BRIEF · CLIMATE RESOURCE · NOVEMBER 2026

A short runway needs a managed landing

Phasing out Australia's fossil fuel industries

What a 1.5°C world could mean for Australia's fossil fuel industries: a brief on Climate Resource's analysis

Dr Anita Talberg, Karla Spiller and Rebecca Burdon

Key messages

1. **Australia has committed internationally to move away from fossil fuels but has no timeline for it:** This analysis tests what the most ambitious 1.5°C pathways still achievable would mean for Australia's fossil fuel industries, covering both exports and Australia's own use.

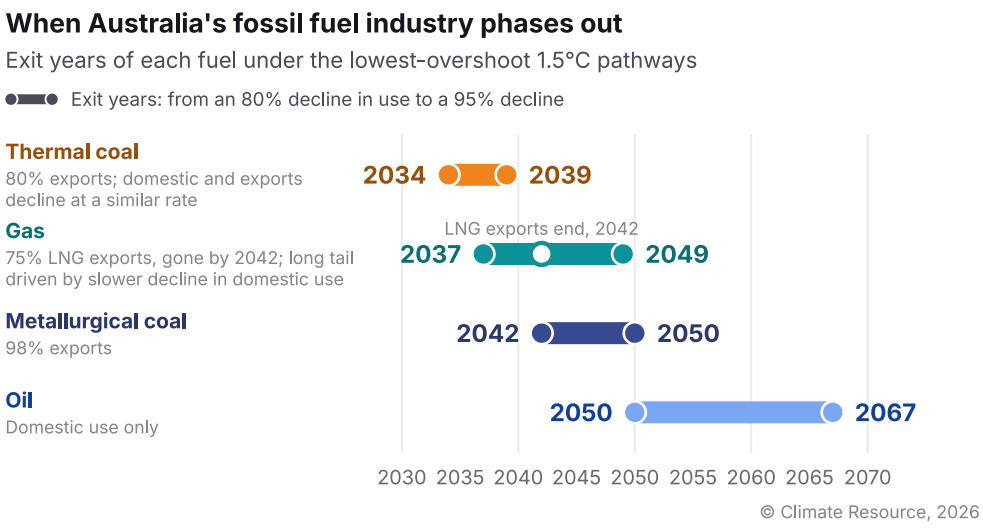
2. **On those pathways Australia's fossil fuel (coal, gas and oil) industries shrink quickly:** They fall to about 5% of current levels by 2050. Thermal coal goes first, with its exit years running from 2034 to 2039. Metallurgical coal follows from 2042 to 2050, gas from 2037 to 2049, and oil from 2050 to 2067.

3. **Exports go first, and our customers set the pace:** Customers that mine their own coal, such as China and India, cut imports first as their demand falls. Japan and South Korea have little coal of their own, but their coal power goes quickly as cheaper renewables and storage, nuclear restarts in Japan and both countries' net zero targets for 2050 push it out. For LNG, the world will have far more capacity than demand left to win. Australian LNG is high-cost and struggles to compete for new buyers in an oversupplied market. Under these settings, existing contracts are effectively the ceiling on Australia's LNG exports, and they run out in 2042.

4. **The exit could come sooner than these years suggest:** Shared rail lines, ports and pipelines have large, fixed costs. As volumes fall, those costs are spread over fewer users, so the infrastructure can become too costly to keep running before demand has fully gone. New South Wales and northern Queensland, where most of the coal shipped is thermal, would face that first.

