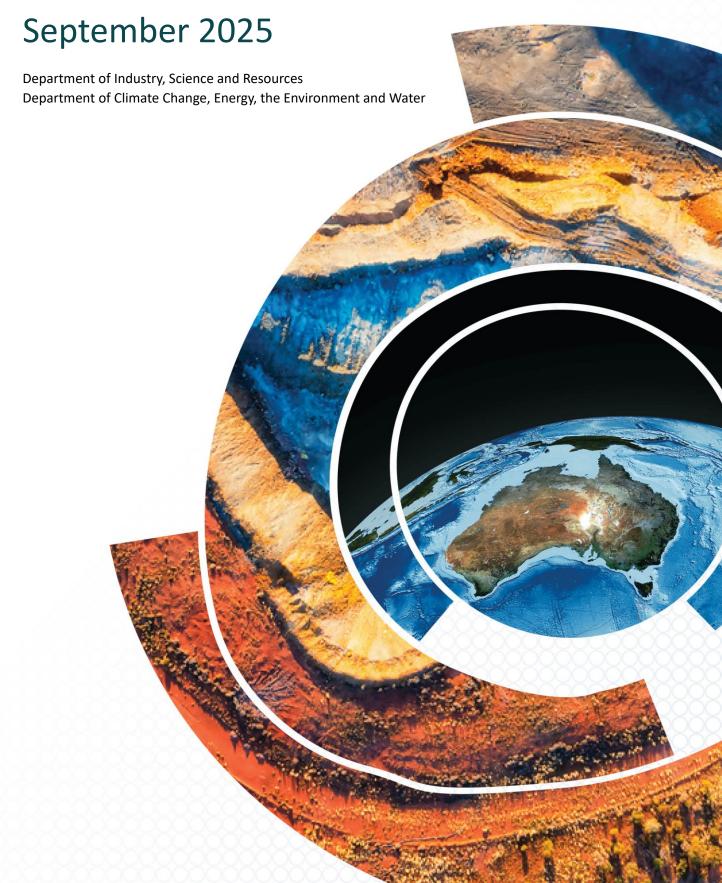


**Resources Sector Plan** 



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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.

Cover: Map image courtesy Geoscience Australia

# **Foreword**

Australia's resources sector is the engine room of the economy, underpinning jobs, investment and energy security.

As we tackle the global challenge of climate change, the Australian resources sector will play a pivotal role in global emissions reduction. The road to net zero runs through the resources sector, and to support that we will work with industry to deliver one of the world's lowest emissions mining sectors.

This Resources Sector Plan demonstrates how reducing the emissions as well as emissions intensity of the resources sector will be a vital contributor to Australia's net zero future, and its role as a global partner in supplying the materials required for this transition.

We have a clear plan and credible pathway for the long-term transformation of the sector, which has shown tremendous capacity to adapt and innovate, backed by a skilled workforce and world class institutions.

Australia's reputation as a reliable and trusted trade and investment partner will be bolstered, not just by securing the region's energy future, but by helping shape it.

Australia's resources and our critical minerals will be essential for global efforts in delivering greater renewable energy. In this process, we will be building a more sustainable, prosperous future for Australia and the world.

Our plan reflects our commitment to an ambitious and credible transition pathway, while seizing economic opportunities that will benefit all Australians.

Together, our dynamic industry and world-class researchers can build a thriving, low-emissions resources sector that works in partnership with communities and continues to deliver for Australia and the world.

The Hon Madeleine King MP Minister for Resources Minister for Northern Australia The Hon Chris Bowen Minister for Climate Change and Energy

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# **Executive summary**

Australia is a resource-rich country. The global drive towards net zero requires the production of critical minerals and metals for renewable energy and new clean and advanced technologies, and as an economy we stand to benefit.

The Resources Sector Plan outlines a pathway for Australia to continue thriving as a global exporter of resources commodities, underpinned by a set of enduring comparative advantages that support ongoing prosperity.

The nation's rich endowment of minerals and resources provides a strong foundation for production of and innovation in low emissions and clean energy embedded products. Our low sovereign risk and stable political environment have fostered sustained investment confidence. Coupled with secure trade routes and our strategic proximity to fast-growing Indo-Pacific markets, Australia maintains a well-earned reputation as a reliable and trusted exporter of energy and resources.

This plan gives an overview of the sector, emissions profile and credible abatement pathways, anchored by the Safeguard Mechanism.

To fully realise the economic and strategic potential of its natural resources, Australia must build sovereign capability in decarbonised minerals extraction and processing, as market demand for low emissions and clean energy embedded products continues to rise.

The Future Made in Australia agenda will support this new capability to strengthen global supply chains and position Australia as a reliable, value-adding export partner in low emissions commodities. New trade in critical minerals will complement existing trade in energy commodities, to ensure energy security for both domestic and international markets.

The government recognises that emissions reduction efforts are changing the way the resources sector operates. Emissions reduction in Australia's resources sector will be shaped by a mixture of evolving global commodity demand, the adoption of low emissions technology and breakthroughs in technological innovation. The Safeguard Mechanism covers 87% of the resources sector's emissions and 64% of the facilities covered by the SGM are resources operations. This places most of the sector's emissions on a predictable trajectory to net zero by 2050 and encourages emissions reductions, achievable through electrification, methane abatement and switching to low-carbon fuels where available.

Net zero scenarios, including those set out in Treasury's modelling report, project a decline in gas trade due to a global shift to clean energy. However, gas will remain critical for energy security and it is an important transition fuel to reach net zero. The role of gas will change over time, with some sectors electrifying. Other areas of our economy and those of our trading partners, like large industrial users, power generation, and electricity firming and peaking support will still require gas over the medium to long-term. We anticipate gas use to support a growing minerals processing industry and to achieve emissions reductions amongst industrial coal users until renewable energy alternatives, like hydrogen or biomethane, are commercially available at scale. Government policy is encouraging a reduction in emissions from gas production and use, while the government's Future Made in Australia investments will help to make low-carbon alternatives like hydrogen competitive.

New technology developments and carbon management solutions will also be critical to achieve net zero. Many companies are leading the way by trialling equipment that reduces diesel consumption, minimising venting and flaring, developing their own new carbon capture technology, investing in multi-billion-dollar carbon capture and storage projects, looking at opportunities to adopt circular economy principles or investing in expanded renewable energy generation. Methane abatement technologies are an important focus for coal and gas extraction industries, with ventilation air methane abatement technology particularly important for underground coal mines, along with technology enhancements in the detection and measurement of methane emissions.

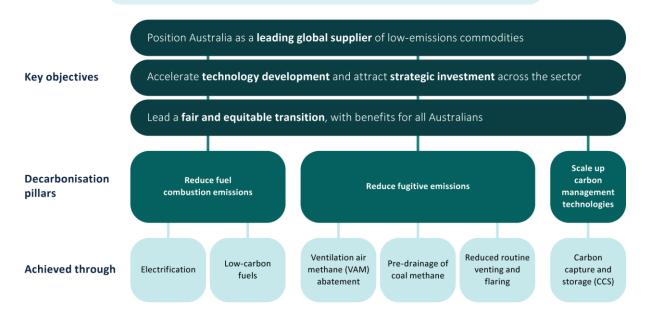
The resources sector is working on lowering its emissions intensity because demand is growing for lower emissions commodities and having a credible pathway to net zero is key to the sector's social licence. Communities affected by the transition must be supported to participate in the net zero economy. This will require inclusive planning and decision-making processes that reflect community needs, with potential to share in the benefits.

