside to operate it from its original 2030 expiry out to 2070.[50] That is a four-decade extension, with an end-of-life 20 years after the year Australia has committed to reaching net zero greenhouse gas emissions, for a plant that was the fourth-largest-emitting Safeguard facility in 2025.[51]

Even with Scarborough and the Pluto-NWS interconnector, there would not be enough gas to sustain the operations of the North West Shelf plant. That is why Woodside is looking to develop Browse, a new gas field 900 kilometres from the

[45] DISR, "2025 Resources and Energy Major Projects."
[46] JERA, "JERA Announces First LNG Cargo from Barossa Gas Field in Australia"; IEEFA, "Should Santos' Proposed Barossa Gas 'backfill' for the Darwin LNG Facility Proceed to Development?"
[47] Tamboran Resources, "The Beetaloo Breakthrough – The Basin That Could Power Australia."
[48] Climate Analytics, *Emissions Impossible: Unpacking CSIRO GISERA Beetaloo Middle Arm Fossil Gas Emissions Estimates*.
[49] Woodside, "Massive Module Delivered to Pluto to Process Scarborough Gas."
[50] Climate Analytics, "The Full Implications of Australia's North West Shelf Decision."
[51] Climate Integrity, *Latest Safeguard Mechanism Data Shows Australia's Centrepiece Climate Policy Is Primarily a Clearinghouse for Low-Integrity Offsets*.

plant with a $CO_2$ content of about 10%. Woodside is proposing to develop carbon capture and storage for the field, despite the financial and technical problems with this technology, as seen nearby at Chevron's Gorgon project.

Analyses have found that Browse's LNG would be around 60% more expensive than Qatar's, and that the project's technical complexity drives substantial costs.[52] It also sits beneath Australia's largest oceanic reef system, Scott Reef, threatening the more than a thousand species it hosts.[53]

*Textbox 4: Browse and Woodside's Burrup Hub*

## Emissions

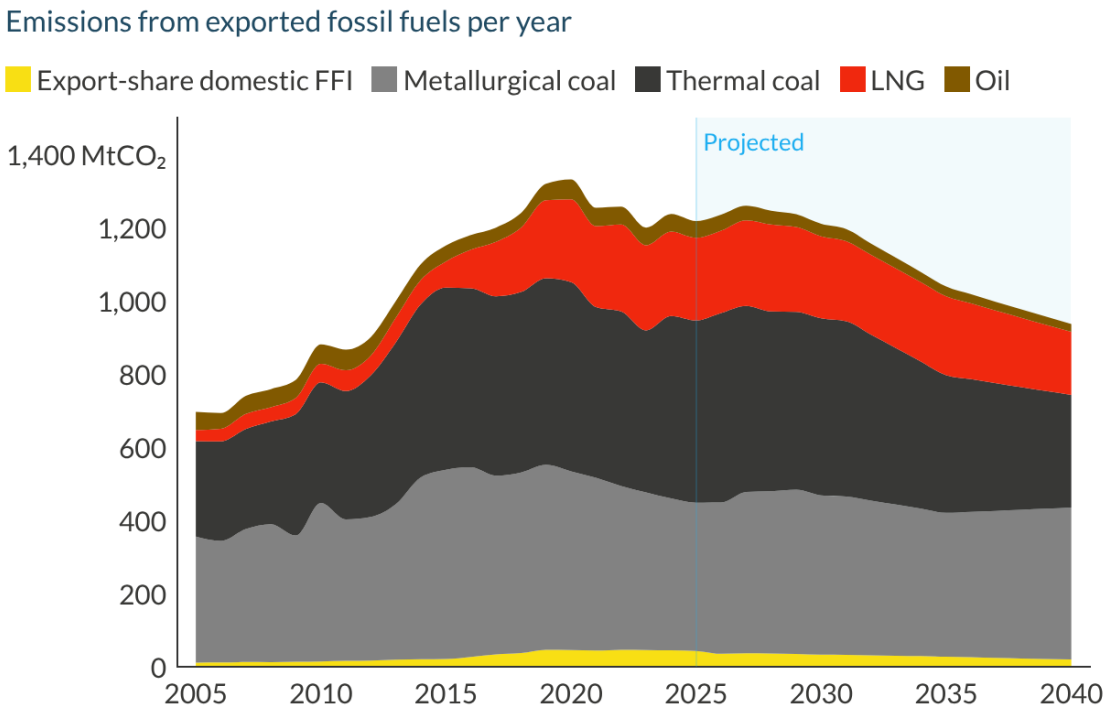



*Figure 7: Emissions from Australia's fossil fuel exports and export-share of domestic fossil fuel industry emissions, historical and projected, by product.*

[52] IEEFA, "Browse Gas: Expensive, Emissions-Intensive, Unnecessary."
[53] Australian Marine Conservation Society, "Save Scott Reef: Stop Woodside's Browse Gas Drilling Proposal."

Figure 7 shows the emissions profile embodied in Australia's fossil fuel exports, with only a small share thereof (in yellow) occurring domestically from the extraction, processing and distribution of these commodities sold abroad. Australia's export fossil fuel footprint rose from around 700 $MtCO_2$ in 2005 to a peak of roughly 1330 $MtCO_2$ in 2020, driven predominantly by the expansion of coal and the rapid build-out of LNG.