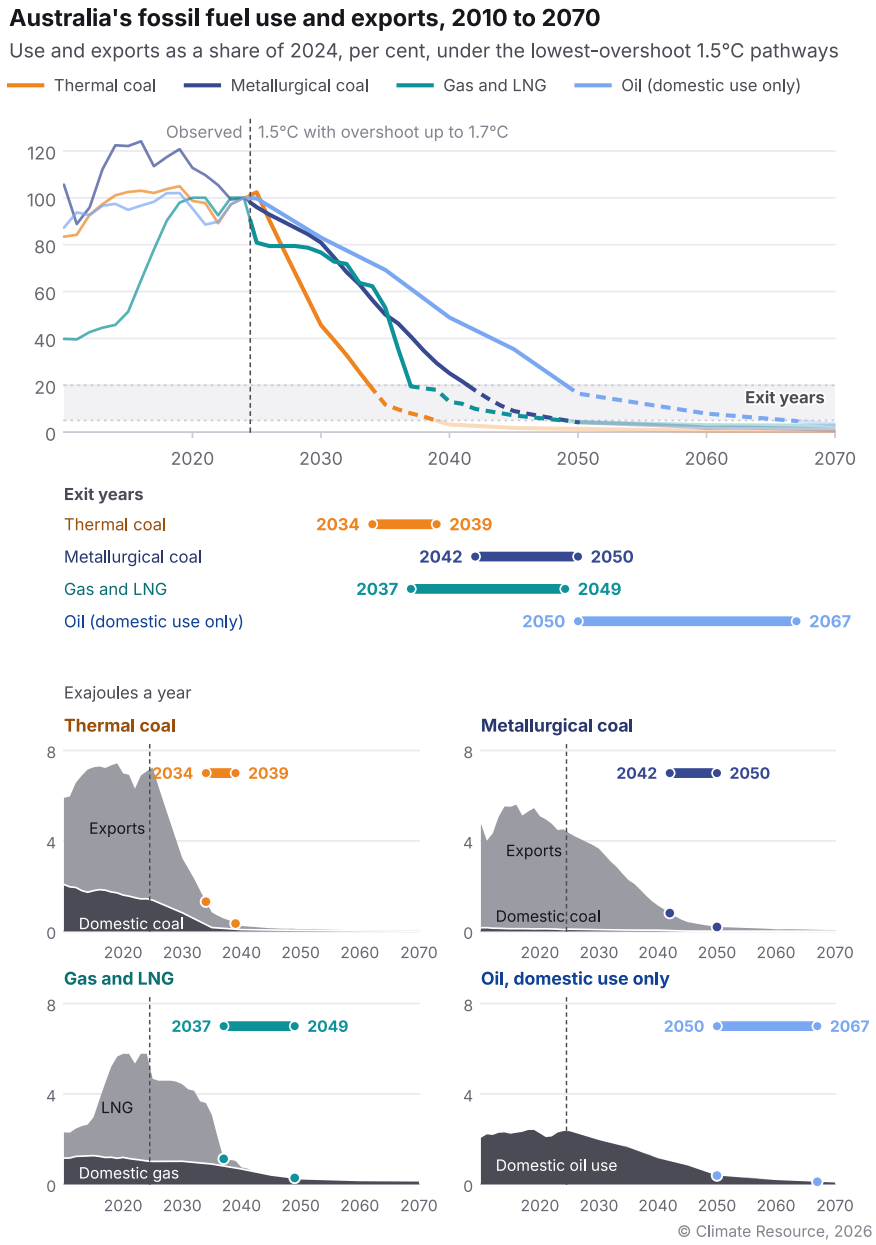
5. **This analysis is one input, not the final word:** It traces a least-cost global route to 1.5°C and leaves aside questions of justice and equity, such as who should move first, who should pay, and how the costs fall on workers and communities. Settling a timeline needs proper discussion and further analysis of those questions. The planning cannot wait for the exact dates because the workers, regions and supply chains that depend on these industries need time to prepare. A plan to phase out fossil fuels has to go hand in hand with a transition to new industries that have long-term futures. Failing to secure that transition, or stepping in later to prop up industries in long-term structural decline, would be a failure of policy.

When each fuel exits



The timeline

On the most ambitious 1.5°C pathways, thermal coal's exit begins in 2034, eight years from now, and coal and gas have both been through theirs by 2050. Only oil runs on beyond that. Each fuel's exit years run from an 80% decline in its use and exports to a 95% decline. At 80%, the mines, railways, ports and pipelines that move a fuel carry a fifth of what they were built for, risking becoming uneconomic or recouping fixed costs from fewer users. At 95%, that industry could be effectively gone. The figure below shows all four fuels against their 2024 levels, and for each one how much is exported and how much used at home.



Thermal coal, 2034 to 2039

About 80% of black thermal coal is exported, so customers set the pace. Exports fall from 209 Mt in 2024 to 89 Mt in 2030 and 6 Mt in 2040. Domestic use follows a year or two behind as coal power leaves the grid.

Metallurgical coal, 2042 to 2050

Steelmaking decarbonises later than power, and Australia's low-ash coking coal is hard to replace. Exports, 98% of production, fall from 153 Mt in 2024 to 37.5 Mt in 2040. This is the least certain of the four timelines, because it depends on how fast India's steel industry moves off coal.

Gas, 2037 to 2049

LNG goes first: deliveries under existing contracts end in the Northern Territory by 2035, in Queensland by 2036 and in Western Australia by 2042. What remains is Australia's own use, still about a quarter of today's level in 2049 and below a fifth in 2056.

Oil, 2050 to 2067

Oil is a domestic story only, and more than 90% of the liquid fuel Australia uses is imported. Electricity replaces most of it, starting with cars, vans and buses, so the oil phase-out is about demand and fuel security rather than production.

Use and exports as a share of 2024 (top), each fuel's exit years (middle), and exports and domestic use by fuel in exajoules a year (bottom), on the lowest-overshoot pathways. Source: Climate Resource (2026).

Thermal coal's exit begins in 2034, eight years from now.