The Resources Sector Plan includes insights from consultation with a wide range of stakeholders, identifies opportunities for technology development and highlights cross-cutting considerations that must be taken into account when developing new policies. Together, the 6 sector plans and Australia's overarching Net Zero Plan harness the nation's comparative advantages to unlock the economic opportunities of the transition to net zero.

# Resources Sector Plan at a glance

### **Resources Sector Plan**

### The path to reducing emissions from commodity production



То 2030	Reduced routine venting and flaring from oil and gas facilities
	<ul> <li>New resources facilities designed for electric power, and improved energy efficiency where technically and commercially feasible</li> </ul>
	Demonstration and commercialisation of electrified haulage and equipment
	Demonstration of coal VAM abatement technology in Australian mines
	Expansion of Carbon Capture Storage (CCS)
То 2035	Increased electrification and energy performance across the sector
	<ul> <li>Deployment of heavy electric vehicles and equipment, with greater penetration of low-carbon liquid fuels and renewable energy in remote regions</li> </ul>
	Scale-up of coal VAM abatement technology in Australian mines
	Greater use of methane pre-drainage in coal mines
	Adoption of low-carbon fuels (liquid and gaseous) where electrification is not feasible
	Use of CCS continues to grow
То 2050	Widespread use of VAM abatement and pre-drainage technologies for coal mines
	Continued use of low-carbon fuels
	Continued use of CCS

Figure 1 – Resources Sector Plan at a glance

# Introduction

Australia's resources sector significantly adds to the nation's prosperity and standard of living. It accounts for around two-thirds of Australia's total merchandise exports and is the largest industry for foreign direct investment (DISR 2025). The resources sector accounts for 22% of national emissions and must contribute to emissions reductions (DCCEEW 2025a). The sector is a major employer, predominantly across regional or remote locations, and is an important employer of First Nations people.

Australia is a world leader in the export of natural resources and energy commodities. Into the future, global demand for these commodities will shift, with forecast declines in traditional energy commodities in response to investment, technology advancement and policy settings. However, Australia aspires to be a leading exporter of the energy and mineral resources that will be crucial for the global energy transition.

Australia's continued success as a reliable exporter will depend on its ability to scale up production of the critical minerals and low-emissions commodities required for the global transition towards renewables. These exports will be key to the nation's sustained prosperity, with new opportunities emerging in critical minerals, rare earths and green metals, supported by the Future Made in Australia agenda.

The Resources Sector Plan and overarching Net Zero Plan provide policy certainty to support an uplift in investment and innovation for a successful transition. This will make sure the sector remains competitive, resilient and central to global decarbonisation.

# The Resources Sector Plan: the path to a thriving sector in a net zero world

The Resources Sector Plan (RSP) is one of 6 sector plans underpinning the Australian Government's Net Zero Plan. Australia has legislated greenhouse gas emissions reduction targets of 43% below 2005 levels by 2030 and net zero by 2050. The government has just announced an emissions reduction target of 62–70% below 2005 levels for 2035. The Net Zero Plan identifies 5 priority decarbonisation actions to reduce key emissions sources across the economy:

- 1) Decarbonise and expand the electricity network
- 2) Electrify activities wherever possible and improve energy performance and materials efficiency
- 3) Switch to low-carbon fuels
- 4) Innovate to expand emissions reduction solutions
- 5) Scale up carbon removals to balance residual emissions

The RSP supports the Net Zero Plan and demonstrates how reducing the emissions as well as emissions intensity of the resources sector will be a vital contributor to Australia's net zero future, and its role as a global partner in supplying the materials required for this transition.

The plan builds on Australia's reputation as an attractive trade and investment destination. It outlines Australia's potential to become a reliable supplier of critical minerals, clean energy embedded

products and clean energy commodities to international partners, to support their own paths to net zero.

The RSP considers the opportunities the transition presents to Australian businesses, workers and communities. It has been developed by harnessing the expertise of the Climate Change Authority (CCA), the Treasury, Geoscience Australia and the Commonwealth Scientific Industrial Research Organisation (CSIRO). It has also been informed by the analysis and sector knowledge of the Department of Industry, Science and Resources. Importantly, it has been informed by widespread engagement with a large cross-section of stakeholders.

## Insights from stakeholder engagement

New technology developments and carbon management solutions will also be critical to achieve net zero. Many companies are leading the way by trialling equipment that reduces diesel consumption, minimising venting and flaring, developing their own new carbon capture technology, investing in multi-billion-dollar carbon capture and storage projects, looking at opportunities to adopt circular economy principles or investing in expanded renewable energy generation. Methane abatement technologies are an important focus for coal and gas extraction industries, with ventilation air methane abatement technology particularly important for underground coal mines, along with technology enhancements in the detection and measurement of methane emissions.

The resources sector is working on lowering its emissions intensity because demand is growing for lower emissions commodities and having a credible pathway to net zero is key to the sector's social licence. Communities affected by the transition must be supported to participate in the net zero economy. This will require inclusive planning and decision-making processes that reflect community needs, with potential to share in the benefits.

The Resources Sector Plan includes insights from consultation with a wide range of stakeholders, opportunities for technology development and highlights cross-cutting considerations that must be taken into account when developing new policies. The accessibility of energy, whether in the form of electricity or low-carbon liquid fuels, has been a recurring theme. Together, the 6 sector plans and Australia's overarching Net Zero Plan harness the nation's comparative advantages to unlock the economic opportunities of the transition to net zero.

# **Scope of the Resources Sector Plan**

The resources sector covers exploration and production of minerals, oil and gas, and coal resources. The sector also covers mine closure, decommissioning and rehabilitation.

### **Production**

Production includes resource extraction and, depending on the commodity, any additional on-site processing as well as limited minerals processing. The RSP focuses on the production activities in its 3 major sub-sectors: minerals, oil and gas, and coal resources.

### Mineral resources

Australia has a rich minerals endowment. In 2023, Australia ranked as top global producer for aluminium ore (bauxite), iron ore and rutile, as well as lithium which is important for battery storage technologies. Australia also hosts the largest share of economic demonstrated resources for gold,

iron ore, lead, rutile, uranium, vanadium, zinc and zircon (GA 2024b). These are currently mined predominantly across Queensland, Western Australia and Victoria (GA 2022).

The government designates lists of critical minerals and strategic materials, that are essential to the global transition towards net zero. These resources support a range of strategic industrial applications. During 2023, Australia was a top 5 producer of 7 critical minerals and 2 strategic materials (GA 2024b). Australia is a world leader in reserves of key critical minerals. Under the Future Made in Australia agenda, this sub-sector will expand with the growth of critical mineral concentration and refining capability.

### Oil and gas

In 2022, three-quarters of Australia's natural gas resources were produced from conventional sources, and the remaining quarter from coal seam gas sources (GA 2024f). Conventional gas can be found both onshore and offshore (CSIRO 2021) and is often co-located with liquid hydrocarbons such as crude oil, condensate and liquefied petroleum gas (GA 2024a). Comparatively, unconventional gas is the collective term for gas accumulations such as coal seam, tight and shale gas. Unconventional gas resources are currently being produced and developed in onshore basins in Australia (CSIRO 2021).