The exported footprint is projected to remain largely stable at 1200-1250 $MtCO_2$ to the end of this decade. Exported fossil $CO_2$ emissions even increase by 0.4% between 2025 and 2030.[54] Australia's export footprint only starts declining gradually from 2030 onwards to approximately 1000 $MtCO_2$ by 2035 and over 900 $MtCO_2$ by 2040. Coal, both metallurgical and thermal, remains the single largest contributor through to 2040.

As was the case historically, exported fossil fuel emissions are expected to continue dwarfing emissions from domestic consumption. For these reasons, a fossil fuel phase-out roadmap cannot only focus on their elimination from the domestic energy system (see Figure 1).

## What about post-2040?

The figures in this report focus on the period to 2040. As discussed in Textbox 2, they are based on the DISR Resources and Energy Quarterly and the DCCEEW Emissions Projections, which we consider to be a quantitatively anchored representation of both what the government anticipates to be the pathways for its trade partners under current policies, and the impact of its own measures.[55]

For the same reasons that scenarios from a decade ago are now outdated, projecting fossil fuel production over long timeframes is challenging, even more so in an increasingly volatile world and for Australia, whose exports depend on conditions in many economies with different characteristics.

Unlike the Resources and Energy Quarterly and the Emissions Projections, the Treasury modelling for the Net Zero Plan provides results for 2035 and 2050. These were reused in the latest Intergenerational Report.[56] The Treasury

[54] This is distinct from what we refer to as footprint, as it excludes emissions emitted domestically in the process of extracting, processing and distributing those fossil fuels purely for export.
[55] DCCEEW, "Australia's Emissions Projections 2025"; DISR, "Commonwealth of Australia Resources and Energy Quarterly June 2026."
[56] Australian Government, *Australia's Net Zero Transformation*.

modelling sees coal output fall 47% below 2025 levels by 2035 and 72% by 2050, and fossil gas output fall 27% and 67%, respectively.

It is, however, the product of a separate, self-contained exercise by the Treasury. Its results are not aligned with DCCEEW's emissions projections in the short term. The Net Zero Plan is also an aspirational strategy, unlike the aforementioned documents. For these reasons, we have not considered them in the figures in this publication.

This does not affect the direction of travel. As we show below in Figure 13, fossil fuel exports need to decline steeply and immediately, not from 2035 or 2040, to be consistent with Paris-aligned scenarios.

*Textbox 5: What about post-2040?*

# Paris-aligned fossil fuel production trajectories

**Background**

In a 1.5°C-aligned transition, both fossil fuel production and consumption need to decline rapidly and immediately, in contrast to the current policy projections. In the IPCC's Sixth Assessment Report, mitigation scenarios identified as consistent with the Paris Agreement that avoided relying on unsustainable levels of carbon dioxide removal saw global fossil fuel production fall around 40% below 2022 levels by 2030.[57]

The world has not followed this trajectory. The recent Highest Possible Ambition scenario (HPA), published at the end of 2025 to reflect the lack of progress so far, has production and use fall 20% below 2025 levels by 2030 and 50% by 2035, and reach zero by 2070 (see Figure 8). Coal and gas, specifically, are effectively phased out in the 2040s and the 2050s, respectively. This scenario reiterates the IEA's findings that if the world is to align with the Paris Agreement, no new fossil fuel projects are needed.[58] Importantly, these figures are global: developed countries, historically higher emitters and with more financial and political means to this end, need to take the lead.

[57] Climate Analytics, "2030 Targets Aligned to 1.5°C."
[58] IEA, *Net Zero Roadmap: A Global Pathway to Keep the 1.5 °C Goal in Reach - 2023 Update*.

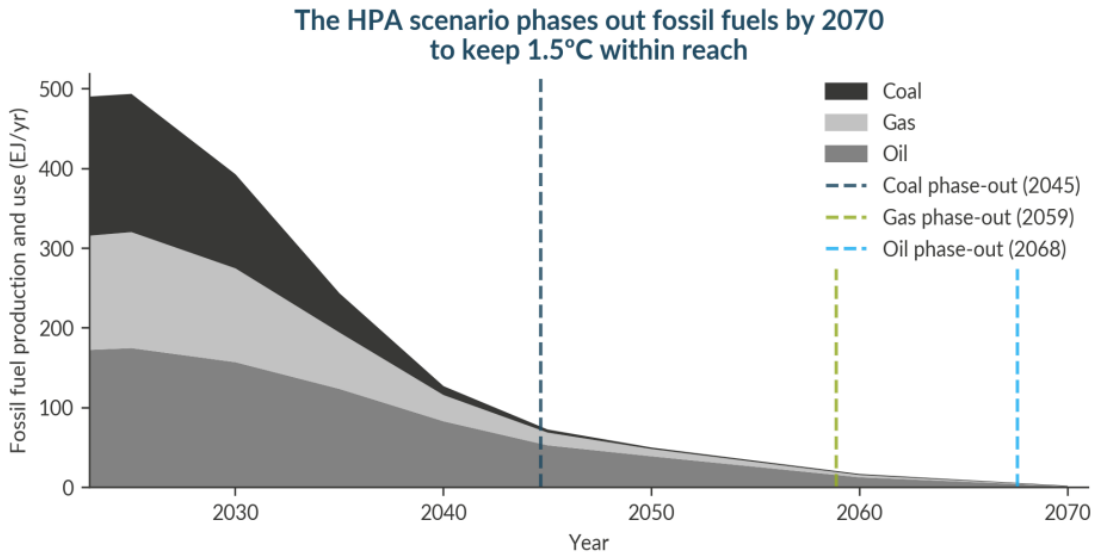



*Figure 8: Global fossil fuel production in the HPA-2025 scenario*

### Paris-aligned trajectories for Australia's fossil fuel production

Australian fossil fuel exports need to follow a similar trajectory. In this report, we explore two different possible trajectories for Australia's fossil fuel exports, aligned with the global transition away from fossil fuels modelled in the HPA-2025 scenario.