A short runway

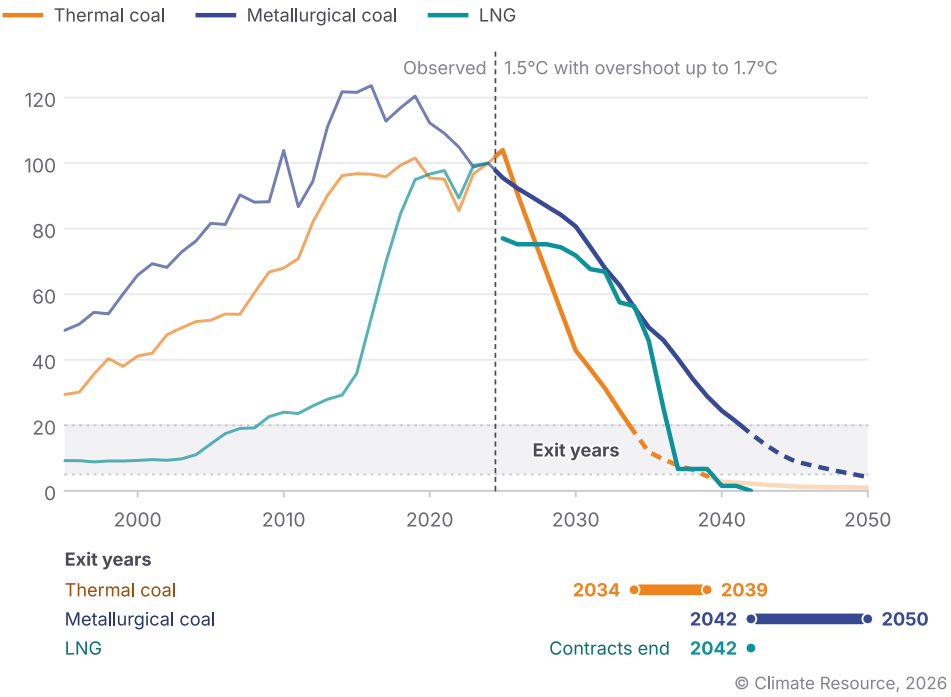
Exports go first

Australia's coal and LNG exports took three decades to build. On these pathways, most of that trade is gone within about the next fifteen years. Coal exports are 72% lower by 2035, with most of what remains metallurgical coal from Queensland, and the last LNG contracts end in 2042.

Most of that trade is gone within about the next fifteen years.

Australia's fossil fuel exports effectively end by 2050

Exports as a share of 2024 volumes, per cent, under the lowest-overshoot 1.5°C pathways



Australia's coal and LNG exports as a share of 2024 volumes, observed and then on the lowest-overshoot pathways to 2050. Source: Climate Resource (2026).

How these dates compare with other assessments

Assessment	Climate outcome	How exports are derived	Headline result
Future Gas Strategy (2024)	IEA scenarios, up to Net Zero by 2050	IEA scenarios run through a global gas trade model	LNG falls from 81 Mt (2022/3) to 7 Mt (2050) under Net Zero
Treasury (2025)	Well below 2°C, about 1.7°C in 2100	Export demand is an input: IEA paths for coal, Future Gas Strategy for LNG	Coal output 47% lower by 2035; gas and LNG 27% lower
Climate Analytics (2026)	One model peaking around 1.7°C	Australia keeps a fixed share of customers' use	Coal exports 95% lower by 2040; LNG 30 Mt in 2040
This analysis	10 pathways from 7 models, peaking around 1.7°C	Demand minus customers' own supply, and pipelines + existing LNG contracts (in the case of gas)	Coal exports 72% lower by 2035 and 88% by 2040; LNG under contract ends in 2042

Why the differences?

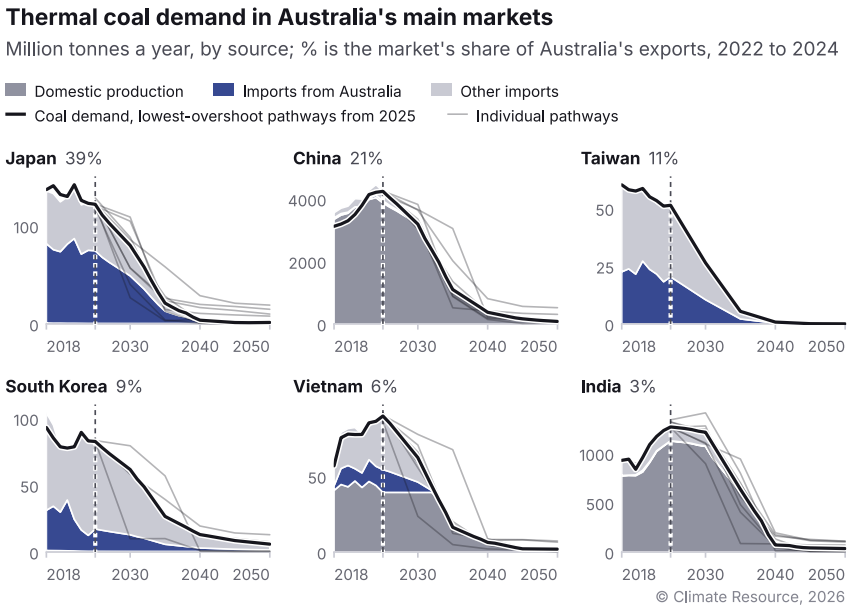
The studies use different climate pathways and supply and trade assumptions. Our pathways return below 1.5°C by 2100, after an overshoot of up to 1.7°C. We combine Australia's own use with exports estimated from import requirements in key markets. We assume existing contracts are honoured, and that domestic production and pipeline gas are used before seaborne imports, which leaves no room for Australian LNG contract renewals. Treasury uses a well-below-2°C framework, with end-of-century warming of around 1.7°C and takes its LNG exports from the Future Gas Strategy, which allows selected renewals. Its coal outlook rests on the IEA's 2023 World Energy Outlook and its own market-share assumptions. Key import markets have since announced stronger coal policies, and the IEA's 2025 stated-policies outlook has less global coal trade than its 2023 one. Climate Analytics uses a single model and holds Australia's share of each customer's use fixed.