The majority of Australia's conventional gas is produced offshore in Western Australia, with approximately 93% of Australia's conventional gas resources located on the North West Shelf, offshore Western Australia. In 2022, the majority of Australia's coal seam gas was sourced onshore from the Bowen and Surat basins in Queensland. Australia also has onshore coal seam gas reserves and contingent resources in New South Wales, while pilot projects for a significant shale gas resource are currently being appraised in the Northern Territory (GA 2024f).

Over recent decades, the geographic profile of gas supply has evolved, with newer developments increasingly located in regions further from major demand centres. This shift has introduced additional transport and infrastructure requirements, which may have implications for supply costs and system planning.

Liquefied natural gas (LNG) can be produced using either conventional or unconventional gas. Australia is a leading exporter of LNG and accounted for a fifth of the global LNG trade in 2023–24 (DISR 2025). Australian gas supports our standard of living and energy security, currently providing over a quarter of our energy needs. It is needed for high-heat industrial processes and as a critical feedstock for the manufacturing industry. Australian LNG exports support and sustain millions of households and businesses across Asia and will be pivotal to the ongoing energy security of the region for decades to come.

Australia produces a small amount of crude oil, condensate and liquefied petroleum gas (LPG), predominantly in Western Australia (GA 2023b).

### Coal

Most of Australia's coal production is black coal (GA 2023a). Its primarily used for 2 major applications:

- metallurgical coal, used in steelmaking
- thermal coal, used for electricity generation (GA 2024e).

In 2023, Australia had the world's largest share of metallurgical coal exports (46%), and the second-largest share of thermal coal exports (19%) (DISR 2025). Black coal is mined in several Australian states, with Queensland and New South Wales having the largest reserves (GA 2024d).

Australia's coal exports are currently largely directed to key Asian markets, including Japan, India, China, South Korea, Taiwan and Vietnam (DISR 2025). These long-standing trade relationships support regional energy security and reflect Australia's role as a reliable trading partner.

### Mine closure, decommissioning and site rehabilitation

Essential to successful modern resource extraction is stewardship of the natural environment and care for country through responsible mine closure, decommissioning and rehabilitation practices.

In the context of onshore activities, this can include removing hazardous materials, stabilising structures and land restoration, with a view at supporting post-mining land use (CSIRO 2023b).

Decommissioning is the final stage in the production lifecycle. As facilities reach the end of their productive life, the leftover infrastructure must be stripped apart and removed. The offshore oil and gas industry will spend an estimated \$60 billion to decommission offshore oil and gas infrastructure over the next 5 decades.

Effective rehabilitation not only reduces environmental impacts, but also contributes to improved social licence, stronger economic output for the local area, and emissions abatement from carbon sequestration achieved through land-based restoration.

An Australian decommissioning and rehabilitation industry can support Australia's move to net zero. It can support growth of domestic industrial capabilities, like recycling, which will assist in the transition. A decommissioning and rehabilitation industry will also play a key role in the continued protection of our environment by ensuring Australia continues to meet the robust environmental standards under Australian and international law.

### **Exploration and other mine support services**

Exploration and mine support services are also part of the resources sector. These additional activities include exploration, drilling operations, mine site preparation, mine site closure operations, as well as mine rehabilitation and remediation. Together, these activities generate 1% of overall resources sector emissions (DCCEEW 2025a).

# Resources sector emissions: an overview

The resources sector generated about 22% of all scope 1 emissions in Australia in 2023–24 (DCCEEW 2025a).

**Scope 1 emissions** are direct greenhouse gas emissions released into the atmosphere as a direct result of the activities at a facility. The RSP focuses on scope 1 emissions, as they are under the control of resources facilities.

**Scope 2 emissions** are indirect, for example emissions generated from an external electricity grid to provide the electricity to power a resources facility. Scope 2 emissions for the resources sector will be addressed through the outcomes of the Electricity and Energy Sector Plan.

Reducing the sector's contribution to national emissions while continuing to supply essential commodities to the global decarbonisation challenge, is key to achieving Australia's climate targets for 2030, 2035 and 2050. A breakdown of scope 1 emissions in 2023–24 by sub-sector is seen in Figure 2 below.

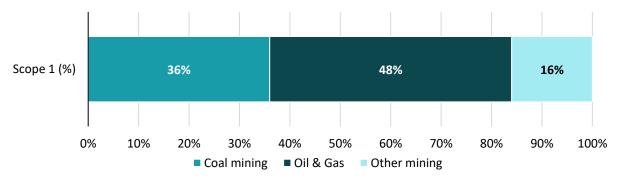


Figure 2 – Resources sector emissions, 2023–24 by sub-sector (%)

Source: Data from Australia's National Greenhouse Gas Inventory December 2024, DCCEEW.

Another way to consider emissions in the sector is in relation to its source. Emissions within the resources sector can be classified as being:

- **Fuel combustion emissions** which are emissions produced to power vehicles and equipment on extraction sites. The major sources of fuel combustion emissions in the sector are from diesel used in internal combustion engines (on-site vehicles and equipment) and remote power generators. They also include natural gas used in stationary energy generators in places like gas liquefaction and processing facilities.
- **Fugitive emissions** are released to the atmosphere during exploration, extraction, production and processing of energy commodities. Fugitive emissions typically arise from leaks, venting and flaring, and the release of gases from geological formations, such as methane escaping from coal seams during mining.

Scope 1 (%)

55%

45%

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Fuel Combustion Fugitives

A breakdown of scope 1 emissions by type in 2023–24 is seen in Figure 3 below.

Figure 3 – Resources sector emissions, 2023–24 by emissions type (%)

Source: Data from Australia's National Greenhouse Gas Inventory December 2024, DCCEEW.

### **Emissions by sub-sector**

Production of energy commodities is the greatest source of greenhouse gas emissions in the sector, followed by production of minerals. <sup>1</sup>

### **Minerals**

On-site equipment and vehicles (e.g. drills, haul trucks, excavators and auxiliary equipment), powered by diesel, cause most fuel combustion emissions in minerals production.

While operating practices across the minerals sector are broadly similar, the scale of emissions from iron ore operations is significantly higher due to the sheer volume of production, especially when compared to Australia's existing strategic materials and critical minerals outputs (DISR 2025).

The minerals sub-sector is currently developing capacity for further processing, which can be energy intensive. The emissions activity from new processing activities will be partially offset by improved energy performance, which includes electrification and integration of renewable energy generation.

Fugitive emissions within the sub-sector are minimal, for example gas leaks and gases released from chemical reactions.

### Oil and gas

The bulk of fuel combustion emissions in the oil and gas sub-sector come from liquefying gas into LNG (using turbines, compressors, and other specialised equipment, commonly known as 'LNG trains'), and from gas to power on-site equipment during extraction activities (Advisian 2022).

Venting and flaring of natural gas and its by-products also contribute to emissions in the gas value chain. Gas reservoirs often contain embedded carbon dioxide, which must be stripped during processing, because it cannot be liquefied or transported alongside saleable gas. The stripped carbon

<sup>&</sup>lt;sup>1</sup> Note: Carbon dioxide and methane are the 2 largest sources of greenhouse gas emissions in Australia. Sector emissions of nitrous oxide and other greenhouse gases reportable under the United Nations Framework Convention on Climate Change and Paris Agreement comprised approximately 0.5 Mt CO<sub>2</sub>-e in 2023–24.

dioxide is either discharged or 'vented' into the atmosphere (as fugitive emissions), or captured and reinjected underground for permanent geological storage via carbon capture and storage (CCS).

