

Australian Government

Net Zero Economy Authority

Hunter in Transition Report

The evidence-base for action

October 2026

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Executive Summary

The ***Hunter in Transition Report*** supports the transition to a net zero economy underway in the Hunter by providing the evidence-base for action.

The Hunter is one of the most exposed regions in Australia to decarbonisation. The global shift away from coal and towards renewable energy is changing the regional economy, affecting workers in coal industries, and impacting businesses along the supply chain. As coal-fired power stations and coal mines close, new industries are emerging, bringing fresh opportunities and creating new jobs. The Hunter is exceptionally well-placed to benefit. With a skilled workforce, deep industrial capabilities and significant competitive advantages, the region is set up to succeed through the transition.

The Australian Government is working in partnership with the NSW Government, local councils, business leaders and the Hunter community, to support affected workers and businesses through this change. A transition pathway is being created to ensure the Hunter emerges in good economic shape, with new jobs, a strong diverse economy and new opportunities for industrial growth. Our job is to make sure no one gets left behind.

The ***Hunter in Transition Report*** aims to provide an understanding of the transition challenges, the competitive advantages and emerging opportunities in the Hunter. Based on the evidence in this Report, the Net Zero Economy Authority (NZEA) has developed a ***Hunter Delivery Program***, outlining the critical actions and initiatives that will drive delivery of a successful transition.

The Hunter's transition to net zero

The Hunter is tracking towards a net zero economy by 2050. The transition away from coal and towards solar and wind power is forecast to involve the closure of all three coal-fired power stations in the Hunter by 2033, and the closure of all currently operational coal mines by 2050 under all AEMO scenarios (Oxford Economics Australia 2025a). This represents a significant economic and industrial change that will directly and indirectly affect up to 55,000 workers and extend to Hunter businesses along the value chain (NSW Department of Primary Industries and Regional Development [DPIRD] 2024).

This challenge will also involve major industrial facilities across the region's established heavy industrial base. These include facilities that are undertaking significant decarbonisation activity while continuing to support critical supply chains, manufacturing capability and regional employment.



The pathway through the transition aims to ensure the Hunter captures the next wave of industrial opportunity. A successful transition involves action to create new jobs, support affected workers, grow new industries, achieve net zero emissions and ensure all have the opportunity to benefit.

Hunter growth industries

The Hunter has many strong and growing industries, including construction, health, tourism, services and green metals. Five industries have been identified as having potential for new growth, based on analysis of growth opportunities and extensive engagement with regional stakeholders:



Each of these sectors has been examined to identify the Hunter's competitive advantages, the enablers and barriers for growth that provide the basis for action.

Insights to inform action

International experience indicates that to support the economic transition, we need the right interventions at the right time. This includes activating industrial precincts early, supporting new industries to grow, attracting strategic investment and creating new jobs when they are needed.

This Report captures insights to inform the transition to 2035 and 2050 based on barriers and enablers of industrial growth, worker transition and reskilling needs, and targeted research into new opportunities. Importantly, direct engagement and feedback from stakeholders in the Hunter has been collated to inform the transition pathway.

Partnering for growth

Leaders from government, industry, academia, unions and the community are coming together to shape a positive future for the Hunter, and to identify the actions and investments that will lift the region to its full potential.

Already, the Australian and NSW Governments are mobilising considerable resources, investing in growth sectors and backing renewable energy projects to support economic transition in the Hunter.

1. Introduction

The Hunter economy is undergoing a significant transformation. This chapter provides the national and global context for this economic disruption and the objectives for a successful transition to a net zero economy in the Hunter.

Across Australia, our energy and industrial economy is in a period of unprecedented change and renewal. Coal-fired generation facilities that have powered the nation for generations are closing as we shift to renewable energy. The demand for coal exports is also forecast to decline as countries across the world shift to a net zero economy. The effects of decarbonisation are concentrated in regions like the Hunter where a large proportion of jobs and businesses are reliant on coal.

In response to this economic shift, new industries and opportunities are emerging in the Hunter. A transition pathway is being created to ensure the Hunter emerges in good economic shape, with new jobs, a strong diverse economy and new growth industries.

The ***Hunter in Transition Report*** provides the evidence base for action to support workers, businesses and the community as the Hunter transitions. Based on research, economic forecasting and stakeholder engagement, this Report outlines who will be affected and when, the barriers and enablers of economic diversification, and the opportunities for new jobs and industrial growth in the Hunter.

1.1 Context for the transition

Australia, along with 145 countries across the world, has committed to achieving net zero greenhouse gas emissions across the economy by 2050 (CAT 2025). Like many other countries, Australia has targets embedded in legislation to reduce greenhouse gases (in comparison to 2005 levels):

- by 43% by 2030,
- by 62-70% by 2035, and
- to net zero emissions by 2050.

The Australian Government plans to meet these net zero targets while growing the economy, creating jobs and delivering benefits for households, workers and businesses.

The ***Net Zero Plan*** aims to achieve a fair, orderly and efficient transition and includes six ***Sector Emissions Reduction Plans*** to support our industry sectors to achieve net zero emissions (DCCEEW 2025). A plan for a ***Future Made in Australia*** has also been developed to attract the investment that will reshape our industries and maximise the economic benefits of the move to net zero (Treasury 2024).

The ***NZEA*** was established as an independent statutory authority in December 2024 to assist with both the challenges and opportunities of the economic transition (NZEA 2025). Our role is to support workers, businesses and communities most affected by the changes, so no one is left behind.

1.2 Transition objectives for the Hunter

A successful economic transition in the Hunter will require action to:

1. **Support affected workers** – to prepare for and find new well-paid, safe and secure jobs in the new Hunter economy.
2. **Grow Hunter industries** – to diversify and grow the Hunter economy through the transition.
3. **Create new jobs** - to offset the closure of coal-fired power stations and forecast coal mine closures in the Hunter.

4. **Provide opportunities to benefit** – to ensure all benefit from the opportunities of the new Hunter economy, including First Nations people, so there is no one left behind .
5. **Achieve net zero emissions** – to achieve net zero by 2050 for long-term prosperity.

The five objectives provide a clear link between the Hunter's local priorities and the Australian Government's Future Made in Australia Community Benefit Principles, helping to support workers, strengthen industries and create opportunities for First Nations communities as the region moves toward a net-zero future.

1.3 Hunter Delivery Program

The NZEA's ***Hunter Delivery Program*** outlines the initial actions that the NZEA will take to support a successful transition in the Hunter. The Delivery Program is based on the evidence provided in this Report and focuses on the NZEA's priority actions to support workers, industries and communities affected by the transition, as a foundation for increased ambition over time.

The Delivery Program aligns with the NSW Government's *Hunter Regional Economic Development Strategy* and various transition strategies and reforms being undertaken by local governments and community organisations across the Hunter.

The Delivery Program was developed in consultation with federal and state government agencies, local councils and regional stakeholders. The steps taken are detailed in Section 5.1 – Engagement to inform the Hunter Delivery Program.



Next steps

The Hunter Delivery Program includes priority actions for immediate implementation, and potential areas for the future.

Priority actions will be implemented in partnership with other agencies over the next 12-18 months, subject to ongoing review and assessment. For more detail, see Chapter 6 – Monitoring and Evaluation.

While the Delivery Program focuses on the work the NZEA can do to support the Hunter, it may also help inform other opportunities for government and industry to progress.

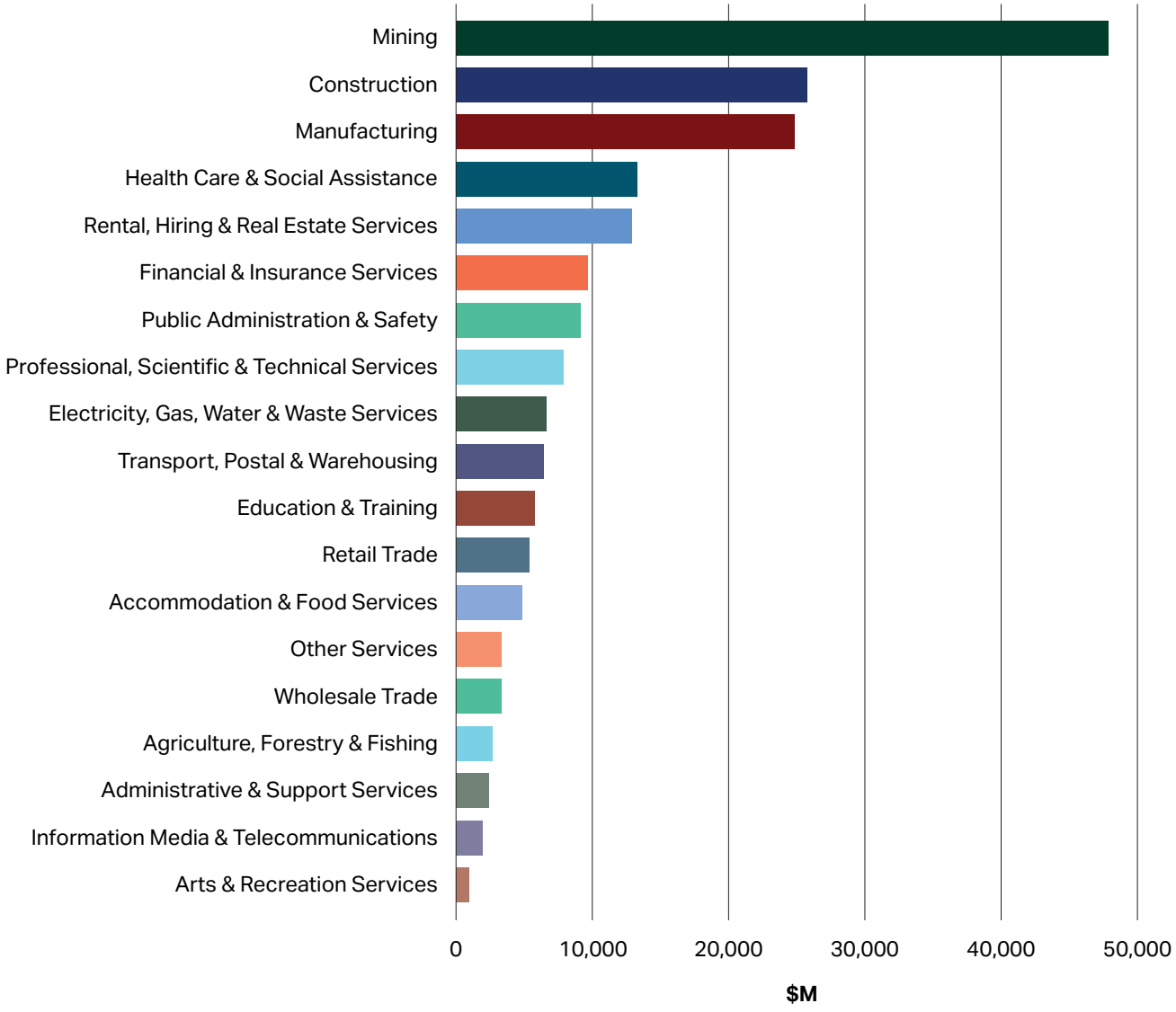
2. The Hunter's transition to net zero

This chapter details the features of the economy that result in the Hunter being one of the Australian regions most affected by decarbonisation. At the same time, the Hunter's deep industrial capability, skilled workforce and competitive advantages make it exceptionally well placed to succeed through the transition.

2.1 The Hunter economy

The Hunter is the largest regional economy in Australia with an economic output (total gross sales) of $194.2 billion per annum (REMPLAN 2025). Mining is currently the dominant industry in the Hunter contributing around 25% of economic output, driven by thermal coal production and coal exports (REMPLAN 2025). As *Figure 1* shows, construction and manufacturing are the next largest industry sectors in the Hunter, each contributing around 13% of economic output.

Figure 1: Breakdown of industries contributing to the Hunter economy **(REMPLAN 2025)**



The strengths of the Hunter economy include its industrial base, effective supply chain and enabling infrastructure, export networks and location. This enabling infrastructure, as well as extensive rail networks and proximity to major highway systems, enables the efficient movement of trade and workers through the region.

The Port of Newcastle supports over 2,300 vessel movements annually and facilitates trade to 31 countries (Port of Newcastle 2026). Established supply chain infrastructure and export networks currently support $80 billion worth of exports annually (REMPLAN 2025).