What matters for Australia is not how much coal and gas the world burns, but how much its customers still need to buy.

Why exports go first

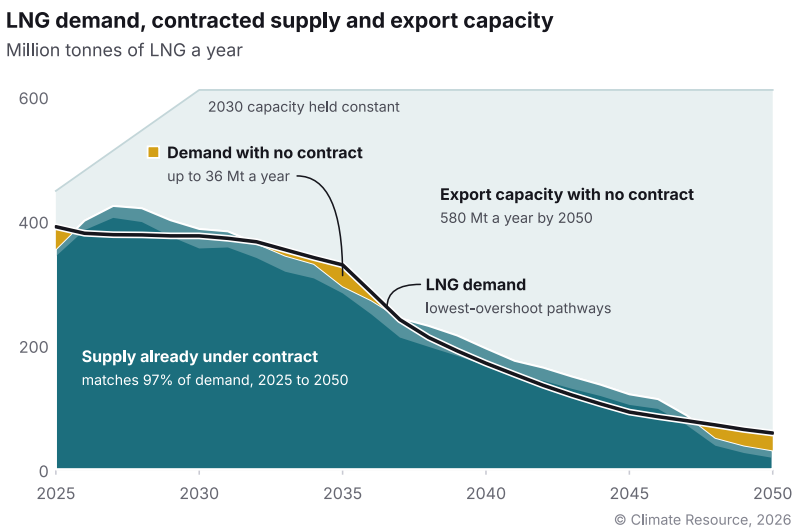
Exports fall fastest because Australia can only sell into demand that its customers cannot meet more cheaply from their own production or existing supply. Most assessments assume a fall in demand flows straight through to Australian exports. Counting only the demand left open to Australia, which for gas also excludes pipeline imports and LNG already contracted, brings the timelines forward. As demand falls, countries turn to their own production first and cut imports.

Coal: customers that mine their own coal stop importing first. China and India mine most of the thermal coal they burn, so as demand falls, their imports go first. Australia supplies only about 2% of China's. Japan, South Korea and Taiwan have little coal of their own, so their imports fall with demand. Metallurgical coal lasts longer, largely because India, Australia's biggest market for it, imports 85–90% of its coking coal as its own is too high in ash.



Thermal coal demand in Australia's six main markets on the lowest-overshoot pathways, split into domestic production, imports from Australia and other imports. China, India and Vietnam meet most of their demand from their own mines. Source: Climate Resource (2026).

By 2040, thermal coal exports are down 97%. Metallurgical coal exports are down 75%.



LNG: an oversupplied market leaves no room for new Australian supply. Only about 3% of gas demand on these pathways is not already met by domestic production, pipelines or signed contracts, if cargoes can be redirected. From 2025 to 2050, ~9,000 Mt of LNG export capacity has no contract, against 180 Mt of demand without one.