Flaring involves igniting the released hydrocarbons and process by-products, converting methane to mostly carbon dioxide, which has a lower global warming potential than methane. Venting and flaring can be undertaken for safety, operational and economic reasons.

### Coal

Fuel combustion emissions in coal mining are typically produced through diesel and petrol consumption in heavy mining equipment (e.g. for drilling, hauling and blasting), as well as during gas flaring activities, and gas used for on-site energy generation (CER 2024).

Fugitive emissions in coal mining are predominantly methane (95%) (CCA 2024b). These emissions are the result of the fracturing of gas-bearing strata when coal is extracted (CER 2024).

Underground coal mines generate 60% of fugitive emissions in the sub-sector, with most methane released as ventilation air methane (VAM). Open-cut mines also contribute, though typically at lower concentrations (DCCEEW 2025a).

# The resources sector pathway to net zero

Economic modelling and analysis by the Treasury explores plausible scenarios of Australia's transition to net zero by 2050. This work informs the development of the Australian Government's Net Zero Plan and sector plans and includes potential economy-wide and sector-specific emissions reductions pathways. The RSP considers the Baseline Scenario, in which Australia efficiently builds on existing climate policies and trends.

#### Under the Baseline Scenario:

- Through to 2050, Australia's commodity exports are expected to shift from hydrocarbon energy commodities towards minerals and resources essential for global decarbonisation.
- Emissions from Australia's resources sector are projected to reduce from 94 Mt CO<sub>2</sub>-e in 2025 to 19 Mt CO<sub>2</sub>-e in 2050. In 2050, emissions from the resources sector are projected to make up 12% of economy-wide gross emissions.

To achieve the necessary reduction in emissions while supporting energy security and increasing output through to 2050, operations in the sector will focus on lowering emissions intensity (Treasury 2025). This is especially the case for energy commodities and emissions-intensive mining activities that will continue to play a role in the transition.

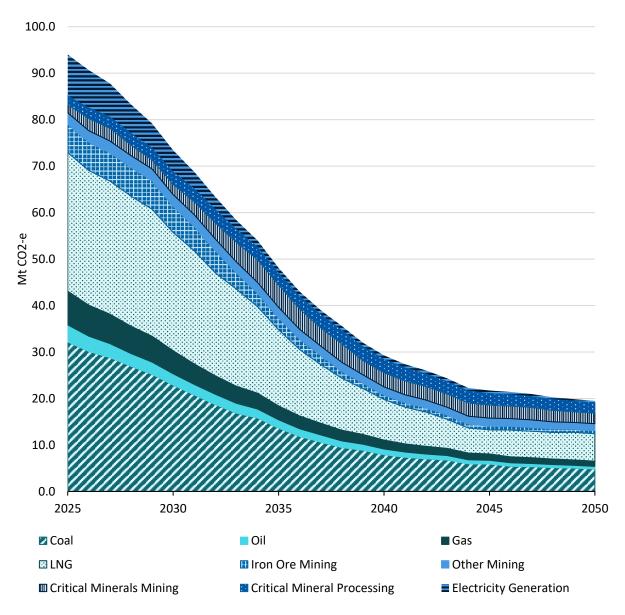


Figure 4 – Resources sector emissions projections to 2050, by commodity group under the Baseline Scenario.<sup>2</sup>

Source: Modelling report: Treasury (2025) <u>Australia's net zero transformation: Treasury modelling and analysis</u>, Treasury, accessed September 2025.

These declines are broadly consistent with technology pathways advice from the CCA. Government sees a credible pathway with a structural shift to production of the energy and mineral resources that will be crucial for the global energy transition, which leads to a reduction in emissions (CCA 2024a).

While scenario-based analysis is a powerful tool in helping inform Australia's net zero pathway, it is not possible to precisely predict how the transition will unfold. The future is uncertain and many factors will influence the net zero transition, including changes in technology, global dynamics and community responses.

<sup>&</sup>lt;sup>2</sup> Note: In a stacked area chart, emissions are represented cumulatively. Values should be interpreted as the magnitude within each visible area, not from the baseline of the chart. *'Electricity Generation'* covers emissions from off-grid electricity generation in industries covered by the Resources Sector Plan.

# Australia's energy commodities

The global shift toward clean energy and the production of clean energy-intensive commodities is expected to reduce demand for coal and gas. As a result, demand for Australia's emissions-intensive exports such as coal and LNG is projected to decline (IEA 2023b).

However, some large industrial users will continue to require gas as for several decades, and gas production will continue to maintain energy security in Australia and the region (AEMO 2024). The International Energy Agency (IEA) suggests that between 2025 and 2050, global demand for coal is projected to decrease by 71%, LNG by 40%, and oil by 42%. Despite these global projections, there will be an ongoing need for some Australian metallurgical coal and gas in 2050, and beyond. This supports investment in further development and deployment of technologies to abate emissions in these sub-sectors.

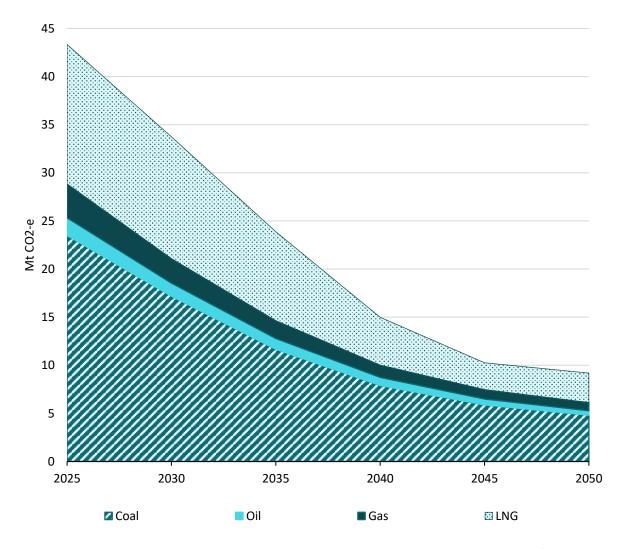


Figure 5 – Resources sector fugitive emissions projections to 2050, by commodity under the Baseline Scenario<sup>3</sup>

Source: Modelling report: Treasury (2025) <u>Australia's net zero transformation: Treasury modelling and analysis</u>, Treasury, accessed September 2025.

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<sup>&</sup>lt;sup>3</sup> Note: In a stacked area chart, emissions are represented cumulatively. Values should be interpreted as the magnitude within each visible area, not from the baseline of the chart.

# Australian minerals needed for the global transition to net zero

Australia's rich endowment in minerals and metals positions us to be a leading enabler in the global transition to net zero. This creates significant economic opportunities and potential to grow the overall output of Australia's resources sector while reducing global emissions.

Global demand for the mineral commodities needed to support the net zero transition – especially critical minerals – is projected to increase rapidly. Under the International Energy Agency's Announced Pledges Scenario, demand for lithium grows around sixfold from today to 2040 while graphite demand almost triples and demand for nickel and cobalt almost doubles. Rare earth elements also grow strongly, increasing around 65% by 2040. Copper demand is projected to grow by more than 30% over the same period (IEA 2024).

While volume is expected to increase, emissions are projected to be offset by key steps taken within industry to decarbonise. This means the overall sector's emissions will decline as Australia becomes a leading supporter of global decarbonisation (Advision 2022).