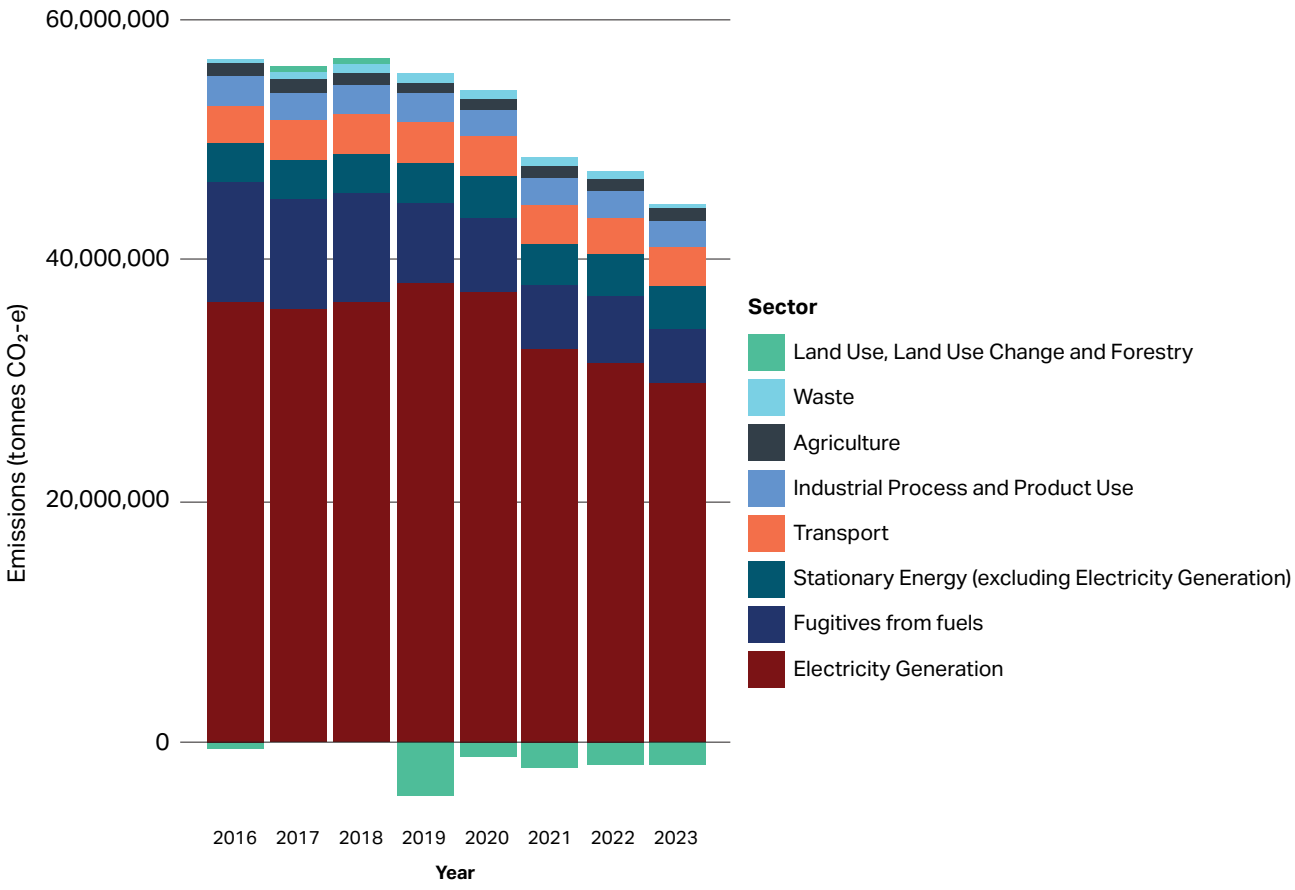
Newcastle Airport has just completed a significant upgrade and is moving more than 1.2 million passengers each year with increased connectivity to major cities and regional destinations across Australia (Newcastle Airport 2025). The opening of the Airport's international terminal marks a significant milestone for the region, enabling direct international passenger services and strengthening its role as a key transport hub (Newcastle Airport 2025).

2.2 Towards net zero

The Hunter regional economy has traditionally been heavily reliant on the coal industry, with coal-fired power generation and coal exports making up 28% of annual regional output (REMPLAN 2025).

As the Hunter economy transitions towards net zero, greenhouse gas emissions are reducing, as illustrated in *Figure 2*.

Figure 2: Change in Greenhouse Gas emissions for the Hunter **(NSW Government 2026a)**



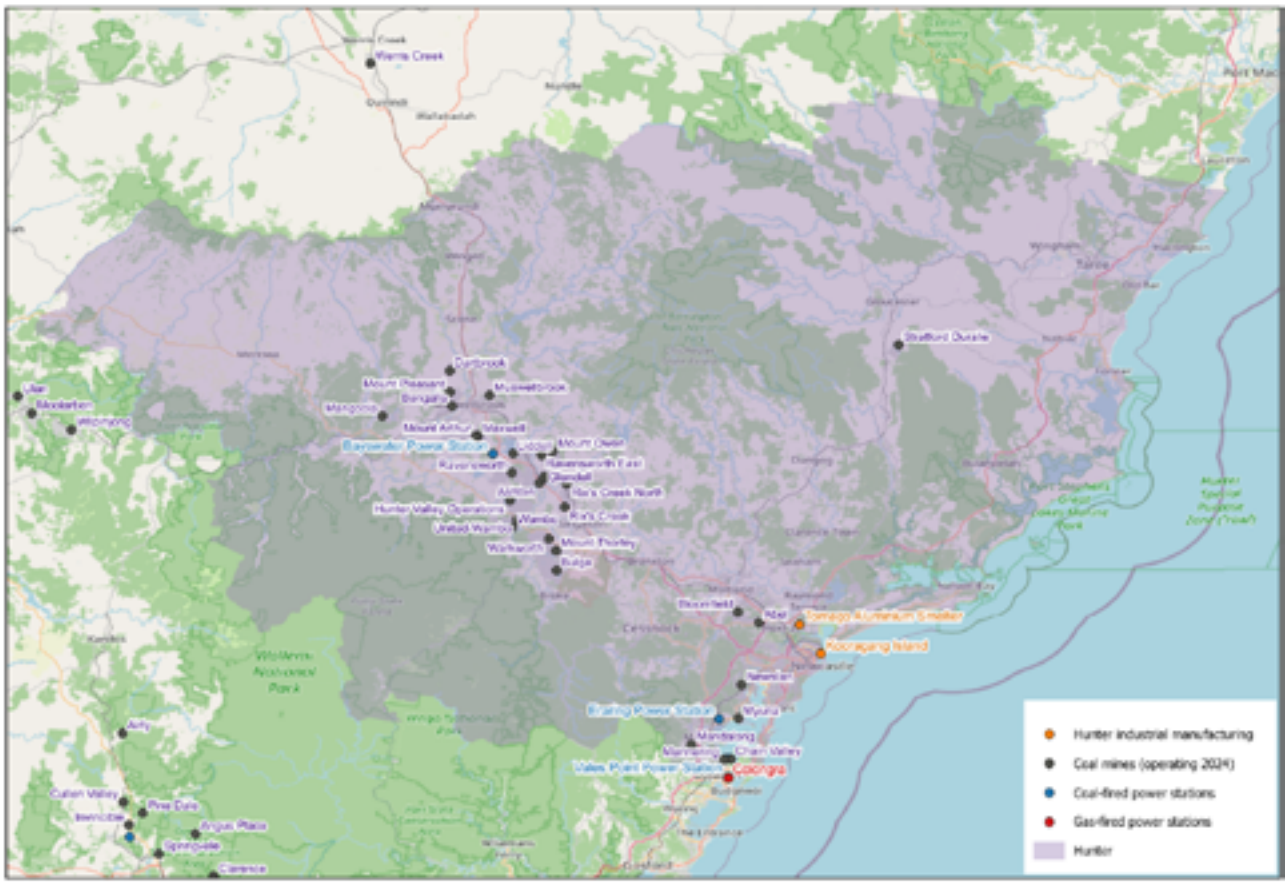
The Hunter region emits 48Mt of greenhouse gases per year (University of Newcastle 2021), with a large portion of these emissions (68%) sourced from coal-fired electricity generation.

2.3 Transitioning industries

Coal mining and electricity generation

The region's coal-fired power stations, coal mines and major industrial facilities are illustrated in *Figure 3*. The Vales Point Power Station is in the neighbouring Central Coast Council, but given its proximity to the Hunter, it is included when referring to power station closure dates and worker numbers.

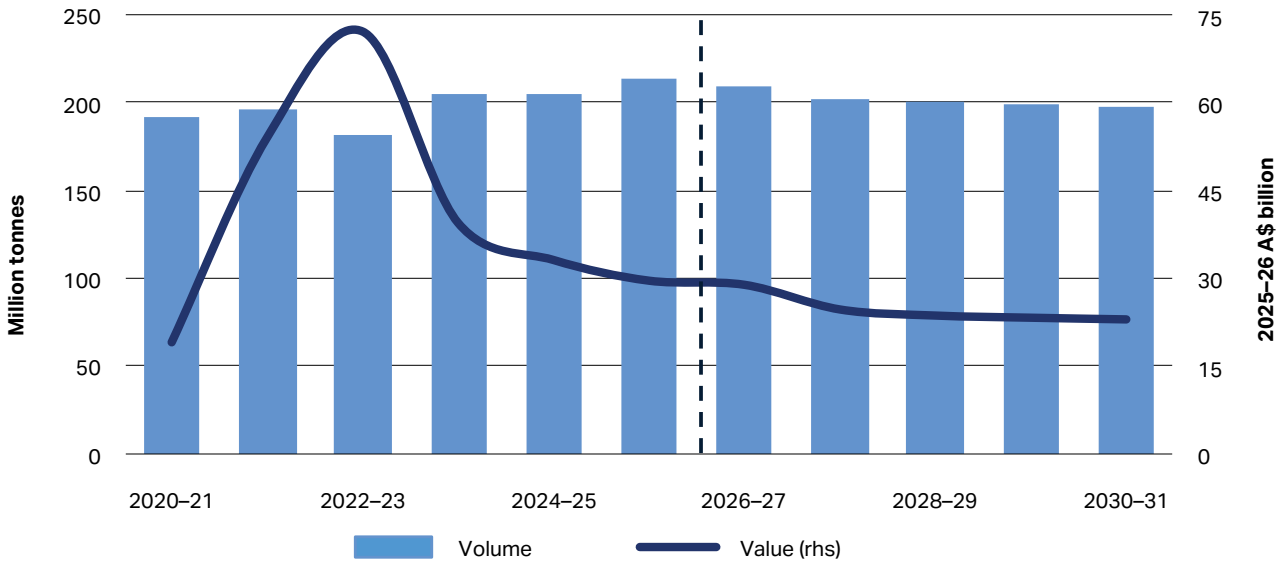
Figure 3: Coal-fired power stations and coal mines in the Hunter **(ABS 2026; CER 2024; Geoscience Australia 2026; NZEA 2025)**



The three coal-fired power stations in the Hunter are scheduled to close by 2033, with Eraring Power Station the first to close in 2029 (Origin Energy 2026).

Demand for Hunter coal is expected to decline over the long term in response to changes in export demand. Thermal and metallurgical coal from the Hunter is currently exported to Japan, China and other parts of Asia, so output is highly sensitive to changes in demand as these countries decarbonise. Thermal coal exports from NSW to the Asia-pacific region declined by 4% over the last 6 years – a trend that is forecast to continue at a rate of 1% per year to 2031, as illustrated in Figure 4 (DISR 2026; NSW Government 2026b).