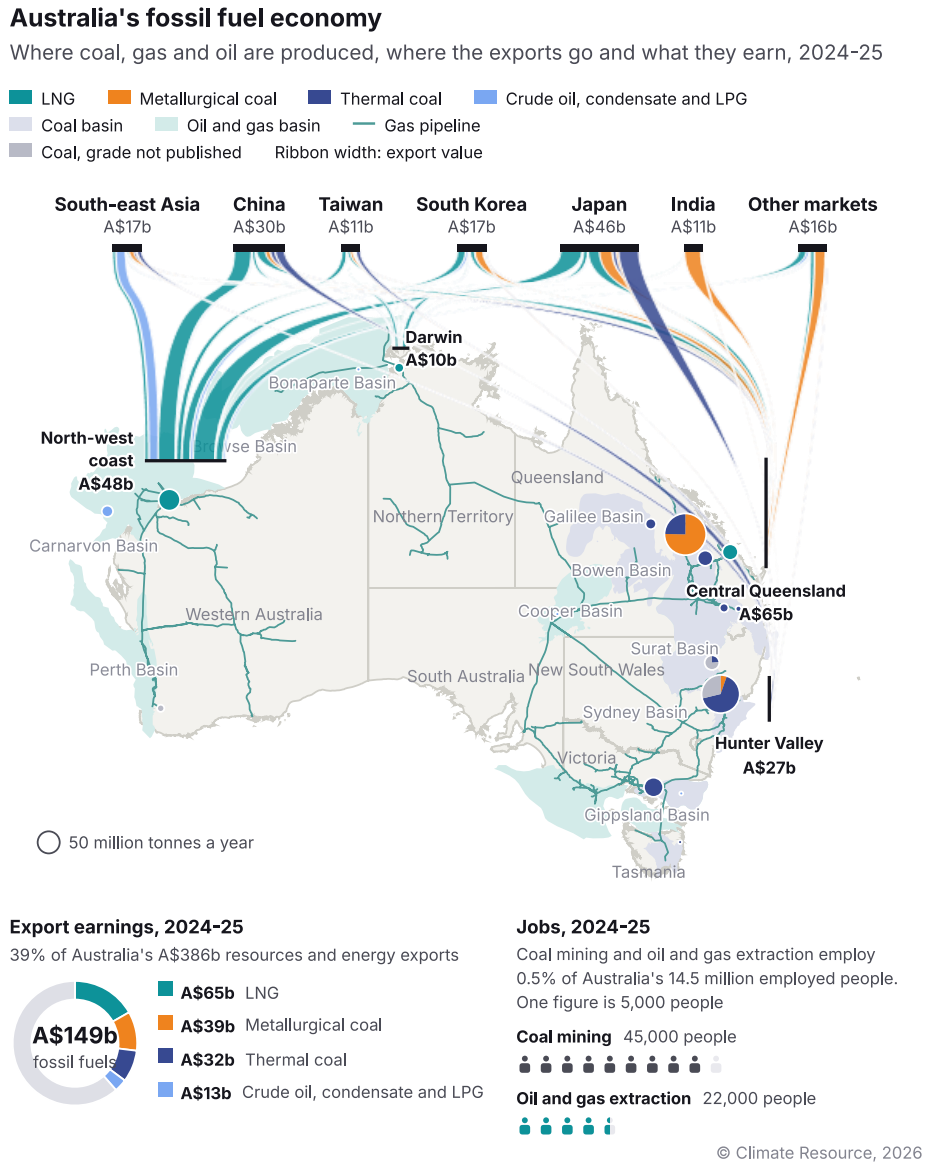
In a 1.5°C world, existing contracts may be the ceiling on Australia's exports, and they end in 2042.

Global LNG demand on the lowest-overshoot pathways against supply already under contract and export capacity with no contract. Contracted supply meets 97% of demand over 2025 to 2050. The lighter band shows delivered ex-ship (DES) contracts that exceed the importing country's own LNG needs. DES terms may mean less flexibility to redirect these surplus cargoes to other markets. Source: Climate Resource (2026).

Neither a warmer world nor the Hormuz crisis changes the picture. Warmer pathways leave more uncontracted demand, which capacity already built or under construction still covers. The IEA expects global LNG supply to fall 3% in 2026, with tightness possibly lasting into 2027. Even with Qatar's two damaged trains out for five years and its expansion two years late, uncontracted capacity to 2030 is several times uncontracted demand (about 210–550 bcm a year against 20–70 bcm). Australia's high-cost LNG is the most exposed when the market loosens.

Our customers are moving too. The crisis has shown importers the cost of relying on imported fuel. The IEA now calls diversifying energy sources a central priority for Southeast Asia, and electric car sales have roughly doubled in India, Korea and Viet Nam.

Who is exposed



Where coal, gas and oil are produced, where the exports go and what they earn, 2024–25. Source: Climate Resource (2026).

The effects land on a handful of regions. In 2024–25, exports shipped from central Queensland were worth $65 billion, from north-west Western Australia $48 billion, from the Hunter and Illawarra $27 billion and from Darwin $10 billion. Coal mining and oil and gas extraction employ about 67,000 people, only 0.5% of the national workforce but a fifth or more of employed residents in the main coal regions.

Coal mining and oil and gas extraction employ only 0.5% of the national workforce, but a fifth or more of employed residents in certain regions.

Region	What it depends on today	What changes on the 1.5°C pathways
Hunter and Newcastle (NSW)	146 Mt of coal exports, 92% thermal; coal for Bayswater, Eraring and Vales Point	By 2035, thermal exports are down by more than 80% and all three power stations have closed. The region is hit on both fronts at once.
Central Queensland	Metallurgical coal through Hay Point and Dalrymple Bay; LNG through Curtis Island	Metallurgical coal carries on to around 2050, but Queensland's LNG contracts end by 2036 and its thermal coal exports largely go by 2035.
North-west Western Australia	Most of Australia's LNG; domestic gas supplied by LNG projects under the state's reservation policy	The last LNG contracts end in 2042. Domestic gas then has to stand on its own, without export volumes to share the cost of fields and processing.
Darwin (NT)	Darwin LNG and Ichthys	Contracts end by 2035, leaving only a small local market.
Latrobe Valley (Vic)	Brown coal for Yallourn and Loy Yang A and B	Owners plan to close Yallourn in 2028 and Loy Yang A in 2035. Loy Yang B's owner plans to run it to 2047, six years after domestic thermal coal use falls below 5% on the pathway.