Australia's mineral resources will support the development of technologies that shape daily and industrial life in a net zero economy. Examples of demand drivers include:

- Electric vehicles (lithium, graphite and rare earth elements)
- Wind turbines (magnets from rare earths)
- Home and grid-scale energy storage (lithium and graphite)
- Rooftop and utility-scale solar systems (high purity silica)
- Low-emissions transport infrastructure (aluminium, silicon and rare earth elements)
- Low-emissions manufacturing systems (copper, nickel, cobalt, aluminium)

Australia is well positioned to meet this growing demand, with globally significant reserves of key minerals and metals, and a policy environment that supports expansion of supply capacity.

The Future Made in Australia agenda is accelerating investment in critical minerals processing and refining, including through initiatives such as the Critical Minerals Production Tax Incentive and finance options such as the Critical Minerals Facility, managed by Export Finance Australia. These are designed to mobilise private capital and build sovereign capability in strategic supply chains.

# Practical actions to reduce emissions in the sector

The Australian resources sector has and will continue to capitalise on new technologies, systems and approaches to managing its own emissions. The pathway to net zero will be enabled by 3 trends:

- reducing fuel combustion emissions
- reducing fugitive emissions
- scaling up carbon management technologies.

# **Reducing fuel combustion emissions**







Energy efficiency | Demand flexibility | Electrification or fuel switching

Reducing fuel combustion emissions is a key priority for the resources sector, given the scale of diesel and gas use across extraction and processing activities. Electrification and fuel switching are credible pathways for many companies, including through the adoption of low-carbon fuels such as renewable diesel and other low-carbon liquid fuels where renewable infrastructure is not available. Energy performance will underpin emissions reductions at the lowest cost within the sector (DCCEEW 2024d).<sup>4</sup>

The sector will pursue innovative technologies to improve energy performance, focusing on efficiency in extraction and processing, precision in resource mapping, and operational optimisation (MCA 2017). These improvements will help reduce emissions, energy usage and operating costs.

Electrifying vehicles and equipment across resources facilities will significantly reduce diesel consumption, which currently accounts for most energy use on-site (in 2020–2021, 95% for mine sites) (Advisian 2022). Electrification enables the sector to leverage firmed renewable energy capacity, including within major grids across Australia. The sheer scale and distance of some on-site operations, such as train and large vehicle haulage across expansive mine sites, presents a substantial technical and logistical challenge. Analysis from research and stakeholder engagement suggests that electrified haulage options are rapidly improving, with broader uptake expected over the next

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<sup>&</sup>lt;sup>4</sup> Note: Energy performance is the broad management of energy demand, including energy efficiency, electrification or fuel switching and demand flexibility.

decade. This trajectory reflects the sequencing challenges posed by existing asset lifecycles and the infrastructure requirements necessary to support electrification.

Given many resources facilities are located in remote locations with limited grid access, off-grid solutions may offer a practical and effective decarbonisation pathway in many cases. The sector is currently collaborating with technology and service providers to accelerate innovation and deployment of electrified solutions.

Operators are increasingly partnering with energy providers and independent power producers to deploy off-grid systems powered by renewables. As renewable energy capacity at remote sites becomes more resilient and efficient, mining operations will be able to deploy electrified vehicles and equipment at scale.

Other operations (in particular, but not exclusively, offshore facilities) are unable to develop on-site renewable generation or connect to larger electricity grids due to location, cost associated with transmission or environmental constraints. In these cases, facilities will need to meet any applicable decarbonisation requirements by pursuing the most economically viable options available to them.

While long-distance freight emissions and electricity transmission infrastructure fall outside the scope of this plan, they are critical enablers of the transition and are addressed in the Transport and Electricity and Energy Sector Plans respectively.

Low-carbon fuels will offer an alternative to diesel and natural gas, particularly where electrification is not feasible, such as in remote areas where transmission infrastructure is too expensive to deploy. These fuels are a valuable decarbonisation option, with examples including biodiesel, renewable diesel, ammonia-based fuels and hydrogen.

The Australian Government is taking steps to accelerate the growth of domestically produced, cost-competitive low-carbon fuels under the Future Made in Australia agenda. To build a supply chain for Australian low carbon liquid fuels, the Australian Government will invest \$1.1 billion in a new Cleaner Fuels Program. This will help stimulate private investment in Australia's first onshore low carbon liquid fuel refineries, backing local innovators, making fuel supply more resilient and bridging the price gap for early adopters. The government will engage with industry on how to make sure Australian liquid fuel users have a fair chance to capture the emissions reduction potential unlocked by low-emission Australian fuels. More detail can be found in the Net Zero Plan and Electricity and Energy Sector Plan.

Gas as a chemical feedstock to manufacturing processes cannot be electrified and will require direct substitution. Altering the feedstock used in a process is not straightforward, as chemical processes are typically fully integrated into the facility. This means investment in new infrastructure and supply chains will be required. Transition is likely to require a change to the whole operation rather than a gradual change to the facility. Such changes involve significant capital outlays and require extensive testing and planning.

Treasury's Baseline Scenario indicates that in 2050, fuel combustion emissions in the sector will reduce to around 20% of what they are in 2025, as seen in Figure 6 below.

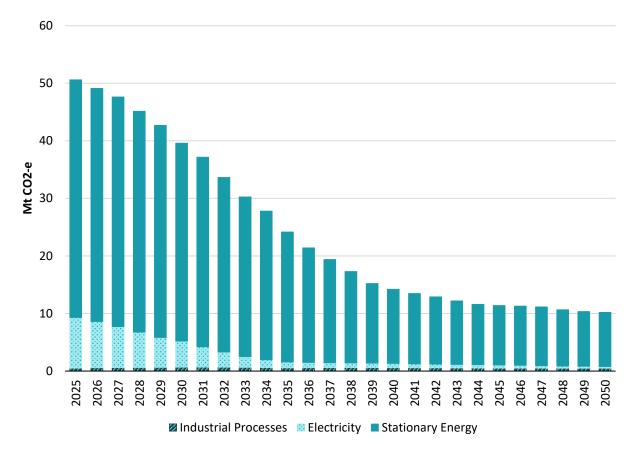


Figure 6 – Total sector fuel combustion emissions projections to 2050, by UNFCCC category under the Baseline Scenario

Source: Modelling report: Treasury (2025) <u>Australia's net zero transformation: Treasury modelling and analysis</u>, Treasury, accessed September 2025.

# **Reducing fugitive emissions**



Pre-drainage VAM abatement



Reduced routine venting and flaring

Leak detection and repair

Fugitive emissions remain one of the most complex and critical challenges in the resources sector's pathway to net zero. Each tonne of methane released has the same warming effect as 28 tonnes of carbon dioxide over 100 years (IPCC 2014). Australia is a signatory to the Global Methane Pledge and is committed to reducing methane emissions across energy commodities production.

New approaches to estimating fugitive methane emissions by combining atmospheric detection of methane with modelling and other analysis involving aerial imaging (top-down approaches) are being developed. The Australian Government has appointed an expert panel to examine these new approaches and advise whether they could enhance Australia's estimation of fugitive methane

emissions (DCCEEW 2025b). Better detection and measurement of methane is also important to addressing methane emissions, such as through leak detection and repair.

The sector is also taking steps to reduce its methane emissions. During the 28th Conference of Parties (COP28), 50 global oil and gas companies (including some operating in Australia) committed to net zero operations by 2050 and ending routine flaring by 2030 under the Oil & Gas Decarbonisation Charter.