Figure 4: Forecast export demand for Australian coal exports (DISR 2026)



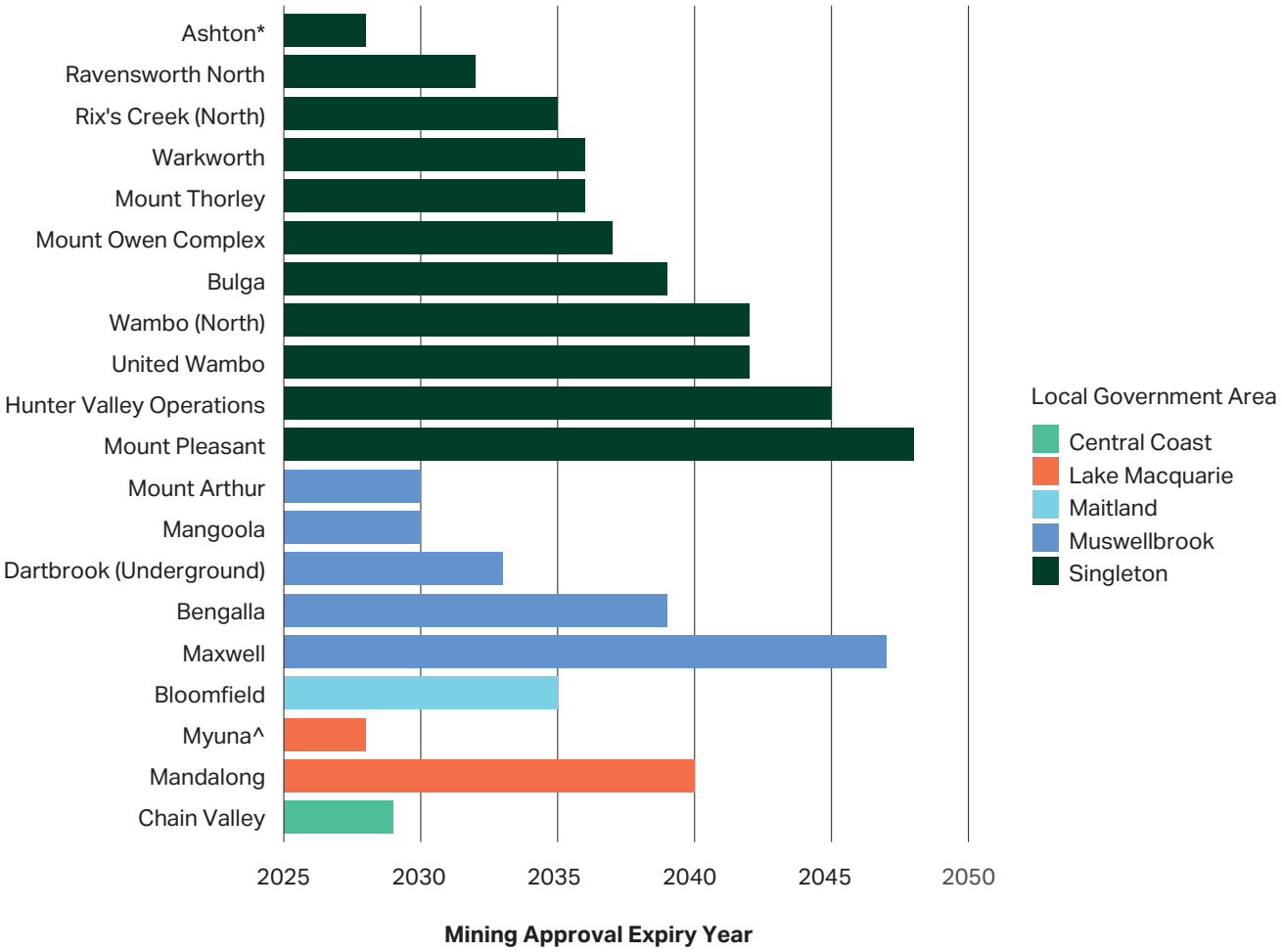
Under AEMO's transition scenarios (Step Change and Green Energy Industries scenarios), all current coal mines in the Hunter are expected to close by 2050 (OEA 2025a). Half of the 20 currently operating mines are expected to close in the next 10 years under the same transition scenarios, driving a decline in coal mining employment (OEA 2025a).[1]

Under the NSW Government's policy, *NSW Coal Industry 2026-2050*, applications for new 'greenfield' coal mines will not be considered. Extensions to existing operations will continue to be considered, subject to strict project-by-project approval processes and robust regulatory frameworks (NSW Government 2026b).

Estimated closure dates are based on current approval expiry dates and proposed extensions for coal mines in the Hunter (see *Figure 5*). Yancoal Ashton recently announced undergoing a staged closure, with longwall mining set to finish by early 2028 (Yeandle et al 2026), and there are another 10 coal mines in the Hunter with approvals that expire by 2035. Other mines are seeking to extend mining out to 2049, and Maxwell Underground mine recently opened, which will provide up to 430 jobs out to 2047 (Malabar n.d.).

[1] OEA 2025a reports 22 mines due to splitting out the Hunter Valley Operations North and South mines and breaking down the Mt Owens Complex. For consistency with other sources, NZEA has quoted 20 mines throughout.

Figure 5: Hunter coal mine expiry dates and extensions as at October 2026 (NSW Department of Planning, Housing and Infrastructure n.d.)[2,3]



* Ashton's mining approval expires in 2030, however it has announced it will close in 2028
^ Myuna's mining approval expires in 2032, however it has announced it will close in 2028

Mining and utilities are contributing $52 billion in annual output to the Hunter economy (REMPLAN 2025). The shift away from coal will affect workers and business in these industries as well as other businesses along the supply chains.

The Hunter has the adaptive capacity to respond to this economic shock, with the Lower Hunter having a very high adaptive capacity and the Upper Hunter having a moderate adaptive capacity (NZEA 2026a). The Hunter's adaptive strengths include labour force participation, skill level of workers and economic diversity. The adaptive capacity of the Upper Hunter is impacted by higher levels of income support, a lower Year 12 completion rate and less economic diversity when compared with the Lower Hunter.

Importantly, as the mining industry declines in the Hunter, other industries are growing, including in the healthcare, tourism, renewable energy and services sectors.

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2 Ashton's mining approval expires in 2030, however, it has announced it will close in 2028. Myuna's mining approval expires in 2032, however, it has announced it will also close in 2028.

3 Hunter Valley Operations includes Hunter Valley North and South. Mount Owen Complex includes Glendell and Ravensworth East. Some sources separate out these mines and so mine numbers may differ.

Industrial manufacturing

The Hunter is home to two major industrial manufacturing facilities, the Tomago Aluminium Smelter and the Orica Kooragang Island ammonium nitrate plant. Both these facilities are subject to the Safeguard Mechanism, an Australian Government policy that caps and reduces greenhouse gas emissions from the country's largest industrial facilities.

In 2024-25 these two facilities emitted over 1.6 million tonnes of carbon dioxide equivalent (under scope 1) or 7.4% of NSW's combined emissions (Clean Energy Regulator 2026). Tomago's emissions have exceeded their allowed baseline the past two reporting periods, meaning the facility has had to acquire carbon credits (ACCUs) to offset their emissions. The baseline emission requirements will continue to decrease over the coming years, so Tomago is finding ways to decrease emissions either through decarbonising their energy, processes, reducing production, or producing or purchasing offsets. The Kooragang Island plant has produced well under baseline emissions in recent years, aided by the completion of the Kooragang Island Decarbonisation Project in 2023 (Orica 2025).

Tomago Aluminium is Australia's largest aluminium smelter and contributes $2.2 billion to the Australian economy, $800 million of which is spent within the Hunter. The company employs over 1000 staff and 200 contractors, who live in the Hunter. Tomago also has partnerships with more than 500 suppliers across the Hunter region (Rio Tinto n.d.). The smelter produces over one-third of Australia's aluminium with 90% exported to the Pacific region (Rio Tinto n.d). Its ongoing operation is important to the Hunter and for Australia's end-to-end aluminium supply chain.

Tomago uses 12% of NSW's electricity demand to run its operations (Rio Tinto n.d.). In August 2026, the Australian and New South Wales Governments announced a joint $2.5 billion investment over 10 years to support commercially sustainable operations at Tomago beyond 2028, securing a nationally significant aluminium-smelting capability (Australian Government 2026). The agreement includes a long-term renewable energy and decarbonisation pathway for the smelter, supporting its transition to lower-emissions aluminium production while maintaining regional employment and industrial capability (Australian Government 2026).

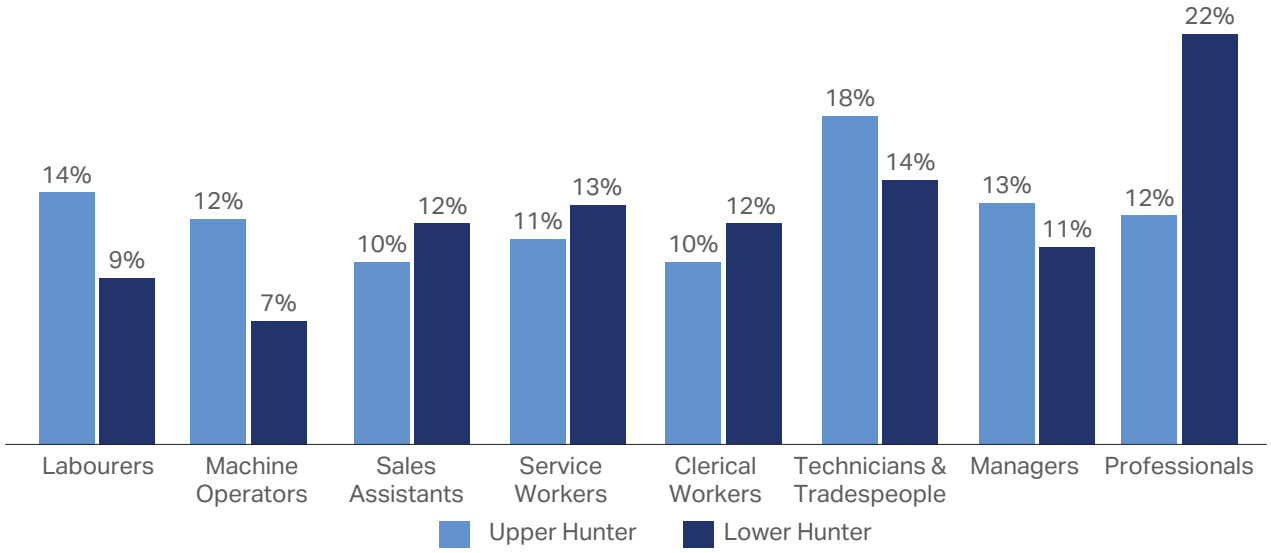
Orica Kooragang Island supplies critical products to the mining and infrastructure, agriculture, water supply, food, dairy and medical sectors (Orica n.d.). The site comprises of an ammonia plant, three nitric acid plants, two ammonium nitrate plants and a production dispatch facility. It produces approximately 360,000 metric tons of ammonia per year, accounting for almost all of NSW's production capacity (DCCEEW 2026), as well as approximately 330,000 tonnes of nitric acid and 400,000 tonnes of ammonium nitrate per year. The site has approximately 210 permanent staff and about 40 regular contractors, with up to 150 additional staff during plant shutdowns. In July 2026, Orica announced that it was proceeding with the Hunter Valley Hydrogen Hub to help decarbonise its operations (Orica 2026).

2.4 Hunter workers

Almost 18,000 workers in the Hunter are in industries exposed to change from decarbonisation (NZEA 2026a). This includes those directly employed in coal mining (69%) and electricity generation (2%) as well as those employed in chemical and other industrial manufacturing (29%). When including those working in coal mining and electricity generation in the neighbouring Central Coast, the number increases to over 18,700 (REMPLAN 2026).

The Hunter's workforce has a higher concentration of blue-collar workers, particularly in the Upper Hunter where almost half (49%) of the workers are machine operators, technicians and tradespeople (*Figure 6*).

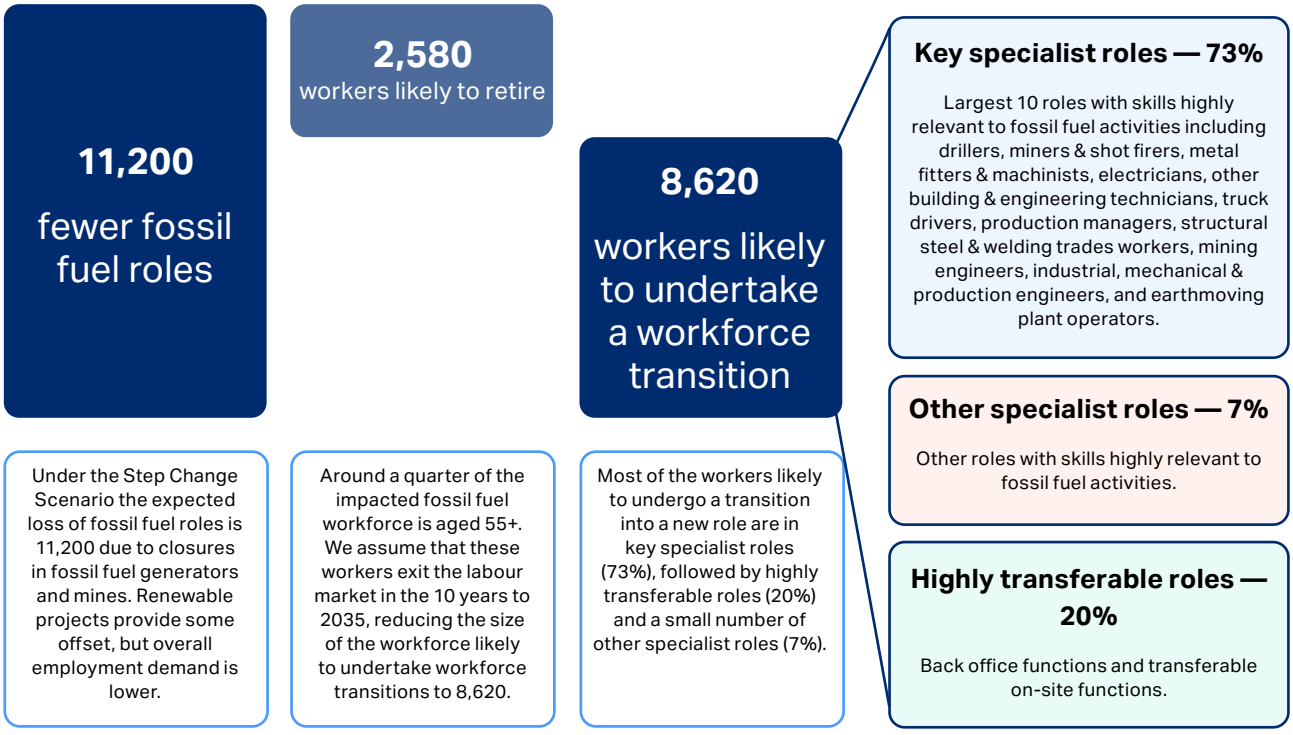
Figure 6: Breakdown of the workforce in the Hunter (ABS 2021)



Many skills from coal mining and coal-fired power generation are directly transferrable to industries that have the potential to grow in the Hunter. For example, 12% of workers in the region are in jobs highly compatible with clean energy industries, such as electricians, metal fitters and machinists, and chemical, gas and petroleum and power generation plant operators (Jobs and Skills Australia n.d.). However, there is also a cohort of workers in low-skilled, specialised occupations, with relatively weak skill transferability. Reskilling will enable these workers to secure new opportunities.