Plans are already behind

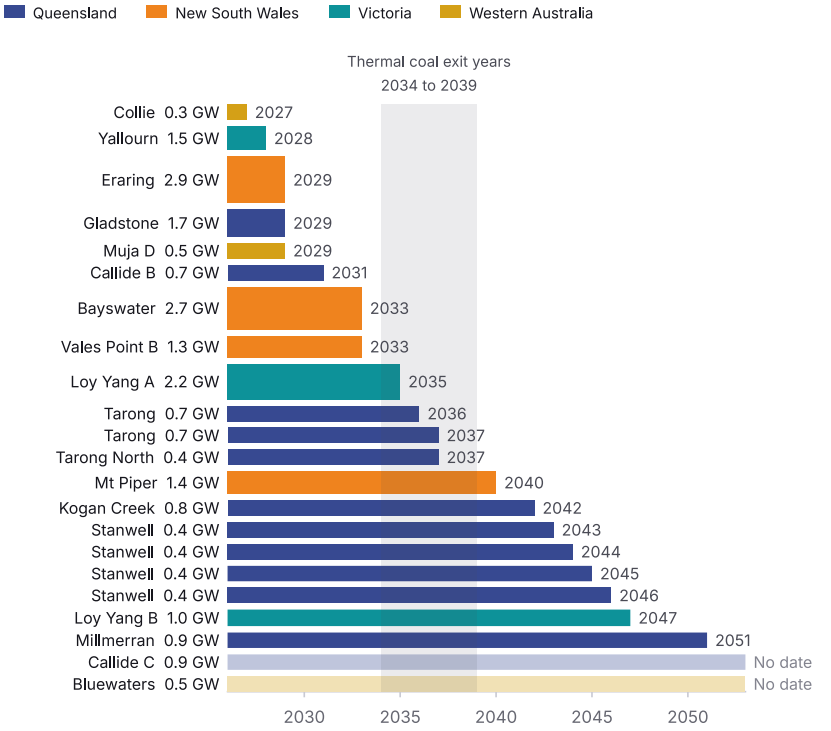
Australia's own plans have not caught up with these timelines. Coal power closures, gas supply planning and fuel stocks all assume a slower transition than a 1.5°C world allows.

Coal power closures are already slower than a 1.5°C world allows. AEMO's central scenario retires nearly two-thirds of the remaining eastern coal fleet by 2035, faster than owners have announced. Even so, about 5.5 GW, a quarter of today's capacity, is due to keep running past 2040, around when domestic thermal coal use falls below 5% of today's level. Queensland's 2025 Energy Roadmap keeps its state-owned plants running to the end of their technical life, with Stanwell's last unit to 2046.

About 5.5 GW, a quarter of today's capacity, is due to keep running past 2040.

When Australia's coal power stations are due to close

Operating coal-fired generating units by advised closure year; bar height is capacity



© Climate Resource, 2026

Coal-fired generating units by advised closure year (bar height is capacity) against thermal coal's exit years, 2034 to 2039. Source: Climate Resource (2026), from AEMO, the WA Government and Global Energy Monitor.

East coast gas has to stand on its own once LNG contracts end. About three-quarters of east coast gas is exported through Curtis Island. When those contracts end, by 2036, fields and pipelines built for export are left serving a shrinking domestic market. That raises questions about gas prices, who pays for infrastructure sized for export, and reservation policies that depend on export volumes. Western Australia faces the same questions from 2042.

Oil is a fuel security question. More than 90% of the liquid fuel Australia uses is imported, and in August 2026 stocks covered about 52 days of net imports, against the IEA's 90-day obligation. Electrifying transport reduces that exposure, and it may come faster than the pathways assume: Australia's electric car sales roughly doubled in March to June 2026 compared with a year earlier.