In a 2026 analysis, Climate Analytics modelled two different possible futures under which a transition away from fossil fuels aligned with the HPA would occur:

- The first is the market-driven scenario, in which the scale and location of future production are driven by market conditions.[59] In this scenario, Australia's fossil fuel extraction is a function of domestic demand and export opportunities, and Australia competes against other fossil fuel producers for a share of the global market.[60]
- The second is a coordinated scenario, which explores what would happen if there were coordination between producers and consumers around the pace at which fossil fuel production declines in each country.

Those countries with the greatest transition readiness (as defined by lower levels of fiscal dependency on fossil fuel production, and greater economic and regulatory capacity to manage the transition away from fossil fuel production) would have faster and deeper

[59] Climate Analytics and University College London, "End of the Pipeline: Managed vs Market-Driven Routes to Ending Fossil Fuel Production."

[60] This work focused predominantly on oil and gas and did not produce a market-driven scenario for coal. In coal, we instead introduce a simple scenario in which all countries cut production at the global average, which we term a "baseline" scenario.

cuts to fossil fuel production, and those countries with lower transition readiness would still phase out production, but at a more gradual pace.

Because of its lower dependency on fossil fuel production for economic activity, and higher income levels, Australia ranks consistently as a producer that would accelerate the pace of phase-out under a coordinated approach, across all three fuels. Figure 9 shows Australia's fossil fuel production trajectories for all fuels. Below, we break these down for coal, oil and gas. They give potential perspectives on the pace of decline in fossil fuel production in Australia that would align with highest possible ambition.

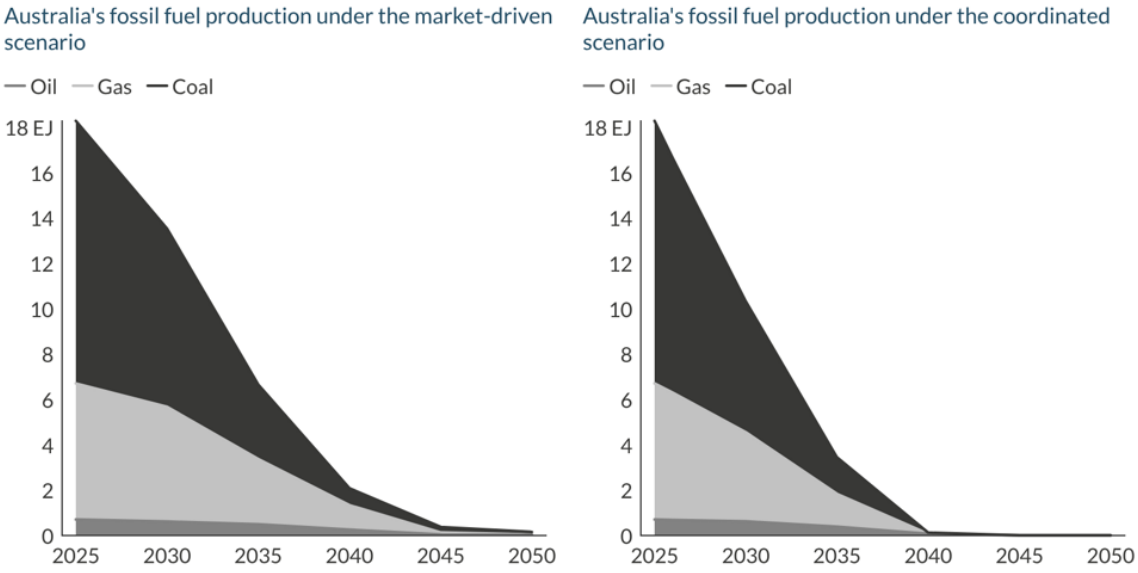



*Figure 9: Australia's fossil fuel production under the market-driven and coordinated scenarios.*

Under these trajectories, coal production declines by 32-50% from 2025 levels by 2030 and 72-86% by 2035. By 2040, production is 94-100% lower (see Figure 10). The coordinated approach has the fastest decline this decade and brings production to zero by 2040, while under the market-driven approach, a residual amount remains in 2050, around 99% below current levels.