As energy production continues, reducing fugitive emissions from the coal and gas sub-sectors can make a significant difference in the pathway to net zero. In the coal sub-sector, 95% of fugitive emissions are made up of methane. In contrast, oil and gas operations tend to release more carbon dioxide, with 68% of fugitive emissions from oil and gas extraction being carbon dioxide in 2024 (DCCEEW 2024b).<sup>5</sup>

### Coal

Abating coal mine methane is a major opportunity to reduce fugitive emissions in the coal sub-sector, with underground mines responsible for the majority of production-related methane (CSIRO 2025a). Most of these emissions come from ventilation air methane (VAM), which is currently difficult to mitigate due to low and variable methane concentrations and complexity in meeting safety requirements (NSW Resources 2025).

The government is actively supporting a VAM abatement project using regenerative thermal oxidation technology under the Powering the Regions Fund. This project is intended to demonstrate that the abatement of VAM emissions for underground gassy mines safely is possible, providing a replicable pathway for many underground gassy mines to materially reduce their emissions (GrantConnect 2024).

The sector is exploring other approaches such as pre-mining drainage for open-cut mines (CCA 2024a), and new ways of safely oxidising methane (CSIRO 2025b).

The Australian Government will continue to work closely with state governments and their agencies on coal mine methane abatement, particularly to help ensure new technologies, such as for VAM, can be safely and efficiently deployed. State government agencies also regulate coal mines, including in relation to the implementation of abatement technologies for waste coal mine gas.

### Oil and gas

Fugitive emissions in the oil and gas sub-sector can be reduced by minimising or eliminating venting and flaring. Technologies to reduce the incidence or intensity of venting and flaring include process and infrastructure optimisation, gas and vapour recovery and utilisation, and use of flaring instead of venting when gas capture is not commercially viable.

The Future Gas Strategy committed to reducing and, where possible, eliminating venting and flaring of gas, unless required for safety purposes. A consultation process occurred in March 2025 and offshore policy and regulatory settings are being assessed, to implement this commitment. The

<sup>&</sup>lt;sup>5</sup> Note: DISR data processed by National Inventory Systems and International Reporting Branch of DCCEEW and the Analysis and Insights Division at DISR.

Australian Government will continue to work with state and territory governments on their equivalent regulatory regimes.

Leak detection and repair and monitoring programs can also contribute to emissions reduction in the oil and gas sub-sector while maximising gas outputs for energy production. Spectral gas imaging is widely used to detect leaks, and continuous monitoring devices will be increasingly used to allow for rapid detection and rectification of leaks (IEA 2023a). Innovative robotics and remote operations can also lead to more safe and cost-effective leak detection and remediation. The oil and gas industry should continue to pursue and invest in innovative solutions to minimise emissions from leaks, alongside regulatory approaches.

## Scaling up carbon management technologies

Carbon management refers to a suite of technologies and processes that help to remove, reduce or reuse carbon dioxide and other gases. The most applicable for the resources sector is carbon capture and storage (CCS).

Other carbon dioxide removal technologies continue to be a focus for development through the CSIRO, brought together through the CarbonLock Program (CSIRO 2024). Technologies applicable to the resources sector such as enhanced mineralisation from tailings are actively being developed in partnership with industry, for example a pilot carbon mineralisation project using mine tailings at BHP's Mount Keith Nickel West Mine in Western Australia (Austrade 2024).



### Carbon capture and storage

Australia has several comparative advantages when it comes to CCS. Our geology, landmass, existing regulatory frameworks, existing infrastructure and expertise, and potential for cheap, renewable energy resources all offer opportunities for domestic and international transport and storage of  $CO_2$  (CSIRO 2023a).

CCS can address industrial and point-source emissions that cannot otherwise be avoided. CCS projects can reduce emissions from resources sector activities by capturing and storing reservoir carbon dioxide that would otherwise be emitted during gas production.

Australia is home to one of the largest CCS facilities in the world (Gorgon, at Barrow Island, off the coast in Western Australia). Another large-scale CCS project has recently been commissioned (Moomba, in South Australia) and a third project has just been granted major project status (Bonaparte, in the Northern Territory).

According to the International Energy Agency, CCS as well as carbon, capture and use (CCU) could be responsible for abating around 20% of global emissions required to reach net zero by 2050 (IEA 2021). While the IEA notes that progress on CCS has been slower than needed to meet this ambition and there have been technical challenges to overcome with these significant engineering projects, the scale of the opportunity remains significant. CCS is used in almost every model pathway assessed by the IPCC that reaches net zero emissions – including in pathways which assume a high uptake of renewables. Australia is therefore well placed to capitalise on the scale-up of this technology, widely recognised as essential to reach net zero.

The government's role in the development of CCS is focused on the regulatory frameworks to facilitate its deployment, such as the Safeguard Mechanism, and offshore regulatory framework for its safe operation. Emissions accounting and verification is also assessed under the National Greenhouse and Energy Reporting Scheme. Offshore CCS activities are regulated under several pieces of Commonwealth legislation including the *Offshore Petroleum and Greenhouse Gas Storage Act* 2006 and the *Environment Protection (Sea Dumping) Act* 1981.

Offshore CCS opens the door to new trade opportunities, leveraging Australia's geological capacity to enter new international markets for transboundary  $CO_2$  storage. Through the Regional Cooperation Initiative on Carbon Sequestration, the Australian Government is working collaboratively with key regional and partner countries to establish bilateral instruments to facilitate transboundary CCS.

International volumes of CO<sub>2</sub> could generate the economies of scale needed to help reduce the cost of CCS. This would make CCS a more accessible option for Australia's domestic industries while also helping the economies of Australia's trading partners

Table 1 – Large-scale CCS projects in Australia

Project	Capacity	Status
Gorgon	Up to 4 Mtpa (over 100 Mt total)	Stored over 11 Mt since 2019
Moomba	1.7 Mtpa, potential for 20 Mtpa	Stored 1 Mt since September 2024
Bonaparte	Capacity over 10 Mtpa	Major project status, injection to commence around 2030

Mtpa = million tonnes per annum.

Source: (Chevron Corporation 2025), (Santos 2025), (Inpex 2025)

More projects are currently at various stages of development. It is estimated that Australia has approximately 31 Gt of sub-commercial storage capacity and 470 Gt in undiscovered storage resources (GA 2024c).

# Framework supporting net zero

Australia's resources sector will undergo a significant transformation towards a net zero economy. This transition benefits from a strong foundation of existing policies, but will require coordinated action across governments, industry and communities. Together, these actions will ensure that proponents contribute to emissions reductions while maintaining energy security and economic resilience.

To guide future policy and investment, the Australian Government will consider core objectives to drive economic transformation, alongside emissions reduction.

- Position Australia as a leading global supplier of low-emissions commodities and commodities needed for the global net zero transition
- Accelerate technology development and attract strategic investment across the resources sector
- Lead a fair and equitable transition, with benefits for all Australians.

These objectives will shape the next phase of the sector's transition and ensure that future actions build on existing momentum.

They complement existing government policies such as the Safeguard Mechanism and the Future Gas Strategy, which encourage the resources sector to reduce emissions. State and territory governments also play a critical role, working alongside the Australian Government to achieve national climate targets. The objectives are also aligned with the Critical Minerals Strategy, which outline the government's ambition to grow the resources sector and provide a secure and diversified supply of critical minerals needed for net zero.