An estimated 8,620 Hunter workers are likely to undertake a workforce transition by 2035 based on the current make-up of the workforce and forecast changes (see *Figure 7* below) (OEA 2025b). Of these workers, 73% are currently in key specialist roles, followed by 10% in highly transferable roles and a small number of other specialist roles (7%).

Figure 7: Quantifying the workforce transition needs to 2035 (OEA 2025b)



Source: Oxford Economics based on AEMO Step Change scenario.

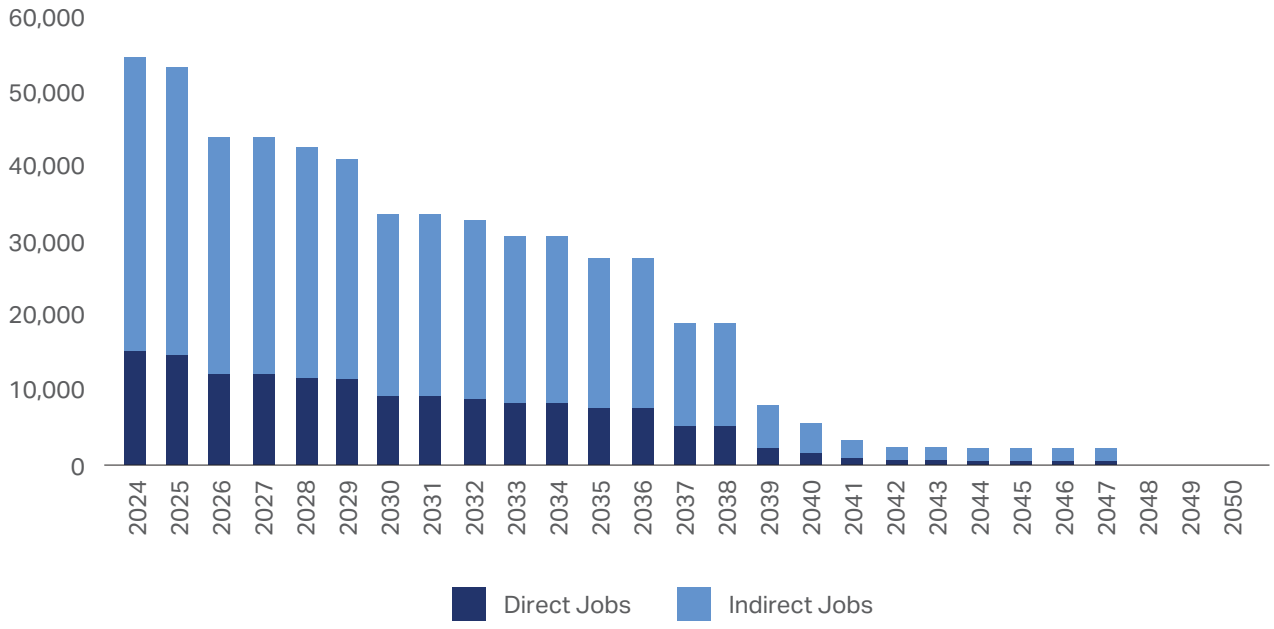
Despite the large proportion of workers currently in key specialist roles, half are likely to be able to transition to a similar role in another industry by 2035. Many skillsets are industry agnostic, for example workers in finance and human resources, electricians, engineers, truck drivers and earth moving plant operators. The remaining half are likely to be able to move into skills-adjacent roles. Those with skills specialised to the electricity and mining industries can be supported to reskill into different specialist skills areas and upskill in generalist skills, such as digital engagement, planning and organising and teamwork (OEA 2025b).

At a subregional level, labour market analysis is being progressively undertaken to understand local opportunities and challenges. For example, when the Eraring Power Station closes in 2029, workers with specialised industrial skillsets will be looking for alternative employment in a local labour market where there are surplus workers and a broad employment profile. It is estimated that 45% of the Eraring workers will experience low employment prospects without the growth of new industries (NZEA 2026b). Core competencies of these workers in high-voltage electrical distribution, heavy machinery maintenance, thermal system analytics, and rigorous industrial safety protocols, translate directly into renewable energy projects, including wind, solar, and grid-storage operations (DEWR 2026). Further work is underway to align emerging opportunities, identify training requirements to fill current skills gaps and map worker transition pathways.

2.5 Hunter jobs

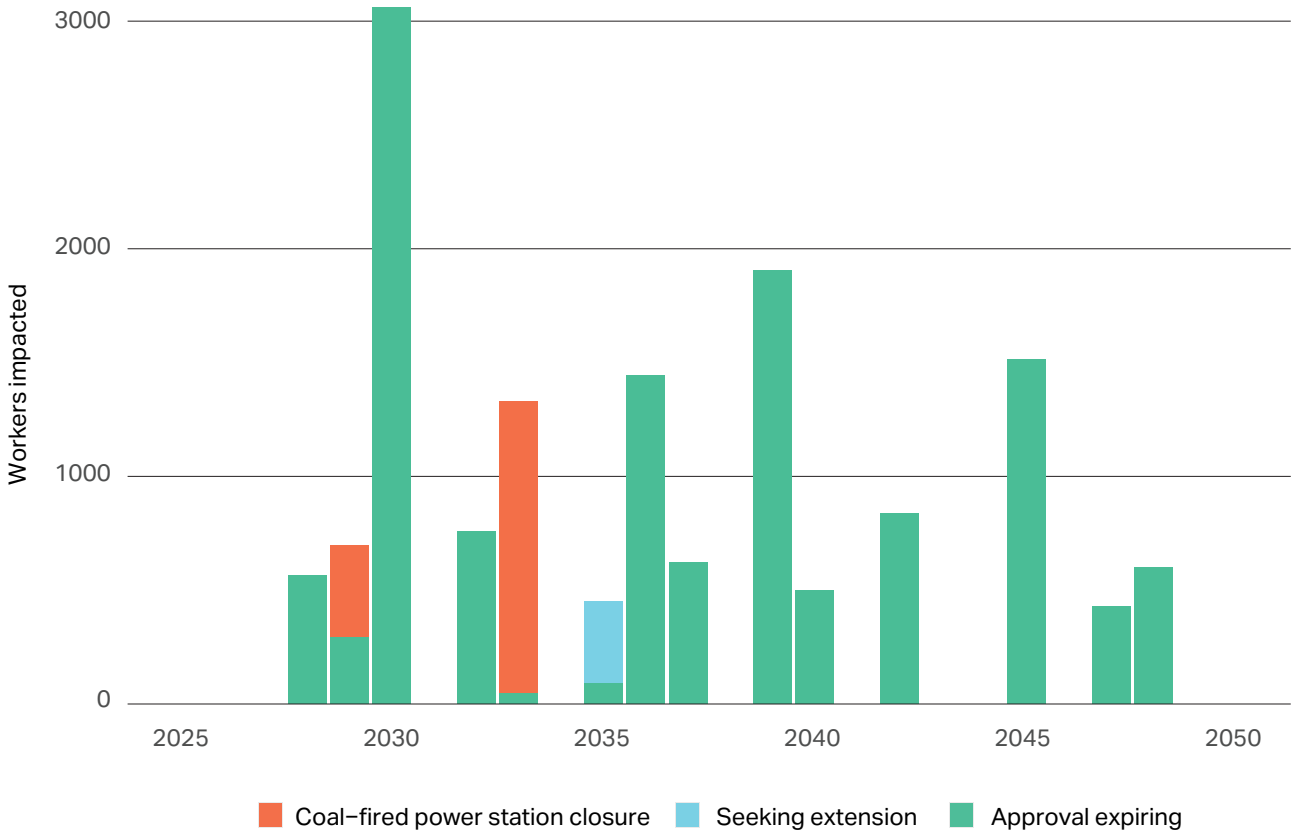
Coal mining and electricity generation and distribution currently account for just under 5% of Hunter jobs, or around 18,000 jobs (REMPLAN 2025). Adding indirect jobs takes the total number of jobs to 55,000 affected jobs in the Hunter (Department of Regional NSW 2024; Committee for Hunter 2026). *Figure 8* shows how the direct and indirect jobs associated with coal mining and electricity generation are forecast to decline to 2050 (NSW DPIRD 2024).

***Figure 8: Forecast direct and indirect jobs, coal mining and electricity generation jobs, Hunter* (NSW DPIRD 2024)**



The first significant declines to the workforce are expected to occur in 2030, followed by clusters of coal mines expiring around 2036. *Figure 9* provides more detail on the timing of jobs directly impacted, based on announced power station closure dates and mine approval expirations. Mines that are seeking extensions are highlighted in green. If these extensions proceed, it is expected that workers will be required for continuing operations.

Figure 9: Workers impacted by mine approval expiries and power station closures[4,5]



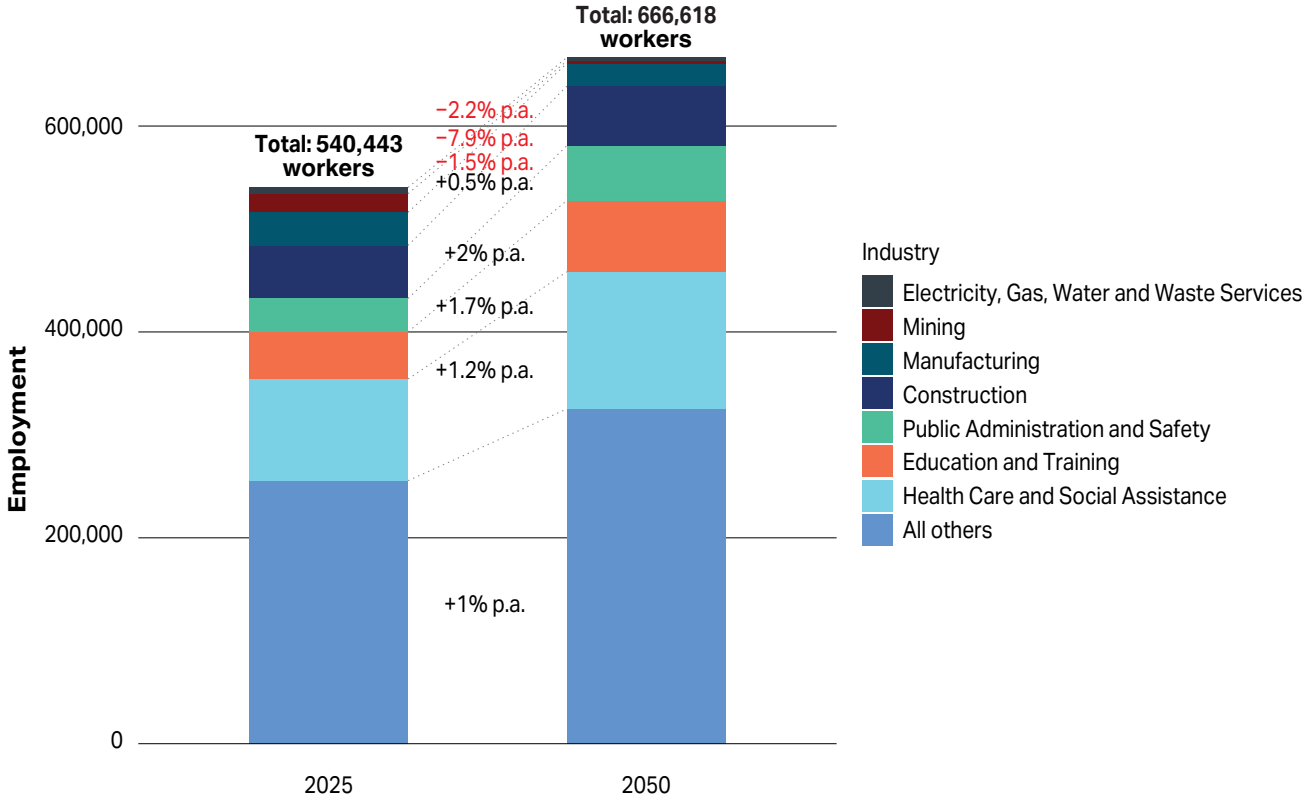
Work is underway to create the conditions for new jobs in the Hunter to offset job losses, with worker transition pathways and reskilling opportunities being developed. Based on an AEMO step change transition scenario, jobs growth by industry is forecast for the Hunter in *Figure 10*. This transition scenario estimates there will be around 126,000 (19%) more jobs in the Hunter by 2050 than there were in 2025 (OEA 2025b).