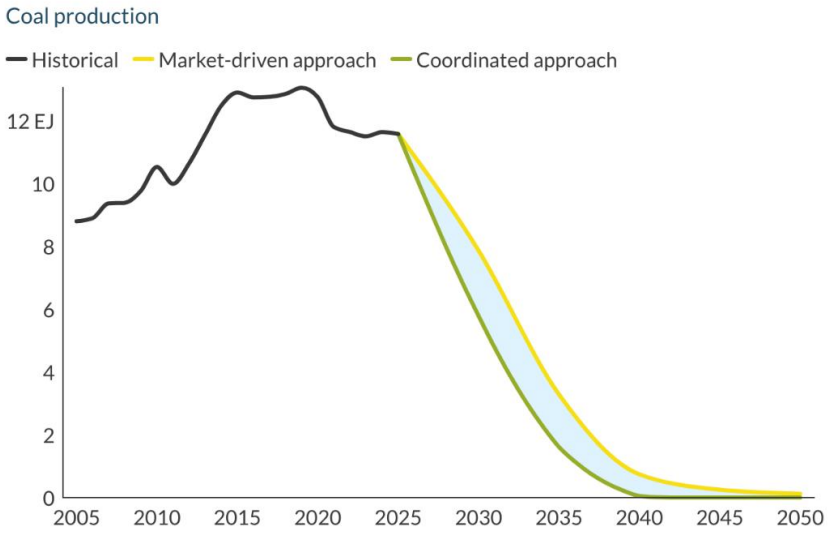



*Figure 10: Market-driven and coordinated approach trajectories for coal production*

Fossil gas production more than doubled between 2015 and 2023 as Australia went through its LNG export boom. Under the two pathways, it falls 16-35% below 2025 levels by 2030 and 52-76% by 2035 (see Figure 11). The range is wider than for coal. In the coordinated scenario, gas production is phased out by 2040 (as Australia is among the producers leading the transition away from fossil fuels). Under the market-driven scenario, we estimate that Australia would phase out gas production between 2045 and 2050.

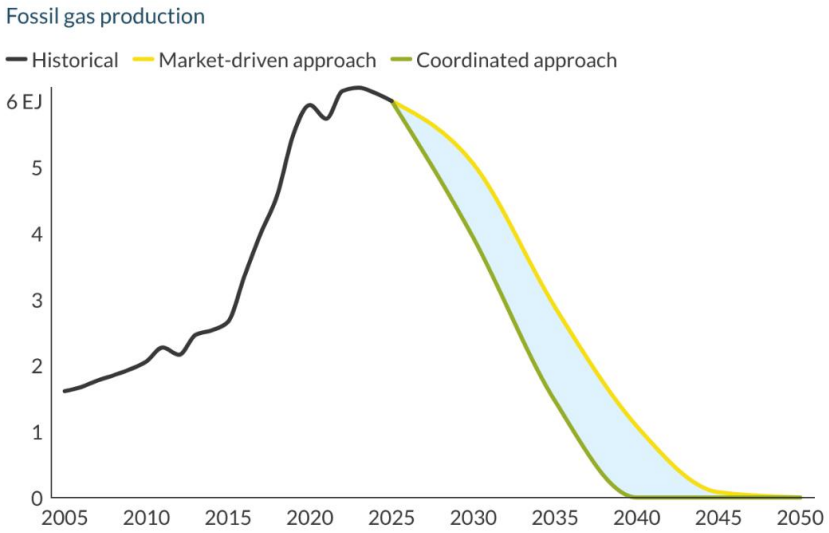



*Figure 11: Market-driven and coordinated approach trajectories for fossil gas production*

Oil production, historically much smaller and more volatile, falls by 11-13% by 2030 and 30-46% by 2035 (see Figure 12). It is effectively phased out in the early to mid-2040s

under both approaches, but with a faster pace of reduction under the coordinated scenario than in the market-driven scenario.

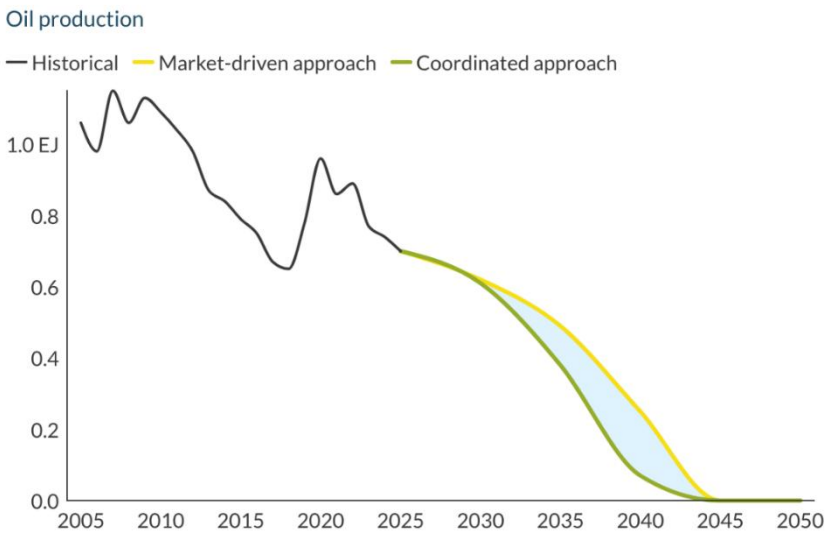



*Figure 12: Market-driven and coordinated approach trajectories for oil production*

Figure 13 compares the exported emissions implied by these production trajectories with current export levels. Under the Paris-aligned trajectories, Australia's export footprint is 26-43% below 2025 levels as early as 2030, dropping to 700-900 $MtCO_2$, 63-80% below 2025 levels by 2035, at 250-460 $MtCO_2$, and 87-98% by 2040, by when Australia's exported footprint sits at 30-150 $MtCO_2$.