# The Safeguard Mechanism

The Safeguard Mechanism (SGM) will play a central role in driving emissions reductions in the resources sector. The scheme applies to most of the sector, with 87% of emissions from the sector covered in 2023–24 (see Figure 7 below). It gives industry, including the resources sector, a clear and enduring incentive to undertake cost-effective emissions reductions.

The SGM sets limits on scope 1 emissions, known as baselines, on industrial facilities emitting more than 100,000 tonnes of CO2-e per year. Baselines will decline predictably and gradually on a trajectory aligned to Australia's 2030 and 2035 emissions reduction targets and net zero by 2050. Over time, declining baselines will provide facilities with increasing incentive to develop and pursue decarbonisation pathways to reach net zero by 2050. The best practice arrangements for new entrants help ensure that the expansion of the resources sector does not compromise the achievement of Australia's emissions reduction targets. These include net zero baselines for new shale gas facilities and for reservoir carbon dioxide emissions from new gas fields.

Where new projects are approved under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act), information about their emissions is provided to the Climate Change Authority and Secretary of the Department of Climate Change, Energy, the Environment and Water for assessment of their impacts on the delivery of the Safeguard Mechanism objectives. These objectives include a cumulative emissions budget for the 10 years to 2030, a 100 Mt net emissions target for

2030 and a requirement for gross emissions of all facilities to decline over time (assessed on a 5-year rolling average basis).

The resources sector makes up the majority of facilities covered under the Safeguard Mechanism (64% in 2023–24).

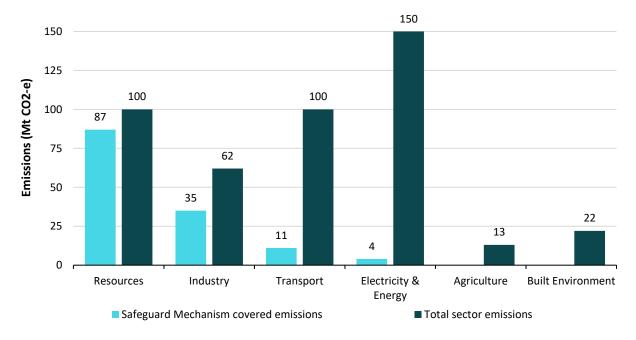


Figure 7 - Safeguard Mechanism emissions coverage by economy sector in 2023-24

Source: Data from Australia's National Greenhouse Gas Inventory – December 2024, DCCEEW; 2023–24 Safeguard Mechanism data, CER.

To ensure the SGM is appropriately calibrated to help Australia reach its emissions reduction targets, including the 2035 target of 62–70% below 2005 levels, the government will conduct a review of the Safeguard Mechanism in 2026-27. In addition to the targets, the Safeguard Mechanism also has a number of legislated outcomes that must continue to be met, including ongoing reduction in total onsite emissions across all facilities and maintaining a material incentive for on-site emissions reductions.

### The Future Gas Strategy

The Future Gas Strategy (FGS) is the Australian Government's plan for how gas can support the energy transition to net zero by 2050 and beyond. The FGS outlines guiding principles to underpin government policies and actions as we move towards a net zero economy, and signals the government's commitment to reducing and, where possible, eliminating venting and flaring of gas, unless required for safety purposes.

The FGS also acknowledges the important role geological storage of carbon dioxide through CCS will play to support our region's transition to net zero, by enabling transboundary carbon storage. It also helps ensure that emissions are managed to help achieve net zero, while allowing consumer choice in selecting sources of energy for Australian homes and businesses.

# Coordination with state and territory governments

State and territory governments play a key role in the transition, as they each regulate resources activities within their jurisdictions and strive to meet their own climate targets. There is opportunity to work across all levels of government to streamline project approvals, giving proponents more certainty. This would result in increased productivity while striving for a common net zero goal, with benefits shared with local communities. Cooperation on methane abatement, including safe deployment of new technology, is another focus of activity.

# Unlocking investment and innovation

To accelerate the transition towards a net zero economy while strengthening Australia's global competitiveness, the government has deployed a diverse array of initiatives to crowd-in private investment and stimulate innovation across the economy, with a direct impact on the resources sector. These include targeted funding programs, tax incentives, and specialist investment vehicles that support emerging industries such as low-carbon fuels and critical minerals processing.

Complementary initiatives like the Capacity Investment Scheme and Australian Renewable Energy Agency (ARENA) are accelerating innovation and renewable electricity uptake across the resources sector. Export Finance Australia's Critical Minerals Facility, the Northern Australia Infrastructure Facility, the Critical Mineral Production Tax Incentive and the newly announced Critical Minerals Strategic Reserve will help unlock investment into the strategic growth of the critical minerals sector. The Safeguard Transformation Stream of the Powering the Regions Fund provides additional support for emissions abatement, including reductions in fugitive emissions in the coal sub-sector. The Industrial Transformation Stream of the Powering the Regions Fund administered by ARENA has also funded a range of resources sector projects, including electrification of mining operations.

These initiatives alongside the Future Made in Australia agenda enable Australia to grow and leverage opportunities in the resources sector towards a net zero economy.

# The role of industry and the research and development system

Offsetting is available where on-site abatement is not yet technically or economically viable. Industry recognises that reliance on offsets is not a long-term solution. As policy settings evolve and technology costs fall, a shift toward direct emissions reduction is increasingly economic, underscoring the importance of identifying and investing in commercially viable abatement solutions sooner rather than later.

Industry-led initiatives, often in collaboration with research institutions look to innovate in emissions abatement technologies (ACARP 2025). These have reached various levels of technology readiness, and it is imperative that private investment continues to support these innovations to scale up and commercialise.

Accelerating the commercialisation of low-emissions technologies will rely on continued industry innovation in close collaboration with energy providers, original equipment manufacturers, the mining equipment, technology and services (METS) sector, universities, and private equity. These partnerships are essential to move promising innovations from pilot to scale.

The METS sector plays an important role in decarbonising the resources sector by deploying more energy-efficient machinery as well as electric equipment to replace machinery powered by diesel. It also contributes expertise to optimise processes and plan the transition to low-emissions technology at individual sites.

## Links with other sector plans

The Australian Government recognises that not all sectors within the economy will achieve the same rate of decarbonisation at the same time. There are significant dependencies between the different sectors, which need careful coordination and sequencing to meet national targets in a cost-effective way.

The 6 sector plans have been informed by engagement with industry, the community, experts and governments. Collaboration between agencies gives whole-of-government coverage on aspects of mutual interest.

Outcomes from the Electricity and Energy Sector Plan will have a direct impact on the pace of decarbonisation in the resources sector. Expanded electricity networks, with increased capacity to power heavy industries, will enable electrification of resources operations. The availability of low-carbon fuels at a competitive price will reduce reliance on diesel for activities that cannot be electrified.

The resources sector will provide the critical minerals and iron ore required to produce renewable energy, and the gas to firm supply. These are direct enablers of the Electricity and Energy Sector Plan. In addition, iron and other metal ores will be the foundation to produce green metals, contributing to the Industrial Sector Plan. Australia will need to increase production of these resources, which represent an important economic opportunity as they are essential inputs for a decarbonised world.

# **Enabling the transition**

Enabling the resources sector's transition to net zero requires more than emissions reduction. A successful transition will stimulate positive system-wide change.

Workers, financial systems, First Nations partnerships, innovation, and regional resilience, are all integral to the transition. This level of industrial transformation needs inclusive, coordinated, and future-focused action. These considerations shape the conditions for success and ensure the transition is not only technically feasible, but socially and economically sustainable.