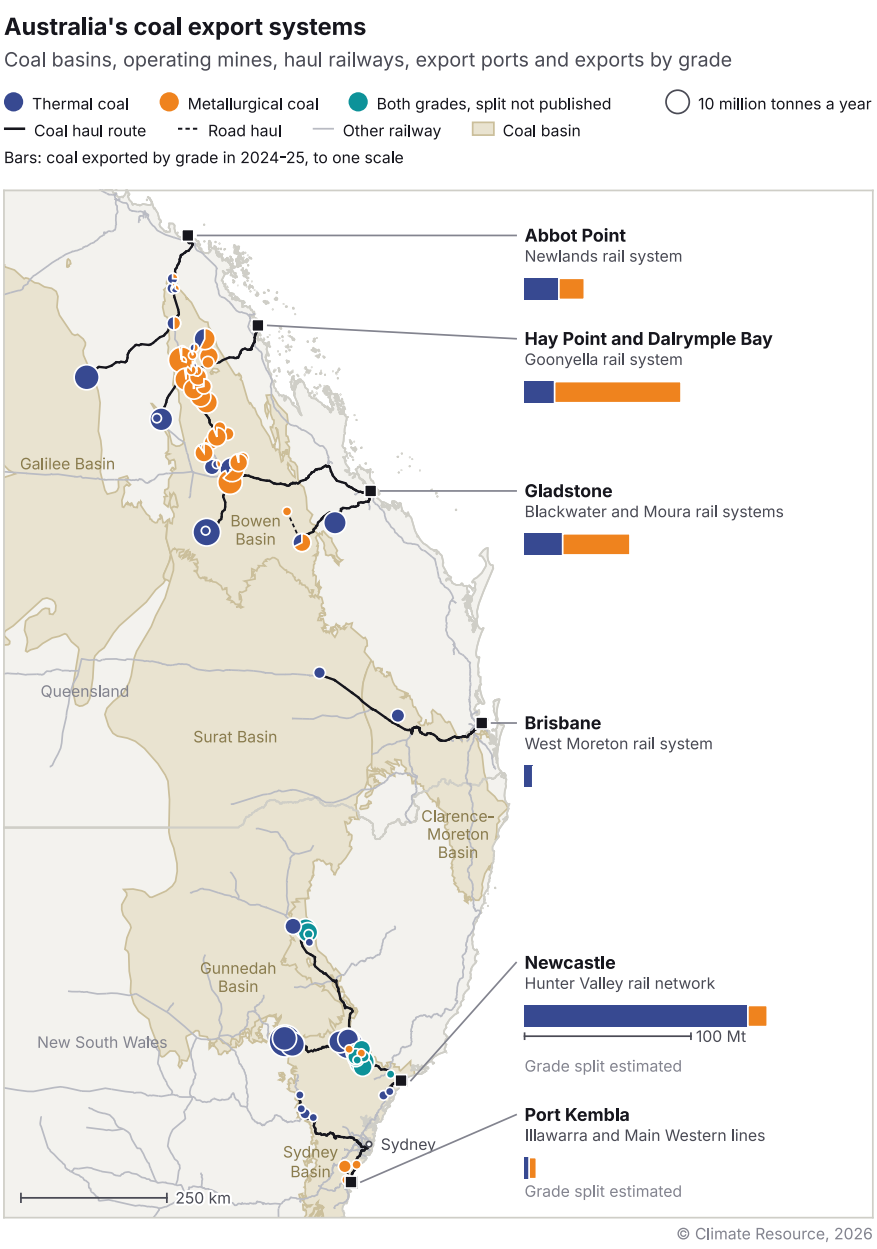
A coal consolidation and closure plan

Power stations in the National Electricity Market must generally give 42 months' notice before closing, and the Net Zero Economy Authority supports their workers. Nothing comparable applies to the export mines, rail lines and ports that carry most of Australia's coal. A consolidation and closure plan, agreed with industry, unions and communities, would:

- set out how the export systems wind down, and how those that continue keep their rail and port capacity viable;
- line up mine and system closures with the power station closures already scheduled in the Hunter, Latrobe Valley and Collie;
- give workers, contractors and supply-chain businesses years to plan and secure prosperous futures in emerging clean energy industries.

Why it could come sooner

The exit years assume the systems that supply each fuel keep running until demand has gone. In practice, parts of them may become too costly to run before then. Smooth demand curves do not show what a decline feels like once infrastructure, finance and regional economies start to hit their limits.



- **Shared coal systems.** Coal leaves Australia through five export systems of mines, haul railways and ports, each with large fixed costs. As volumes fall, those costs are spread over less coal, and a system can close before its last customer has gone. New South Wales and northern Queensland, where most of the coal shipped is thermal, face that test first.
- **Gas networks.** As customers leave, the fixed costs of pipelines and networks fall on those who remain, bills rise and more customers leave. The ACT expects parts of its network to become unviable from the mid-2030s, and the regulator's modelling for one major network assumes bills up 500–600% by 2050.

Australia's coal export systems: operating mines, haul railways and export ports, with 2024–25 exports by grade. Source: Climate Resource (2026).

What has not yet been analysed. This analysis maps volumes, not the economics that follow from them. The next questions for government analysis are at what point shared rail, port and pipeline systems become too costly to run, and how royalties, tax revenue and regional employment respond. Lenders, insurers and asset values are likely to move before the physical decline does, and that too needs testing.

Nobody can say exactly when these points arrive. That uncertainty strengthens the case for planning rather than weakening it: an exit left to markets is decided project by project, and may reach a region as a closure notice.

Why plan against 1.5°C now

Internationally Australia has committed to transitioning away from fossil fuels, but not to a timeline. It backed the Global Stocktake's call to transition away from fossil fuels at COP28, signed the Belém Declaration at COP30, and took part in the first conference on transitioning away from fossil fuels in Santa Marta in 2026. At home it has legislated net zero by 2050 and set a 2035 target of 62–70%, but most of what these industries produce is exported, and those targets do not govern exports.