By contrast, under current policies, it is stable at 2025 levels to 2030, and 15% below by 2035. The dramatic divergence between the two paths shows the level of ambition needed immediately if the government is to align Australia's exports with the Paris Agreement. A comprehensive fossil fuel production phase-out roadmap, with quantified production reduction targets for the short and medium term, would allow a planned transition along this trajectory and redirect the domestic economy towards clean outputs.

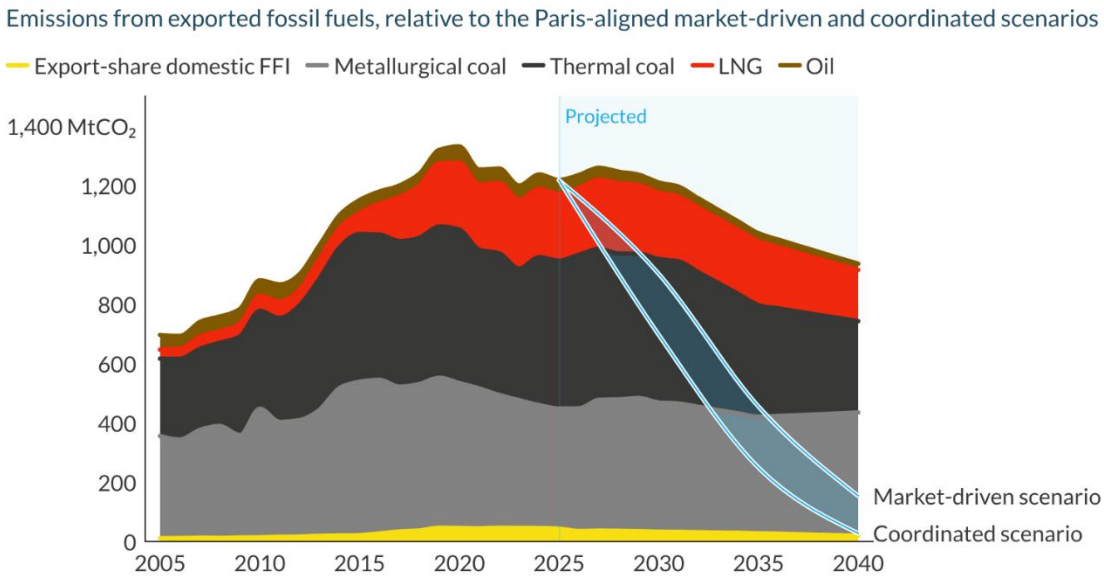



*Figure 13: Emissions from exported fossil fuels and export-share of domestic fossil fuel industry emissions, relative to the Paris-aligned market-driven and coordinated approaches.*

## Clean electrification is what enables a fossil fuel phase-out

In a Paris-aligned scenario, clean electricity replaces fossil fuels across the economy. In the HPA scenario, two-thirds of global final energy demand is met by renewable electricity in 2050.

Not only would electrification increase the overall system efficiency, it would also improve energy security (in the case of Australia, by cutting refined oil product imports that expose businesses and households to oil price volatility).

In the Paris-aligned fossil fuel phase-out scenario for Australia that Climate Analytics published in September 2026, electrification reaches over 50% by 2035 and more than 75% by 2050 through deep electrification across transport, industry, and buildings.[61] This is a rapid acceleration compared to current policies, under which electrification only reaches 33% in 2035 and 46% by 2050 (see Figure 14). It is supported by a complete transition to renewable electricity, with a phase-out of coal-fired generation by 2034 and fossil gas before 2040.

[61] Climate Analytics, *A Fossil Fuel Free Australia*.

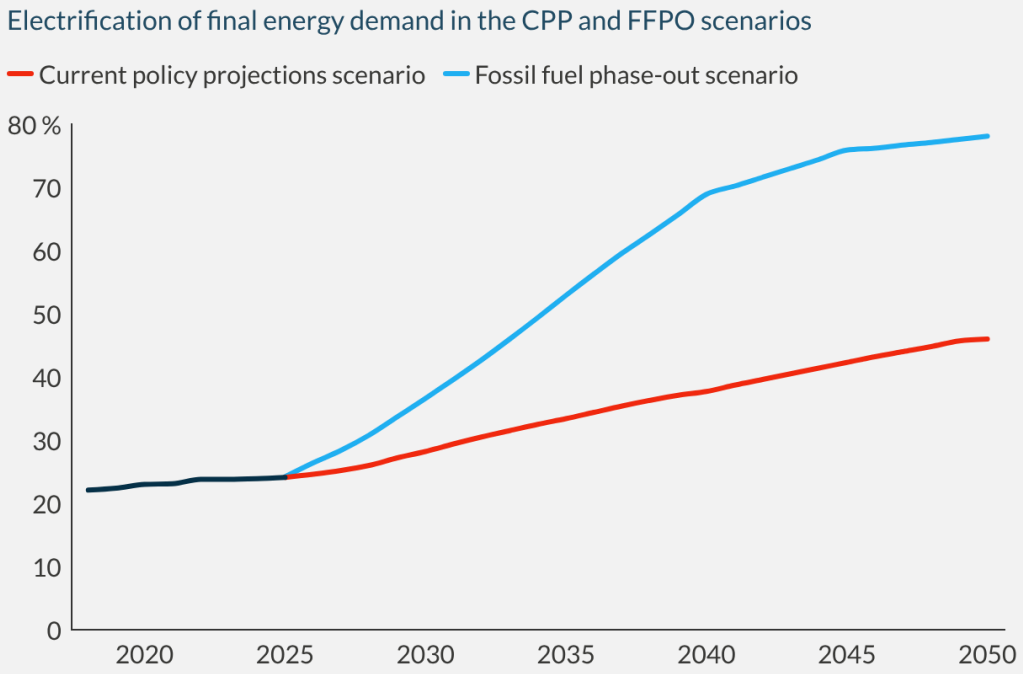



*Figure 14: Electrification of final energy demand under current policies compared to the fossil fuel phase-out scenario*

Türkiye has tabled a goal of achieving 35% global electrification by 2035 as a key agenda item for COP31. This goal is a collective international goal and does not mean every country should reach exactly 35% in 2035. Australia, with its renewable potential and its policy enablers, should aim at overachieving this goal, as occurs in the fossil fuel phase-out scenario.