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4 Employment data sourced from: Yancoal (2025) *Community Consultative Committee 24th July 2025*, Yancoal; Bengalla Mining Company Pty Ltd (Bengalla) (2024) *Bengalla Mine Annual Review 2024*, Bengalla; Bloomfield Group (2025) *Bloomfield Colliery Annual Review Report Year Ending March 2025*, Bloomfield Group; Glencore (n.d.) *Bulga Coal*, Glencore website, accessed 30 July 2026; Delta Coal (2024) *Chain Valley Colliery Annual Review 2024*, Delta Coal; Turner-Cohen A (2 October 2025) *Dartbrook Hunter Valley mine to stop running after failed revival*, ABC, accessed 30 July 2026; Hunter Valley Operations (HVO) (n.d.) *Hunter Valley Operations*, HVO website, accessed 30 July 2026; Centennial (n.d.) *Mandalong*, Centennial website, accessed 30 July 2026; Glencore (2024) *Mangoola Open Cut Annual Review 2024*, Glencore; Malabar (n.d.) *Maxwell Underground Mine*, Malabar website, accessed 30 July 2026; BHP (2024) *Mt Arthur Coal Annual Review FY24*, BHP; Glencore (n.d) *Mt Owen/Glendell Open Cut*, Glencore website, accessed 30 July 2026; Mining & Energy Union (MEU) (1 October 2024) *Three NSW coal extensions approved* [media release], MEU, accessed 30 July 2026; MDO (n.d.) *Mount Thorley Warkworth Operation*, MDO website, accessed 30 July 2026; Centennial (n.d.) *Myuna*, Centennial website, accessed 30 July 2026; Glencore (n.d.) *Ravensworth Operations*, Glencore website, accessed 30 July 2026; Glencore (n.d.) *United Wambo Joint Venture Open Cut*, Glencore website, accessed 30 July 2026; Peabody Energy (2020) *Wambo Fact Sheet*, Peabody. Mine approval expiries sourced from: NSW Government (n.d) *Planning Portal*, NSW Government website, accessed 28 July 2026. Power station closure data sources from: Australian Energy Market Operator (AEMO) (2026) *Generating Unite Expected Closure Year – July 2026*, AEMO, Australian Government.

5 Hunter Valley Operations includes Hunter Valley North and South. Mount Owen Complex includes Glendell and Ravensworth East. Some sources separate out these mines and so mine numbers may differ.

Figure 10: Jobs growth in the Hunter by industry sector under AEMO's Step Change transition (OEA 2025b)[6]



6 Region includes the Central Coast Working Zone.

3. Hunter growth industries

The vision for the Hunter economy in 2050 is that it will be larger and more diverse, driven by growth in renewable energy and high value-add industries. This chapter details the Hunter industries with potential for growth through the transition.

The Hunter has many strong and growing industry sectors, including construction, health, tourism, services and green metals. In partnership with business leaders and regional stakeholders, priority growth industries have been identified for the Hunter based on competitive advantages, job potential, policy alignment and growth opportunities.

The framework for identifying growth industries includes consideration of:

- the contribution of the industry to national objectives and strategies
- the alignment of the industry with regional capabilities and advantages
- the contribution of the industry to regional structural adjustment needs, and
- Hunter community priorities.

Five priority growth industries have been identified for the Hunter:

- Clean energy supply chains
- Rail and rolling stock manufacturing
- Circular economy, recycling and low-carbon liquid fuels
- Defence and aerospace, and
- Value-add agriculture.

An analysis of the opportunities for growth in each of these industries is provided in the sections below.

3.1 Clean energy supply chains

The Hunter is becoming a renewable energy manufacturing hub, anchored by significant Australian Government investment in clean energy projects and supply chains. There are a growing number of local companies with capability in solar, wind, battery technology, and transmission grid infrastructure components. There is also an established, growing, customer base for renewable energy technologies in the Hunter, with local demand being driven by the Hunter's renewable energy zone (REZ), and proximity to two other REZs, as well as residential development.

A transmission capability analysis undertaken by NZEA and ICN demonstrates the strong existing manufacturing capabilities in the Hunter region, and opportunities to increase local participation in renewable energy projects. For example, there are 413 businesses with capability to support the Hunter transmission supply chain (ICN 2026). Existing efforts within the Hunter to support small and medium-sized businesses include the Supply Chain Connect program delivered by HunterNet and New.E , and the Ready for Renewables workshops delivered by EnergyCo and DPIRD.

Existing organisations in the Hunter have deep transferable capability in heavy fabrication, precision machining, and industrial metal processing suitable for transmission and wind tower components. There is real market opportunity for the manufacturing of transmission towers, but weaker possibilities for other areas of the supply chain including line hardware, conductor fittings, and busbars.

Businesses capable of contributing to the transmission supply chain in the Hunter advised that they would benefit from greater visibility of the project pipeline and earlier engagement prior to procurement. Businesses also noted the benefit of local content requirements in government funded renewable energy projects, which are supported by the NSW Government's Renewable Energy Sector Board Plan (NSW Department of Climate Change, Energy, Environment and Water - DCCEEW, 2022).

Enablers

The Hunter region has a strong clean technology innovation system, with many small and medium sized enterprises (SMEs) across renewable technologies based in the region. Innovation in the sector is supported through DISR's Cooperative Research Centres (CRCs) and the University of Newcastle. There are also existing relevant skills programs in the Hunter to support transition in employment, including VET and school leaver programs with relevant training.

Furthermore, the Port of Newcastle (including the proposed Clean Energy Precinct and the Newcastle Deepwater Container Terminal) provides a major competitive advantage for future clean energy industries.

There is strong community support for manufacturing in the Hunter. The community recognises the significant benefits for employment (direct, indirect and induced), as well as the wider economic impacts.

Barriers

Industry competitiveness remains a barrier, as domestic manufacturers with higher input costs (capital, labour and energy) have struggled to compete against established global market entities with integrated supply chains. Domestically, demand for local wind turbines has been weakened recently due to declining offshore wind prospects.

Limitations on the availability of unconstrained investment-ready industrial land in the Hunter to support new renewable manufacturing companies has been flagged by some stakeholders. A number of industrial precincts are awaiting activation, with only 2 out of 12 having reached construction phase. Difficulties with planning and rezoning approvals are delaying projects, adding to the cost of doing business, and impacting the attractiveness for outside investment (Matthews 2025).

Existing Government initiatives

The Australian Government supports the growth and competitiveness of renewable energy businesses through programs such as AusIndustry, which provides tailored advice and facilitates access to grants and other support programs. This assistance helps businesses innovate, expand and invest.

Recent Government initiatives include:

- **Hunter Valley Solar Foundry** - Australian Renewable Energy Agency (ARENA) has invested $151 million in the Hunter Valley Solar Foundry project under the Solar Sunshot Program. The NSW Government has contributed a further $20m to Sunman Group's Hunter Valley Solar Foundry under the Net Zero Manufacturing Initiative (CEFC 2025). The project will establish a 500 MW per annum solar module manufacturing facility in the Hunter Valley (CEFC 2025). Construction of the facility is expected to create up to 200 jobs, with another 100 ongoing roles once operational. To support long-term workforce development, the project will also partner with an accredited training partner to deliver an advanced manufacturing training program, ensuring local workers can build capability in next-generation solar production (ARENA 2025). The project further incorporates a First Nations recruitment strategy and a scholarship program to support local students pursuing studies in renewable-energy fields.
- **Biofuel Tech Facility** - Construction and delivery of a commercial scale technology facility to produce biochar pellets or lumps to replace fossil coke in an Electric Arc Furnace (EAF) and to produce electricity from syngas produced during pyrolysis. The Australian Government has provided support of $4.8 million.

- **Industry Growth Program** – DISR provided a $2.9m grant under the Industry Growth Program to the Cardiff-based manufacturing business 3ME technology to construct and commercialise four Battery Powered Transport Trailers (DISR n.d). Hunter-based Allegro Energy received a $1.85m grant under the Industry Growth Program to scale its long-duration Redox Flow Battery to mass production (NZEA 2025).
- **NSW Government support** - The NSW Government supports the growth of renewable energy manufacturing through the Net Zero Manufacturing Initiative, Ready for Renewables workshops, and the NSW Critical Minerals and High-Tech Metals strategy. In addition, the NSW Government has also established the Development Coordination Authority and Investment Delivery Authority to support and assist proponents to navigate the planning approval pathways.

3.2 Circular Economy, Recycling and Low Carbon Liquid Fuels

The Hunter region has a significant economic opportunity to transition to a circular economy and to become a hub for low-carbon liquid fuels (LCLFs).

LCLF are one of the six priority sectors identified in the Future Made in Australia policy as having potential to contribute to emissions reduction while leveraging Australia's comparative advantages in a net zero global economy. The local production of LCLFs, including renewable hydrogen and low-carbon ammonia, will strengthen Australia's fuel security, providing a sovereign alternative to imported fossil fuels.

Sustainable Aviation Fuel (SAF) is emerging as a long-term growth opportunity with future demand coming from aviation, maritime and other hard to-electrify sectors, as overall domestic liquid fuel demand declines from around 60 GL to 20-40 GL by 2050 (DISR 2026).

Renewable hydrogen and ammonia

Renewable hydrogen is clean fuel made by splitting water into hydrogen and oxygen (through electrolysis) using renewable electricity. Hydrogen can be used to decarbonise heavy industry, power heavy transport and freight, and store bulk renewable energy for grid stability. Renewable hydrogen can be combined with nitrogen (from the air) to create renewable ammonia for use in farming with zero carbon emissions.

Hydrogen and ammonia projects have the potential to create new investment pathways that strengthen the Hunter's industrial base, research capacity, and export potential. According to a report from Oxford Economics Australia (2025a), each new project can generate over 300 new jobs and grow the Hunter economy as estimated in *Table 2*.OEA's analysis included consideration of Orica's Hunter Valley Hydrogen Hub project. A detailed breakdown is available in the report's technical appendices.

Table 2 – Estimated impact of proposed hydrogen and ammonia projects in the Hunter **(OEA 2025a)**

	Hydrogen		Ammonia	
	Construction	Ongoing	Construction	Ongoing
Investment	$1,400m	$420m p.a.	$2,900m	$464m p.a.
GVA	$248m	$136m p.a.	$394m	$282m p.a.
Employment	790 jobs	383 jobs p.a.	1,359 jobs	300 jobs p.a.

* Estimated economic impacts per project.

Biofuels and energy from waste

Biofuels are renewable energy made from organic materials such as plants, algae, and animal waste. Unlike fossil fuels that take millions of years to form, biofuels can be generated readily from feedstock like corn, sugarcane, soybeans and canola, non-food cellulosic plant waste, animal fats, and fast-growing algae. Energy can also be generated from bagasse landfill gas, wood and wood waste, sludge biogas, and municipal waste.

Australia is currently generating over 3,800 GWh of energy each year from existing biofuel and energy from waste production, making up just under 4% of Australia's clean electricity (OEA 2025b). Energy from waste facilities reduce landfill while generating power.

The Hunter can position itself as a national leader in biofuels and energy from waste by aligning industrial capability with circular economy demand. Each new biofuel and energy project can generate hundreds of new ongoing jobs as detailed in *Table 3*.

These industries can provide a practical transition opportunity for workers with transferable skills in power generation, process engineering, heavy industrial operations, maintenance, safety systems, and environmental compliance.

Existing state policy settings, including the *NSW Energy from Waste Policy Statement* and the *NSW Waste Levy*, provide a foundation for energy recovery from residual waste to be considered as an alternative to landfill.

Table 3 – Estimated impact (investment, gross value-add and employment) of proposed Biofuels and EfW Projects in the Hunter **(OEA 2025a)**

	Biofuels		Energy from Waste	
	Construction	Ongoing	Construction	Ongoing
Investment	$600m	$60m p.a.	$600m	$240m p.a.
GVA	$78m	$20m p.a.	$86m	$62m p.a.
Employment	733 jobs	103 jobs p.a.	539 jobs	385 jobs p.a.

Enablers

The Hunter's competitive advantages for biofuel include established heavy industrial infrastructure, an experienced manufacturing workforce, cutting-edge regional research capabilities, and abundant access to local agricultural, forestry, and municipal waste feedstocks.

Development of enabling infrastructure in the Hunter remains early-stage and is largely dependent on the commercial viability of emerging clean energy precincts and clean-energy businesses. NSW EnergyCo is investing heavily in upgrades to existing transmission lines and the rapid construction of new high-voltage transmission lines, including the Hunter Transmission Project (due to be completed by 2028). In addition, the Port of Newcastle provides a major competitive advantage for future clean energy industries, with opportunity for importation of feedstocks, export of recycled commodities, and potential export of sustainable biofuels and SAF. While the Port currently has limited hydrogen export infrastructure, the Clean Energy Precinct proposal includes construction of gaseous and liquid storage and export facilities suitable for hydrogen, ammonia and urea by-products.