The gap matters because the assets involved last for decades. LNG trains, coal terminals, rail lines, pipelines and the regions around them are planned years ahead. Getting the timing wrong is costly either way: too late strands capital and leaves communities to learn their future from closure notices, while too early gives up viable returns.

Why test against 1.5°C

It is the goal Australia has signed up to.

The International Court of Justice's 2025 advisory opinion found that 1.5°C has become the primary temperature goal under the Paris Agreement.

For our Pacific neighbours, 1.5°C is existential.

Warming of 1.5°C or more, even temporarily, raises the risk of long-lasting or irreversible change. Pacific governments have called for a just phase-out of coal, oil and gas.

It is prudent risk management.

Commitments keep moving. Projected warming this century has fallen a degree since the Paris Agreement was adopted. Testing plans against the most ambitious plausible pathway is the same logic as central bank climate stress tests, and as Australia's mandatory climate reporting, which requires large companies to test their strategy against a 1.5°C scenario.

About the analysis

This brief summarises *Phasing out Australia's fossil fuel industry: what 1.5°C pathways mean for Australia's coal, gas and oil*, a Climate Resource report commissioned by WWF-Australia. The full report sets out the method, data and sensitivities.

The results are not a forecast of what will happen, and not a target for when Australia should exit. They show what Australia would face if the world follows the path Australia says it supports.

- **Pathways.** Ten 'Very Low' pathways from seven integrated assessment models in the latest generation of climate scenarios (ScenarioMIP for CMIP7). They peak at 1.63–1.70°C and return to 1.25–1.41°C by 2100. The median is reported, with every pathway shown alongside it, so no single model drives the result.
- **Exports.** For each major customer, coal demand less its own production, and gas demand less domestic production, pipeline imports and LNG already under contract. Australia keeps its recent share of coal imports. LNG is limited to existing contracts, with no renewals, new contracts or spot sales.
- **Domestic use.** Each model's pathway for the region containing Australia, scaled to Australia's observed use and checked against AEMO, CSIRO and Climate Change Authority, Net Zero Australia and DCCEEW projections.
- **Exit years.** From the year a fuel's use and exports together are 80% below their current level to the year they are 95% below.

Limitations. The pathways find the least-cost global route to 1.5°C, so they do not weigh who should move first, who should pay, or how the costs of change should be shared. The analysis maps volumes, not prices, revenue or the economics of shared infrastructure. The models represent steelmaking and Australia's own region only coarsely, so metallurgical coal and late-century gas are the least certain results.

What a roadmap would need to answer

These findings do not set a timeline. They show why Australia needs a process to set one, and what that process would have to settle. A national roadmap for the transition away from fossil fuels need not start from fixed closure dates. Its first job is to examine the trajectories and prepare for their consequences.

1 What is a fair timeline for Australia?

The pathways here are least-cost and global. A timeline Australia commits to also has to weigh justice and equity, such as its responsibility and capacity as a wealthy exporter, what it owes its Pacific neighbours, and how the costs fall on workers and communities at home. Settling that needs discussion and analysis before any timeline is locked in.

2 How is the decline sequenced?

A consolidation and closure plan, agreed with industry, unions and communities, would set the order in which mines, power stations and export systems close, around workers, regions and shared infrastructure.

3 How is the window used while contracts run?

Most of the coal and LNG Australia will still export ships before 2040. How the resource is taxed in that window, and whether new supply is approved for a market with little room for it, decide what Australia has to show for these industries when they end. Revenue not collected while contracts run cannot be collected afterwards.

4 What replaces the wealth these industries bring?

Coal, gas and oil support jobs, wages, royalties and local businesses, concentrated in a few regions. A phase-out plan needs a phase-in plan that builds new wealth there, without limiting what the new industries must be.

5 Are domestic energy plans tested against these dates?

Gas supply outlooks, reservation policy and network planning all assume export volumes that may not be there. The east coast, where LNG contracts end by 2036, is the place to start.

6 Who owns the job?

The work spans energy, Treasury, industry, trade, foreign affairs and regional policy. One option is to extend the Net Zero Economy Authority's remit to cover coal mines, exports and the regions that depend on them.

Planning *now* is what makes a later bail-out avoidable. With this evidence in hand, public money spent propping up mines, ports, pipelines or their suppliers once the decline is under way would be a failure of planning, not bad luck. A planned phase-out does the opposite, as it frees skilled workers and capital just as the transition needs them, helping close skills gaps and ease supply chain pressures.

About Climate Resource

Climate Resource provides climate-science modelling, emissions data and scenario analysis to support decision-makers in navigating the transition to a net-zero world, and responding to the changing climate. We're always open for new engagements and would welcome the opportunity to collaborate with your team. Please contact us to discuss how we can support your climate-risk and transition-analysis needs.

www.climate-resource.com

Climate Resource acknowledges the Traditional Owners of Country throughout Australia and their continuing connection to land, waters and culture. Australia's coal, gas and oil are extracted from their Country, and the industries that replace them will be built on it too. We pay our respects to Elders past and present.