Comprehensive planning will be key to doing so. Climate Analytics previously identified a lack of policies and targets across sectors as the main obstacle to electrification.[62] The government will need to set up ambitious roadmaps for transport, addressing current gaps like heavy transport and sustainable aviation, develop a strategy for the buildings sector and overhaul the Safeguard Mechanism to allow the economy to switch to electricity while leaving no one behind, in parallel to a transition away from fossil fuels roadmap.

*Textbox 6: Electrification is what enables a fossil fuel phase-out*

[62] Climate Analytics, *A Fossil Fuel Free Australia*.

### Avoided impacts by aligning with a Paris-aligned trajectory

Every tonne of $CO_2$ adds to global warming, and the warming caused by any given quantity of emissions can be quantified. As per Abram et al.'s (2025) application of the transient climate response to cumulative emissions, every 1,000 $GtCO_2$ emitted causes around 0.45°C of additional warming (likely range 0.27-0.63°C).[63] Applying the same relationship to Australia's export footprint can shed light on its impact.

Under current policies, the cumulative exported footprint between 2025 and 2040 totals around 17.9 $GtCO_2$. This alone would cause around 0.008°C of additional warming. That would expose roughly 10.5 million more people to unprecedented heat and push more than 7 million outside the human climate niche, the range of temperatures in which human societies have historically thrived.

| | Current policies scenario | Market-driven scenario | Coordinated scenario |
|---|---|---|---|
| Cumulative emissions | 17.9 $GtCO_2$ | 11.0 $GtCO_2$ | 8.3 $GtCO_2$ |
| Additional warming | 0.0080°C (0.0048-0.0113) | 0.0050°C (0.0030-0.0069) | 0.0037°C (0.0022-0.0052) |
| Additional people left outside the human climate niche | 7.3 million (4.3-10.3) | 4.5 million (2.7-6.3) | 3.4 million (2.0-4.8) |
| Additional people exposed to unprecedented heat | 10.5 million (6.3-15.0) | 6.5 million (3.9-9.2) | 4.9 million (2.9-6.9) |
| Additional GBR thermal exposure | 0.035°C-weeks (0.012-0.077) | 0.022°C-weeks (0.008-0.047) | 0.016°C-weeks (0.006-0.036) |
| Corals lost in every future GBR bleaching event | 328 million (96-759) | 202 million (59-468) | 152 million (45-352) |

*Table 1: Total impact of Australia's fossil fuel export footprint across different scenarios.*

The Paris-aligned trajectories avoid 6.9-9.6 $GtCO_2$ of these emissions over the same period, or 0.0031-0.0043°C less warming. As a result, 4 to 5.7 million people would be spared exposure to unprecedented heat.[64] 2.8-3.9 million would stay within the human climate niche.[65]

In the Great Barrier Reef, 126 to 176 million coral colonies would survive every future mass bleaching event that would otherwise kill them.[66] These figures cover only 15 years of exported emissions and a small number of quantifiable impacts; with still elevated coal

[63] Abram et al., "Quantifying the Regional to Global Climate Impacts of Individual Fossil Fuel Projects to Inform Decision-Making."
[64] with a likely range 2.4-8 million across the two trajectories.
[65] With a likely range of 1.7-5.5 million.
[66] With a likely range of 37 to 407 million.

and gas exports in 2040, they are likely to continue for years, if not decades, with climate impacts lasting for centuries.

# Final considerations

Australia's main contribution to climate change is the fossil fuels it sells abroad. Annual emissions from its coal, LNG and oil exports have been around 1.2 $GtCO_2$ in recent years and are still projected at around 1 $GtCO_2$ in 2035 and more than 0.9 $GtCO_2$ in 2040. That is more than twice the country's current domestic net emissions. Even if these emissions fall outside Australia's national inventories, they are its responsibility. Altogether, they represent 4.3% of global fossil fuel $CO_2$ emissions.

The main takeaway from this analysis is the gap between the government projections and Paris-aligned pathways. Current projections lock in an emissions-intensive future for Australia, with multiple adverse impacts. A transition away from fossil fuels is needed to address this.

Under current policies, coal exports remain broadly stable at around 350 Mt to 2030 and decline slightly to around 300 Mt in 2035 - a 14% reduction. By contrast, under the Paris-aligned trajectories outlined above, coal production falls 32-50% from 2025 levels by 2030, 72-86% by 2035 and 94-100% by 2040.

For fossil gas, current projections see LNG exports staying close to 80 Mt a year to 2035. Under Paris-aligned trajectories, fossil gas production falls 16-35% below 2025 levels by 2030 and 52-76% by 2035. Across all fuels, Paris alignment means that the decline starts immediately.