Facilities on Kooragang Island and the Port of Newcastle provide a base for hydrogen and ammonia exports that can be scaled with targeted investment. The Hunter-Central Coast REZ delivers staged grid upgrades, supporting long-term power purchase agreements and flexible demand for electrolysers, while federal and state initiatives, including hydrogen hubs, subsidies and precinct funding provide

signals and support for first movers. Finally, federal and international demand, especially from Japan and South Korea, coupled with increased domestic renewable energy supply, and thus lower production costs, strengthen the Hunter's positioning.

Tomago's industrial estate can also be a key enabler as it provides a natural anchor for energy from waste industry, with strong grid connections and complementary heavy industry. The agricultural capacity of the Upper Hunter can also provide consistent biomass inputs. The Hunter's existing industrial workforce, including transferable skills from power generation, chemical processing and manufacturing (including of ammonia and nitrate) and process engineering, provides a talent base for energy from waste operations and technology adaptation.

Barriers

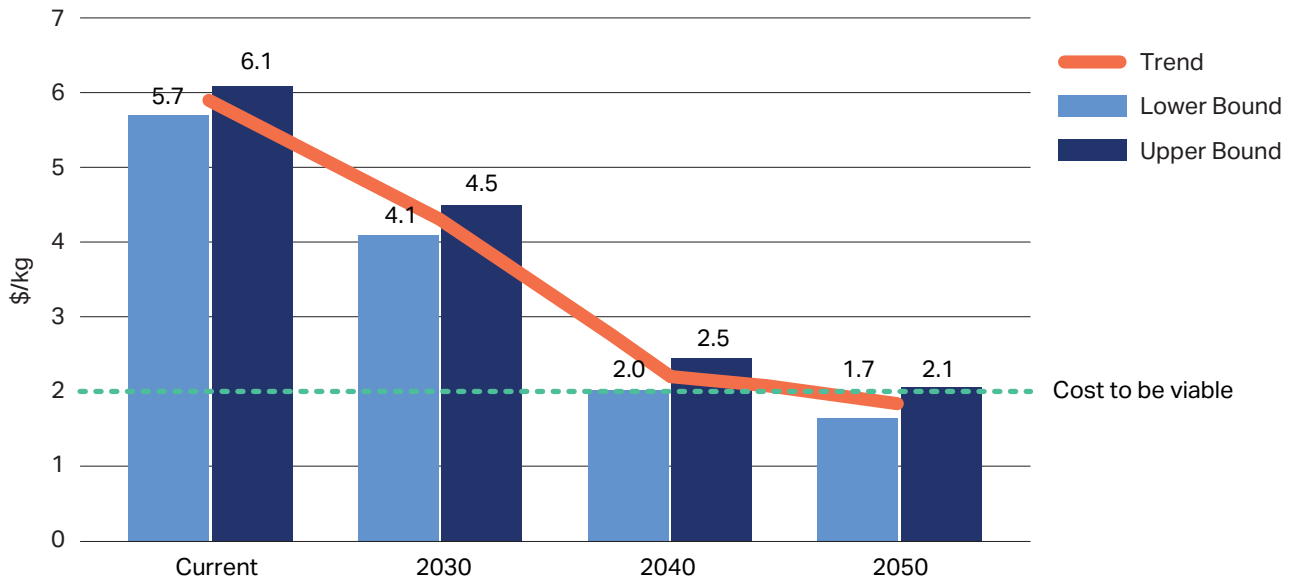
While substantial policy and investment support is underway, there remains uncertainty around the combination of policy, market and investment interventions required to support a commercially competitive domestic LCLF industry at scale.

Biofuels and energy from waste face slow licensing, fragmented feedstock chains, and community concerns.

Steps to reduce commercial risk include expanding tonnage allowances, clarifying waste rules, and carbon credit eligibility. In addition, co-location with biofuels and heavy industry can improve feedstock use and provide industrial by-products like heat and steam.

For green hydrogen, high input costs, slow market development and the risks associated with developing capital-intensive projects of this nature, have led to increased market uncertainty and industry leaders withdrawing from the region. Early opportunities lie in decarbonising existing ammonia production with average production costs forecast to decrease to an estimated $2/kg from the current $6/kg (PWC 2025). Scaling requires offtake contracts and shared infrastructure. As illustrated in *Figure 11*, costs of green hydrogen are projected to be increasingly competitive and viable by 2040-2050.

Figure 11: Australian green hydrogen production cost/kg (AUD) **(PwC 2025)**



Assumptions informing these estimates include a rapid decline in the production costs of Australian green hydrogen production, mainly driven by:

- reductions in the cost of large-scale electrolysers
- increasing efficiency of electrolysers – requiring less energy for production of hydrogen
- growing the domestic manufacturing capability – avoiding supply-chain bottlenecks in the move to GW scale
- sustained low-cost renewable electricity in Australia – available for the production of hydrogen.

Recent government initiatives

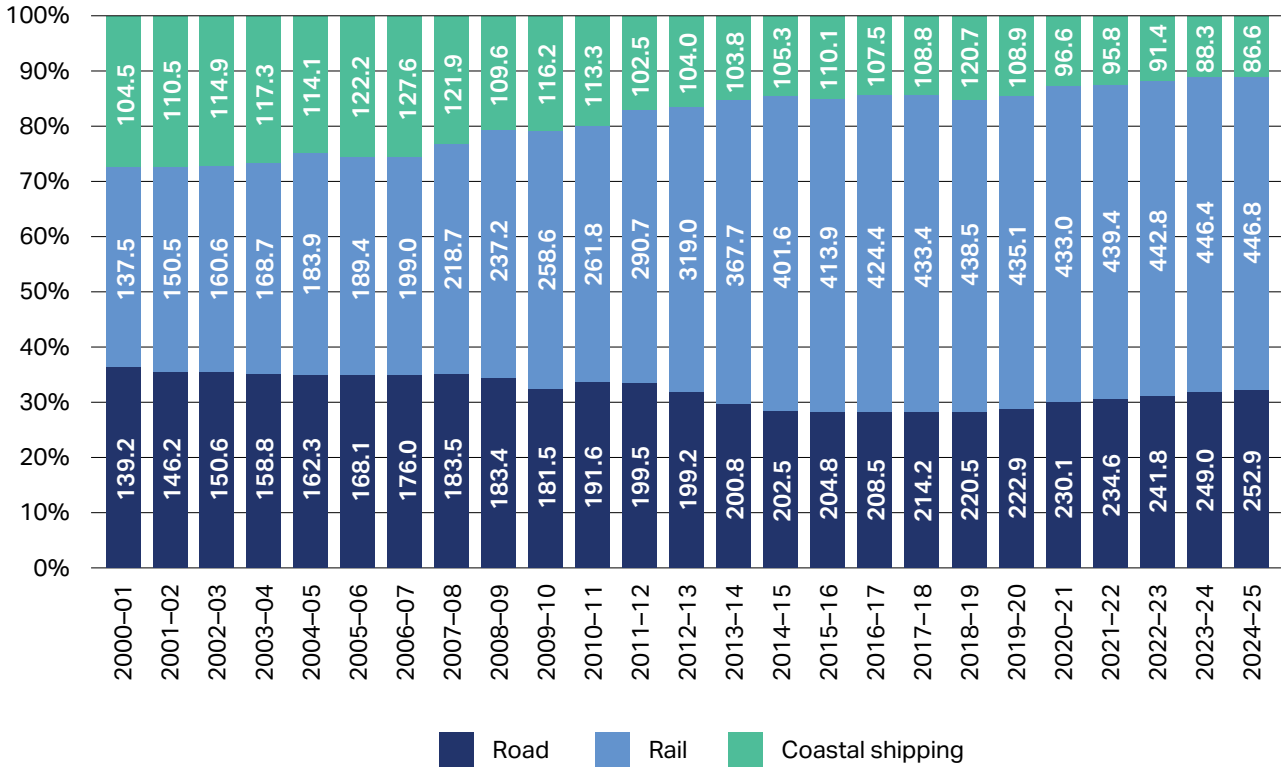
The Australian and NSW Governments are supporting the growth of the circular economy, recycling and low carbon liquid fuels in the Hunter. Some of the recent initiatives include:

- **Cleaner Fuels Program** - The Australian Government has invested $1.1billion in grant funding to support the development of a domestic low carbon liquid fuel industry (ARENA n.d.).
- **TRaCE Program** - The Australian Department of Education has invested $280 million in Trailblazer for Recycling and Clean Energy (TRaCE) to accelerate recycling and cleanenergy technology commercialisation (TraCE n.d.). TRaCE is delivered through a collaboration between the University of Newcastle and the University of NSW.
- **Hunter Valley Hydrogen Hub** - Orica's Hunter Valley Hydrogen Hub will deliver a commercial-scale renewable hydrogen production facility integrated with Orica's existing ammonia operations in the Newcastle industrial port precinct. The Hub is a first-of-its-kind project that will decarbonise one of Australia's largest industrial ammonia facilities while strengthening sovereign manufacturing capability. The project is backed by both the Australian and NSW Governments, including through $432 million in ARENA Hydrogen Headstart funding.
- **Port of Newcastle Clean Energy Precinct** -The Australian Government is investing $100 million in the Port of Newcastle Clean Energy Precinct. The project supports the transformation of a 220-hectare former industrial site on Kooragang Island into a site for hydrogen and ammonia production, energy storage and new export infrastructure. The project is forecast to create more than 5,800 jobs throughout construction and provide re-skilling opportunities for the Hunter's 16,000 Mining Equipment Technology Services workers. It will also support the production of enough renewable energy to power approximately 1.7 million average Australian households for a year.
- **NSW Government support** - The NSW Government supports the growth of renewable energy manufacturing through the Net Zero Manufacturing Initiative, Ready for Renewables workshops, and the NSW Critical Minerals and High-Tech Metals strategy. In addition, the NSW Government has also established the Development Coordination Authority and Investment Delivery Authority to support and assist proponents to navigate the planning approval pathways.

3.3 Rail and Rolling Stock Manufacturing

Rail and rolling stock demand is expected to be strong across the coming decades. Freight rail demand is growing, with 57% of all freight in Australia in 2024–25 travelling by rail, compared to 36% in 2000-01 (BITRE 2025).

Figure 12 – Total Bulk and Non–Bulk Domestic Freight by Transport Mode (billion tkm)[7] **(DITRDCSA 2025)**



There is also a renewed focus on domestic passenger rolling stock manufacturing. The NSW Government has committed $447 million to upgrade rolling stock through the Tangara Life Extension Program, which will be partially based in the Hunter, as well as $12 billion to domestic procurement for the replacement of the 445-car Tangara fleet of suburban passenger trains in NSW through the Future Fleet Program. Specifically, assembly will occur within the Hunter, and a local content requirement exists for 50% of components to be manufactured in Australia and New Zealand. Furthermore, the Millennium fleet (140 cars) and Oscar fleet (221 cars) will need replacing by the 2040s, and the Waratah fleet (952 cars) by the 2050s, on top of any additional fleets required for the expansion of the Sydney heavy rail network (Transport for NSW).

In addition, the High Speed Rail Authority (HSRA) has also started its tender process for the first two major contract packages for the Newcastle to Sydney connection, which include tunnels, civil works, an underground station and trains (HSRA 2026).

[7] A tonne-kilometre (tkm) is a unit of measurement for freight transport that equals moving one tonne of goods over a distance of one kilometre. It is calculated by multiplying the mass of the cargo in tonnes by the distance travelled in kilometres. Figure excludes air freight mode as it is relatively negligible – less than 0.5%.

Enablers

There is sufficient enabling infrastructure to support rail and rolling stock manufacturing in the Lower Hunter, while the Upper Hunter is also well-supported – provided reliable access to the Hunter Line is secured.

Planning and regulation for the industry are improving through clearer project pipelines, freight corridor planning, and more dedicated policy. The recent $12 billion investment from the NSW Government in a train manufacturing facility in the Hunter will help address the lack of long-term rolling stock procurement commitments (NSW Government 2026). There is also strong local support for rail manufacturing in the Hunter as community benefits include significant employment (direct, indirect and induced) and economic impacts, as well as some VET and school leaver programs.

Barriers

The competitiveness of the small, but established, domestic rail manufacturing industry is low, as rolling stock manufacturing is more reliant on government policy to procure from domestic suppliers. There has also been a shift to offshore manufacturing over the last 40 years, due to tariff reforms and trade liberalisation.

Access to capital for the rail-manufacturing sector in the Hunter is a previous barrier that will be overcome by the NSW Government investment in a manufacturing facility and the clear, multi-year domestic procurement pipeline that provides certainty for investors. There are limited suitable facilities to establish rail and rolling stock manufacturing in the Hunter, particularly if proposals are unable to be accommodated within existing precincts at Broadmeadow or Greta.