## **Enabling social licence and community benefits**

### First Nations people and communities

Building and promoting First Nations partnerships is critical to the resources sector's ability to attract the renewable and carbon abatement investment necessary to build the pipeline of projects required to meet net zero by 2050. International demand for critical minerals is expected to increase significantly. Meeting this demand is likely to require access to land subject to Native Title claims or determinations, which calls for respectful engagement and partnership with First Nations communities (DCCEEW 2024c).

All levels of governments are working with First Nations Peoples, communities, organisations and businesses to implement the 2020 National Agreement on Closing the Gap at the national, state and territory, and local levels. This approach acknowledges that First Nations Peoples should determine, drive and own the desired outcomes, alongside government.

A recent study highlights that 57.8% of critical minerals projects that produce 14 key commodities are in areas where First Nations peoples hold negotiation rights (Burton et al. 2024). When Native Title claims are considered, this figure rises to 79.2%, underscoring the importance of early, inclusive and respectful engagement with First Nations communities for a thriving resources sector, and for a successful and equitable net zero transition.

### Communities and the transition

Remote and regional communities are uniquely positioned to benefit from Australia's net zero transition, with opportunities to attract investment and diversify local economies. However, realising this potential requires addressing infrastructure gaps, workforce challenges, and social disadvantage.

As the economy decarbonises and transitions away from coal as an energy source, there will be an impact on regional communities. The Net Zero Economy Authority (NZEA) is promoting an orderly and positive economic transformation in Collie (Western Australia), the Hunter Valley (New South Wales), La Trobe (Victoria), Central Queensland and Upper Spencer Gulf (South Australia).

The Australian Government through the Net Zero Economy Authority can help build economic resilience by supporting enabling infrastructure, fostering inclusive workforce participation, and encouraging stronger engagement between industry and communities. National policy settings and market signals must reflect regional needs to ensure these areas share in the long-term prosperity of

the transition. The aim is to ensure the transition works to the benefit of communities that have enabled Australia's high standard of living and reliable power supply for many decades.

More broadly, by signalling a commitment to climate action, the government encourages investment in clean energy and low-carbon technologies to create a positive economic transformation in regional areas, where workers and communities, including First Nations people, can realise and share the benefits of the future net zero economy.

Supporting workers, communities and families through regional workforce transition plans will help to ensure an inclusive and fair transformation, critical for a successful net zero transition.

### Workforce, skills and jobs

Decarbonisation will provide employment opportunities, supported by reskilling or upskilling of existing workers to transition into the renewable energy industry. The expansion of a clean energy workforce is integral towards net zero by 2050.

Addressing skills gaps requires a coordinated effort from governments, educational institutions, industry associations and employers to develop comprehensive and accessible education and training programs.

The Australian Government is committed to tackling skills shortages by funding the training system Australia needs, with TAFE at the heart of the system. Universities have a significant role to play, not only in providing graduates but in undertaking the research and development essential for Australia to realise its net zero targets. To achieve decarbonisation through increased energy optimisation and efficiency, it is important to recognise that these are fundamentally productivity challenges.

Increasing the participation of women in the workforce should be advanced as part of a gender responsive approach (KPMG 2018). Women currently make up just 22% of the mining workforce, are overrepresented in lower paid occupations, and the gender pay gap currently sits at 16.6% (WGEA 2024).

The resources sector will need to support the equitable participation of women and other underrepresented groups to secure the skilled workforce that's needed for net zero, in alignment with the government's ambitions in *Working for Women: A Strategy for Gender Equality*, to make industries less gender segregated. Greater participation of women across occupations in the resources sector will also support industry scale up to meet supply chain demand and benefit from the increased innovation and productivity that a more gender equal workforce can bring (PM&C 2024).

# Unlocking more value out of existing resources

The circular economy presents an opportunity to harness the full value of our resources. Circular practices within the sector will play an essential role in lowering energy demand and associated emissions, by improving resource efficiency. This refers to how efficiently materials are used at all stages of the mining lifecycle.

Australia's mining sector has an ongoing history of repurposing mining byproducts and waste, with initiatives such as Geoscience Australia's Atlas of Mine Waste helping to identify opportunities to recover critical minerals and reduce environmental impacts (GA 2025).

Utilising mining byproducts and waste, such as tailings, provides an opportunity to alleviate pressures associated with the extraction of virgin materials and reduce Australia's carbon footprint. Moving towards a circular economy is critical from both supply security and environmental perspectives and provides the basis for a sustainable and competitive economy.

Australia's Circular Economy Framework provides the policy blueprint for driving Australia's circular economy transition (DCCEEW 2024a). It includes an overarching goal of doubling circularity by 2035 and sets clear priorities and targets to reduce waste and keep materials in our economy for as long as possible. The framework identifies resources as one of 4 priority sectors that will drive the transition and deliver on our net zero, environment and economic agendas.

# Mobilising private capital for sustainable finance

Sustainable finance can support the sector's net zero transformation. It can assist in funding climate mitigation and adaptation efforts, such as through financing more efficient, low-emissions technologies.

The Australian Sustainable Finance Taxonomy provides common definitions for sustainable economic activities, helping to drive private investment and support Australia's path to net zero emissions. The Taxonomy includes key mining and metal activities, particularly those with a role in the transition.

The government will publish best practice transition planning guidance in 2025. The voluntary guidance will complement Australia's climate-related financial disclosures regime and help organisations navigate existing international frameworks and relevant domestic considerations for robust transition planning.

# Moving forward to a net zero resources sector

The RSP provides the foundation for the Australian resources sector to make a significant ongoing contribution to reducing the nation's emissions and assisting the domestic, as well as the global supply chain transition to net zero.

Resources decarbonisation will be an ongoing process driven by implementation of emissions reduction and carbon management technologies combined with a structural shift in the type of commodities the world demands. While there is uncertainty in the projected rate of change, there is no doubt on its direction – a low-emissions Australian resources sector supporting net zero globally.

Alongside Australia's Nationally Determined Contributions under the Paris Agreement, with the target of 62–70% reductions by 2035 being the latest, this plan will undergo periodic review to ensure its settings continue to support a credible and coordinated pathway to net zero. While emissions reduction targets have been in place for some time, we are now approaching our first legislated milestone on the path to net zero. Coordinated work between governments, industry, workers and regional communities will be essential to support the sector through this transformation.

The journey to net zero will require sustained effort, innovation and partnership to remain a source of strength and opportunity to deliver for industry, investors, communities, workers and trading partners in a decarbonising world.

# Glossary

Term	Definition
AEMO	Australian Energy Market Operator
ARENA	Australian Renewable Energy Agency
CCA	Climate Change Authority
CCS	Carbon capture and storage
CO <sub>2</sub>	Carbon dioxide
CO <sub>2</sub> -e	Carbon dioxide equivalent
СОР	Conference of the Parties (United Nations Climate Change Conference)
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DISR	Department of Industry, Science and Resources
EPBC	Environment Protection and Biodiversity Conservation Act 1999
FGS	Future Gas Strategy
IEA	International Energy Agency
IPCC	Intergovernmental Panel on Climate Change
LNG	Liquefied natural gas
LPG	Liquefied petroleum gas
METS	Mining equipment, technology and services
NZEA	Net Zero Economy Authority
PM&C	Department of the Prime Minister and Cabinet
RSP	Resources Sector Plan
VAM	Ventilation air methane
WGEA	Workplace Gender Equality Agency

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