Australia's large pipeline of coal and gas projects commits the country to decades of continued emissions and locked-in investment. New approvals and life extensions, from coal mines licensed into the 2060s and beyond to the North West Shelf now sanctioned to 2070, lock in production well past the year the government has committed to reaching net zero greenhouse gas emissions.

As demand from major importers contracts, whether driven by their own decarbonisation or by energy security concerns, focusing capital, institutional capacity and political will to support fossil fuel projects distracts from the opportunities to diversify and the need to implement a just and fair transition. Designing and implementing a roadmap for a fossil fuel phase-out would let Australia diversify its economy on its own terms, rather than having change imposed on it.

Closing the gap between Paris alignment and current policy pathways will require leadership. To set Australia on track to phase out fossil fuel exports, the government first

needs to report on its total carbon footprint and track progress in reducing it. A key commitment is to end approvals of new projects and extensions, and to assess proposals against the emissions released when their fuels are burned.

Ultimately, the government needs to design and publish a roadmap for transitioning away from fossil fuels that plans the retirement of existing production assets, and integrates with a whole-of-economy decarbonisation plan built on renewable energy rollout and the electrification of end uses.

Electrification and renewables are the two tools that will allow Australia to eliminate coal, gas and oil consumption, and also production. Thus, the roadmap must be integrated with deep, whole-of-economy electrification of industry, transport and buildings, powered by renewable energy. It needs to go beyond the 35% by 2035 global electrification goal proposed for COP31 and commit to ambitious renewable energy targets. A planned phase-out would avoid having the transition forced on the economy by trading partners moving faster than Australia.

Internationally, Australia has the chance to act in its role as COP31 co-president, supporting the institution of annual dialogues on transitioning away from fossil fuels, so that the work begun under the Brazilian COP30 Presidency continues beyond COP31. It should also call on all countries to develop national roadmaps that feed into the second Global Stocktake in 2028 and the next round of NDCs, due in 2030. Taken together, these steps would show that a major fossil fuel exporter can plan its own way out of fossil fuel production.

## Moving up the value chain

Under the Paris-aligned trajectories set out above, coal and gas largely disappear from Australia's export base within two decades. Still, Australia is well placed to replace its carbon-intensive output with clean products if it is able to unlock the opportunities the transition has to offer.

There is major potential for Australia to diversify into higher-value exports in a decarbonising world. Australia ranks extremely low on the Atlas of Economic Complexity index, a metric that reflects the diversification, complexity and value-

added in export products, at 74th out of 145 countries rated, below what would be expected for a country of its income level.[67]

It has lost eight spots in this ranking in the last decade. Iron ore exemplifies the low value added of Australia's production. It supplies about 52% of the global seaborne iron ore market, but almost all of it is shipped raw and processed abroad.

This revenue is also under pressure: the Australian government forecasts iron ore export earnings falling from AUD 123bn in 2026 to AUD 79bn in 2031.[68] More generally, its economy is projected to grow slowly, as Australia is concentrated in a sector that is shrinking as a share of global exports.

Australia could instead process the ore into iron with renewable power and green hydrogen before exporting it. Processing Australian ore into iron can add significant value to exports as iron ore prices decline. Estimates of what that could earn range from more than doubling iron export value to over AUD 300bn a year by 2060.[69] Australia also has a card to play in clean minerals, hydrogen and ammonia production. Diversifying up the value chain requires policy leadership and a strategy that could be complementary to a transition away from fossil fuels roadmap.

*Textbox 7: Moving up the value chain*

[67] Harvard Kennedy School, "The Atlas of Economic Complexity."
[68] DISR, "Commonwealth of Australia Resources and Energy Quarterly June 2026."
[69] IEEFA, *Green Iron Exports: Australia Must Look beyond China*.

# Appendix: Comparison to the 2024 Australia's global fossil fuel carbon footprint report

The methodology used in this report is based on that applied in our 2024 report Australia's global fossil fuel carbon footprint. Since then, the government has revised its projections and short-term forecasts several times.[70] For short-term export projections, we used the data from the June 2026 Resources and Energy Quarterly, and beyond that the Emissions Projections 2025.

In 2024, we found that Australia's total export footprint (exported emissions plus the domestic emissions of the fossil fuel export industry) would rise from around 1,200 $MtCO_2$ in 2023 to 1,280 $MtCO_2$ in 2025, before falling to 1,250 $MtCO_2$ by 2030 and 1,140 $MtCO_2$ by 2035, the last projection year of that report. Because this update uses the same methodology, we can directly compare its results with the 2024 publication. We find slightly lower emissions over the period to 2035, with a cumulative export footprint around 5% lower than in the 2024 report, at 13.0 $GtCO_2$ against 13.7 $GtCO_2$.