Key government actions

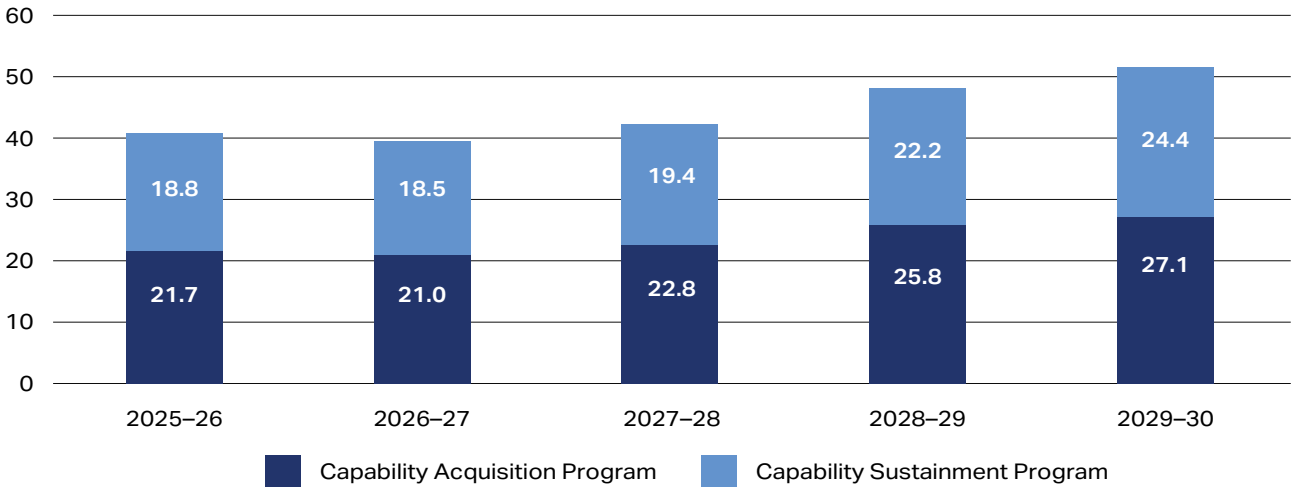
Governments are taking action to grow the rail and rolling stock manufacturing industry in the Hunter. Some of the key initiatives include:

- **Hunter train manufacturing** – The NSW Government is investing $12 billion to deliver a train manufacturing facility in the Hunter, alongside a rolling stock pipeline of 15 years. The site is expected to employ up to 780 workers in construction and 550 ongoing jobs in the facility and supply chains (NSW Government 2026).
- **High Speed Rail Authority** – The High Speed Rail Authority has received approximately $660m in Australian Government funding to-date, with recent funding of $229.6 million provided to undertake a two-year detailed planning phase for the rail line from Newcastle to Sydney.
- **The Office of National Rail Industry Coordination (ONRIC)** – ONRIC is implementing a National Rail Manufacturing Plan, which includes identifying opportunities for Australian manufacturing and developing domestic capability in priority growth areas.

3.4 Defence and Aerospace

Defence infrastructure and market demand are unlocking major investment opportunities for the Hunter in manufacturing, sustainment, and exports. The Australian Government investment in both its Capital Acquisition Program and Capability Sustainment Program is anticipated to increase from $40.5 billion to $51.5 billion annually over the four years to 2029-30 as illustrated in *Figure 13*.

Figure 13: Commonwealth Defence planned expenditure ($ billion) **(Department of Defence 2026)**



The Hunter can build on its defence industry base by leveraging skills, facilities, and supply chain depth to secure national and export opportunities.

Table 4 – Estimated Impact of Proposed Defence Projects in the Hunter **(OEA 2025a)**

	Defence Manufact.		Defence Sustainment	
	Construction	Ongoing	Construction	Ongoing
Investment	$400m	$295m p.a.	$680m	$612m p.a.
GVA	$87m	$58m p.a.	$148m	$120m p.a.
Employment	148 jobs	263 jobs p.a.	367 jobs	600 jobs p.a.

Enablers

Key enablers include the Hunter being home to over 100 defence-capable firms across advanced manufacturing, aerospace, maritime, and cybersecurity, with more than 600 additional firms expressing interest in the region. The region also plays a vital role in defence sustainment, with BAE Systems maintaining the F-35 program, a capability that contributes more than $57 million in direct GDP to NSW each year (OEA 2025a). In addition, the Hunter benefits from nationally significant infrastructure, including Newcastle Airport (which has scheduled upgrades), the RAAF Base Williamtown, Astra Aerolab and Port of Newcastle. These assets underpin aviation, naval, aerospace and logistics capabilities and offer clear expansion potential. Furthermore, proximity to the University of Newcastle, TAFE and specialist defence training SMEs (e.g. AVS) supports workforce scaling, skilling and retention to meet growing industry demand.

Barriers

The transition away from priority precinct status has altered the planning context for Williamtown, while long contracting cycles, clearance delays, and regulatory complexity raise entry costs. Defence sustainment remains strong, anchored by BAE's F-35 program and national assets at Williamtown, Astra Aerolab, and Newcastle Port, but investment hinges on streamlined funding coordination, training expansion, and precinct upgrades.

Recent Government initiatives

Governments are supporting the growth of the defence and aerospace industry in the Hunter. Key initiatives include the Defence Future Energy Strategy, Defence Industry Development Grants, and Space Concession Program. Some specific investments in the Hunter region include:

- **$850m investment in missile manufacturing** – The Australian Government has invested $850m to Kongsberg Defence Australia to manufacture and service missiles at Williamtown near Newcastle. The project is expected to generate more than 500 jobs in the construction phase and almost $100m in economic benefits to the local area. Once complete, the factory is expected to employ approximately 100 people (Department of Defence 2024).
- **$210m investment in an F-35 sustainment hub** – $210m has been committed to BAE Systems Australia to equip Newcastle Airport with an F-35 aircraft sustainment hub (Department of Defence 2023).
- **$500m investment in a Joint Air Battle Management System** – Lockheed Martin has a $500m contract with the Department of Defence to build Australia's future Joint Air Battle Management System, which generate 230 jobs across Adelaide, Williamtown and Canberra, as well as 300 indirect jobs across the air and missile defence supply chain (Department of Defence 2024).
- **$176m investment from the Australian Government** to build 40 uncrewed surface vessels. This investment will create 50 jobs at Ocius's new advanced manufacturing facility in Sydney, supported by a second production site in the Hunter region, and an extensive Australian supply chain (Department of Defence 2026).

In addition to these initiatives, the NSW Government supports the Defence Innovation Network, and Investment NSW is a funding partner for the Hunter Defence Task Force, further supporting and building local supply chain capabilities.

3.5 Value-add agriculture

Demand for Australian food and beverage manufacturing is strong, with opportunities to increase local manufacturers' domestic market share and expand into emerging international markets, with exports increasing from $40.8b in 2014-15 to $65.8b in 2022-23. The Hunter has also relatively good access to domestic markets thanks to its proximity to Newcastle, Central Coast and Sydney metropolitan areas, and to international markets thanks to the Port of Newcastle and Newcastle Airport.

Enablers

The Hunter region has strong transport and export links, emerging skills infrastructure, and strategic regional planning – forming a solid foundation for local and export markets. In addition, there is strong local support for value-add agriculture in the Hunter. Community benefits include a significant employment (direct, indirect and induced) and economic impact, as well as some VET and school leaver programs. In addition, the supply chain is generally strong for value-add agriculture in the Hunter region with proximity to suppliers of meat products, grain mill and cereal products, seafood processing and beverage manufacturing.

Furthermore, the region's well developed road network facilitates efficient movement of raw materials and processed goods via the Pacific Motorway and Hunter Expressway. In addition, high-quality rail infrastructure connects the Hunter to national freight lines, enabling bulk movements. Upgraded runways and improved infrastructure at Newcastle Airport increase potential for export opportunities, particularly for high-value, time-sensitive food products. Proximity to the Port of Newcastle gives manufacturers direct access to international shipping.

Barriers

The lack of investment-ready industrial land has been flagged by some stakeholders as a key barrier to industrial growth in the region. However, emerging large precincts such as the AGL Hunter Energy Hub at Bayswater/Liddell, are suitable for food processing lines, refrigeration, cleaning systems and quality control labs.

In addition, Australia's competitiveness is declining across regulation, labour markets, the rule of law, and business taxation. For food and beverage manufacturers, regulatory layering is particularly challenging, as facilities must navigate environmental approvals, food safety regimes, labelling standards, workplace laws, biosecurity compliance and, increasingly, ESG reporting obligations. Delays in planning approvals or environmental permits can materially impact project timelines and returns.

Recent government initiatives

Governments are supporting the growth of value-added agriculture through initiatives that encourage food and fibre processing, product innovation, research commercialisation and export market development. Recent government initiatives include the:

- **National Reconstruction Fund (NRF)** – The Australian Government has reserved $500 million through the NRF for value-adding in agriculture, forestry, fisheries, food and fibre industries (DAFF 2026).
- **Research and innovation capacity** is being strengthened through the FaBA, which receives $50 million in Australian Government funding under the Trailblazer Universities Program to support the commercialisation of food and beverage innovations (Department of Education 2026; University of Queensland n.d.).
- **Accessing New Markets Initiative** – In NSW, the $55 million Accessing New Markets Initiative, including the Going Global Export Program, provides targeted support for agrifood businesses seeking to build export capability and enter priority overseas markets (Australian Trade and Investment Commission n.d.; NSW Government n.d.).

In addition, the NSW Department of Primary Industries and Regional Development (DPIRD) has identified the Hunter as one of several priority regional locations for plant-based protein manufacturing investment. The prospectus highlights opportunities to transform agricultural commodities into higher-value food ingredients, protein concentrates and alternative protein products through regional processing and advanced manufacturing (NSW Government 2025; Invest Regional NSW n.d.).

4. Insights to inform action

This chapter captures insights to inform action based on international best practise, research into new opportunities and expert advice from Hunter stakeholders.

Learnings from previous experiences in Australia as well as research by the NZEA into international case studies indicate that we need to do the right actions at the right time to support the economic transition. This includes activating industrial precincts early, attracting strategic investment, facilitating workforce transition, empowering First Nations participation and build understanding, engagement and collaboration. The full report by *Urbis on international case studies for place-based industrial policy* is available on the NZEA website.

An analysis of each of these priority areas is provided in the sections below, highlighting where coordinated effort, investment and partnerships can improve the enabling conditions for industry growth and new job creation.

4.1 Activate industrial precincts and enabling infrastructure

Industrial precincts are a core strategy for industry growth in the Hunter. Clustering businesses delivers economic efficiencies through sharing infrastructure, attracting investment, streamlining supply chains and co-locating skilled workers.

The NZEA has identified that there is a need to activate new industrial precincts to host priority industries and support new industrial ecosystems to develop. Several new industrial precincts are already emerging, but planning, regulatory, infrastructure, tenant attraction and other supports are needed.

In particular, mining and industrial land re-use offers a strategic opportunity to locate new industries in places where common user infrastructure, utility connections and a skilled workforce already exist. Unlocking productive re-use of former mines and industrial sites can provide the Hunter with a competitive advantage to attract new industries and support local jobs, and deliver positive environmental outcomes as a substitute to greenfield development.

Priority opportunities for industrial precinct development in the Hunter include:

- **AGL Hunter Energy Hub** – a base for development of clean energy and circular economy manufacturing, and source of future industrial jobs in the Upper Hunter as coal mining declines.
- **AstraAerolab at Newcastle Airport** – a base to grow defence industries, advanced manufacturing, and possibly value-add agriculture.
- **Teralba or Broadmeadow** – a base for rail-related manufacturing.
- **Port of Newcastle Clean Energy Precinct** – production, storage, and export of clean energy products, including hydrogen and ammonia.

Industry and stakeholders in the Hunter are leading on driving further development of industrial precincts and are looking for governments to back the effort and bring it to scale. Government supports can help at each stage of precinct activation, as indicated in *Table 5*.