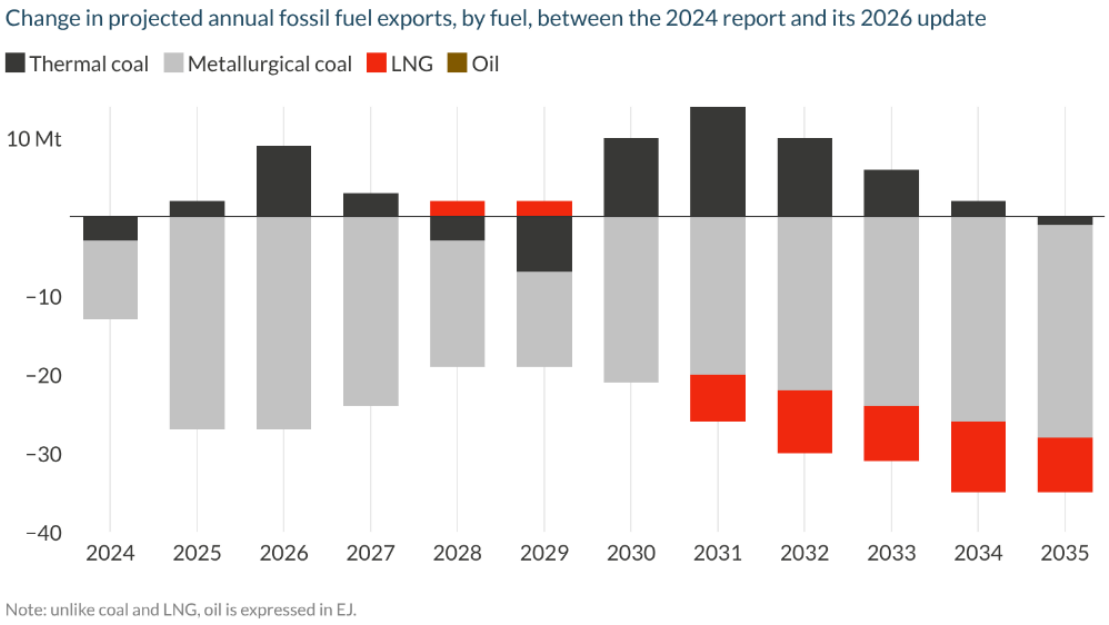
Metallurgical coal accounts for most of this downward revision. In 2024, the government projected that metallurgical coal exports would rebound from their 2022-23 slump, recovering to close to 2015 levels by 2027 and then stabilising to 2035. The latest projections have lowered the magnitude of this rebound. Cumulative emissions from metallurgical coal exports over 2025-2035 fall from 5.3 $GtCO_2$ in the 2024 report to 4.7 $GtCO_2$.

This continues a pattern of downward revisions. IEEFA found that the government's March 2022 forecast had Australia exporting 185 Mt of metallurgical coal in 2027, and its March 2025 forecast 174 Mt for the same year. The June 2026 forecast lowers this further, to 160 Mt.[71]

By contrast, projections for thermal coal and LNG are broadly stable, with cumulative emissions from their exports over 2025-2035 changing by 2% and -3%, respectively. Emissions from thermal coal exports are revised up in the near term, by up to 35 $MtCO_2$ in 2031, before converging with the 2024 projections by 2035. LNG exports are slightly

[70] Grant and Hare, “Australia’s Global Fossil Fuel Carbon Footprint.”
[71] IEEFA, “Australian Met Coal Outlook Not as Strong as Banks and Investors Think.”

higher to 2030 but decline faster afterwards, ending at nearly 10 Mt of LNG below the 2024 projections in 2035.



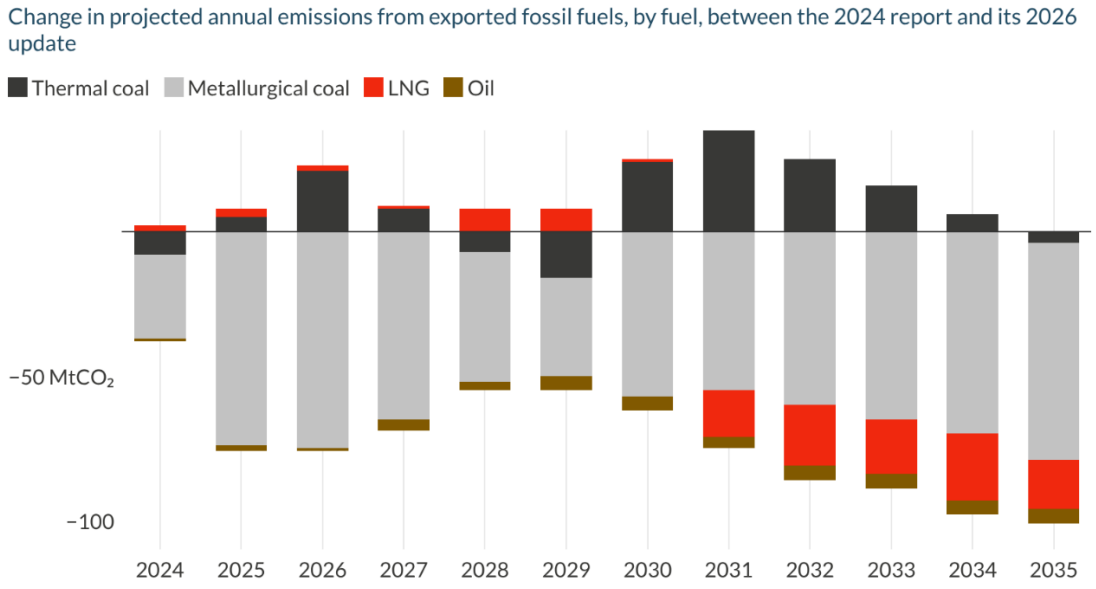




*Figure 15: Change in projected annual exports and emissions between the 2024 report and its 2026 update.*