Table 5: Government role in precinct activation

Areas of effort to successfully activate an industrial precinct	Potential roles for governments, alongside industry
Precinct planning – master-planning, engineering studies, structure plans, development approval processes, etc.	◆ (co)funding planning work ◆ planning/zoning changes, environmental and planning approvals
Site development – enabling infrastructure, other capital works	◆ concessional debt/equity – for precincts operated on a commercial basis ◆ public ownership or grants – for trunk and other public infrastructure
Tenant/investment attraction – particularly anchor projects/primes to catalyse industrial ecosystem growth	◆ develop and support delivery of investment attraction campaigns ◆ project concierge supports ◆ pre-feasibility project development supports ◆ project supports – concessional debt, equity, and/or grant supports ◆ demand-side supports – govt procurement, local content expectations ◆ regulatory approvals
Local supply and value chain development – enable, and maximise the local benefits of, industrial growth	◆ local supply chain capability mapping and opportunity promotion ◆ business capability and development supports ◆ innovation and commercialisation supports ◆ local content expectations/requirements
Workforce development and transition – to meet growth industry needs, and generate jobs for the future, including for workers transitioning from fossil fuel industries	◆ Information and analysis on workforce capability needs of growth industries, and skills pathways ◆ develop and promote skills pathways for transitioning workers ◆ workforce and skills development programs – government funded, universities and TAFE ◆ NZEA Energy Industry Jobs Plan and NSW Future Jobs and Investment Authority – standards and supports for transitioning fossil fuel industry workforce

Analysis commissioned by the NZEA and NSW DPIRD has identified that renewables manufacturing and recycling is the AGL Hunter Energy Hub's most immediate industrial opportunity, with several target uses already under feasibility assessment. Conversion from feasibility to committed development depends on the planning and servicing conditions.

Astra Aerolab has progressed beyond early validation and is moving through staged activation. Analysis commissioned by the NZEA and DPIRD has identified constraints across approvals, defence and aviation operating requirements, servicing, international connectivity and specialist workforce capacity. This provides an opportunity for improved government coordination, funding support, facilitation or regulatory clarity to help unblock progress.

The Port of Newcastle's Clean Energy Precinct could serve as nationally significant infrastructure for Australia's emerging clean energy economy, supporting new low-emissions industrial activity, export capability and broader decarbonisation objectives. Analysis commissioned by the NZEA and DPIRD has identified constraints in development approval and consent certainty, offsite enabling infrastructure, certification and market access, commercial feasibility, and workforce capability that will need to be addressed to support the activation of the Precinct.

As identified in the Delivery Program, the NZEA will give particular focus in the short term to supporting key industrial precincts in the Hunter including AGL's Hunter Energy Hub, a site for rail-related manufacturing, and Astra Aerolab. The NZEA will also support other developing industrial precincts, with a particular focus on the productive reuse of mine and power station lands.

4.2 Secure investment and business development

Industry growth and innovation rely on investment. Learnings from international case studies indicate a wide range of successful government action is being taken to provide certainty for investors and facilitate business development.

Financial tools to provide certainty for investors

Around the world, there are a number of financial tools deployed by governments to encourage new business development and create new jobs. Key findings from research undertaken by Urbis (2026) include:

- **Direct grants** are the most common funding mechanism across place-based industrial policies. They are typically used to de-risk early-stage investment, develop enabling infrastructure and build foundational industry capability in emerging sectors.
- **Enabling Infrastructure** - shared testing, demonstration and commercialisation infrastructure can be as important as direct funding. Dedicated translational institutions help bridge the gap between research and market deployment by reducing technical, commercial and investment risk for industry.
- **Risk-sharing mechanisms** are widely used to mobilise private investment. Tax incentives, co-funding arrangements, concessional finance and public investment are often combined to crowd in private capital and support large-scale industrial development.
- **Market creation mechanisms** provide investment certainty for strategic industries. Long-term procurement, offtake arrangements, government-backed demand and supportive regulatory settings help create the confidence required for industry investment and expansion.
- **Place-based solutions** - No single funding model is universally successful. Effective funding approaches are tailored to industry maturity, market readiness and regional circumstances, with the strongest examples combining multiple complementary mechanisms to address specific market failures and transition challenges.

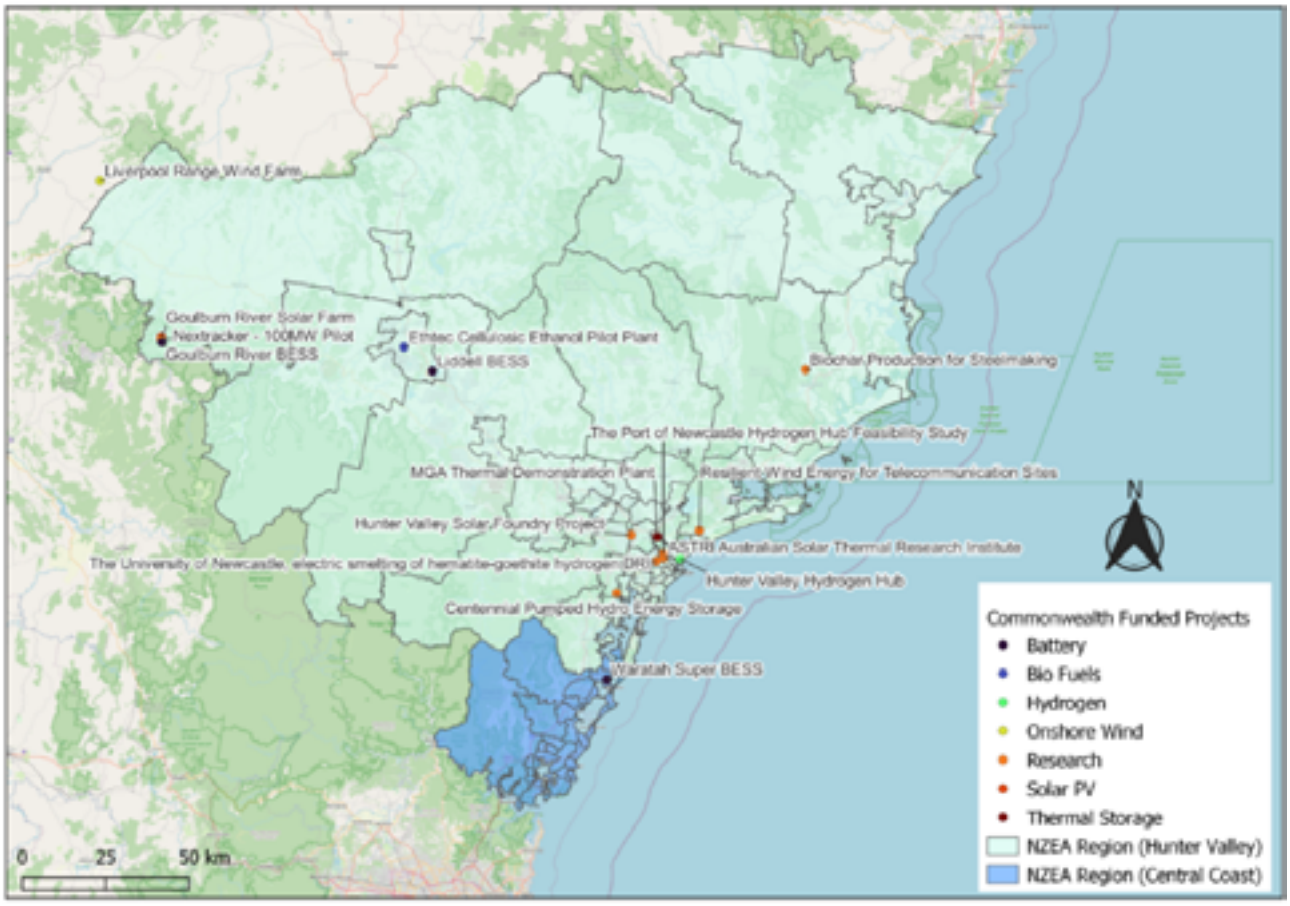
Demand-side supports

Industry growth can also be supported through demand-side policy settings, including procurement, offtake, certification, product standards and customer engagement. Consideration of stronger demand signals can help reduce the risk that existing industry support mechanisms strengthen production capacity without ensuring there is a sufficient market for these products.

Net Zero Investments

The Australian Government has invested over $1.7 billion in the Hunter region to progress net zero related projects. This includes $35 million to support the construction and operation of a 500 MW / 1000 MWh battery with advanced inverters at the retired Liddell Power Station in Muswellbrook. Construction of the battery is complete and is now in its commissioning phase (AGL n.d.). *Figure 14* shows the distribution of these projects across the Hunter.

Figure 14: Australian Government funded net zero projects in the Hunter– current & proposed **(Net Zero Investment Map July 2026)**



The Hunter is positioned to be a competitive renewables manufacturer over the long-term given its renewable energy potential and strategic location. The region is a gateway for accessing international markets, with established trade relationships and port infrastructure.

There is an established, growing customer base for renewable energy technologies in the Hunter. Local demand is spurred by the Hunter renewable energy zone (REZ), and proximity to two other REZs, as well as growing residential development. Household solar and battery penetration in the Hunter is high, so local demand is growing.

There are national challenges to investment and opportunities to provide greater certainty for investors. Domestic manufacturers struggle to compete with established global market players due to high startup and input costs. The Australian Government is currently supporting market development through sector-specific initiatives such as ARENA's $1 billion Solar Sunshot program and the Future Made in Australia Innovation fund, which provides $1.5 billion in grant funding for renewable energy and low emission technologies critical to Australia's renewable energy transition.

However, the NZEA has identified there is a need to attract more projects in the Hunter, particularly anchor projects that can help catalyse growth, along with supports for local businesses to pursue supply chain opportunities and to commercialise innovation.

In light of this, the Hunter Delivery Program includes targeted activities aimed at creating confidence in the region's growth opportunities, helping businesses and investors navigate the transition, and managing the localised impacts of the transition. This includes proactively attracting and securing investment into priority industries, capitalising on the Australian Government's Investor Front Door to attract and support major projects in the Hunter, providing targeted support to progress projects in priority industries and precincts, as well as helping local businesses identify and pursue emerging supply chain opportunities.

4.3 Facilitate workforce transition and development

As identified in Chapter 2 of this Report, a number of coal-fired power stations and associated mines in the Hunter region will close over the coming decades. Ensuring this shift is as fair and orderly as possible necessitates helping impacted workers move into new industries, access training and reskilling opportunities, and receive career and financial guidance so they can make informed decisions about their future. There is also a need to position new workforce entrants for future opportunities.

To help facilitate the transition and development of impacted workers, as well as develop the workforce needed for future industries, governments are taking a number of initiatives. For example:

- On 26 March 2026, the CEO of the NZEA made an application to the Fair Work Commission (FWC) to formally establish the Energy Industry Jobs Plan (EIJP) for the Eraring Power station to support workers affected by the closure.
- The NZEA is also developing a package of redeployment supports including regionally based EIJP Jobs Coordinators, an Online Jobs Board and delivering a grants program that will assist the redeployment of workers across closures where the FWC has made a determination to establish the EIJP.
- A range of regionally responsive skills and employment supports are being designed and delivered by Australian Government and State agencies, TAFE NSW and the University of Newcastle, to support workforce transition and meet future industry need. This includes the development of a Hunter Regional Workforce Transition Plan and Transitioning Workforce Fund by the Department of Employment and Workplace Relations.

The NSW Future Jobs and Investment Authority will also have a role in supporting workers in coal communities, such as the Hunter.

However, better information about current and future workforce needs can complement these efforts. Analysis by the NZEA, as well as consultation with workers, unions and employers through EIJP processes, has identified that there is limited guidance on regionally specific career transition options and pathways for transitioning workers. There is also a need for the profiling of skills required by new industries, which can inform education, skills and training program design.

To that end, the NZEA is creating information products which articulate transition pathways based on the skills, qualifications and capabilities typically held by workers in fossil fuel power station jobs. Through the Delivery Program, the NZEA is also seeking to develop Industry Workforce Plans, profiling future jobs, skills required, and training pathways in select priority industries such as defence industries, clean energy manufacturing and value-add agriculture.

4.4 Empower First Nations participation

As the Hunter transitions, there is a strong drive from First Nations people, communities and businesses to participate in and benefit from emerging economic opportunities. This priority area focuses on supporting First Nations self-determined participation in the transition and ensuring that economic, employment, social and cultural benefits are realised by First Nations communities.

International learnings reviewed by the NZEA highlight that enduring First Nations participation is strongest where governance, capability development, workforce pathways and economic opportunities are designed with First Nations communities and supported by Indigenous-led decision making processes. This includes lessons from Canada's Wah-ila-toos initiative, which supports indigenous participation and ownership through clean energy projects through dedicated funding and capacity building and New Zealand's focus on strengthening the Māori economy, including investment in Māori enterprise, workforce development and partnerships that support self-determined economic growth. These learnings demonstrate the importance of building long-term capability, supporting community-led initiatives and creating pathways for First Nations people to participate and benefit from emerging industries. The full report is available on the NZEA website: Research and Global Case Studies of Industrial and Innovation Place-Based Policies | Net Zero Economy Authority

The NZEA has developed a First Nations Action Plan in partnership with national First Nations peak bodies and commenced engagement with First Nations communities across the Hunter. The NZEA has engaged with approximately 70 First Nations stakeholders, including Local Aboriginal Land Councils, Aboriginal Corporations, Aboriginal Community Controlled Organisations and Indigenous-owned businesses, to better understand transition priorities and opportunities.

Through this engagement, the NZEA is working to identify transition-related economic and employment opportunities and their intersection with First Nations rights, interests and aspirations, support capability-building to enable participation in emerging industries, facilitate knowledge exchange with First Nations communities in other transition regions, and strengthen opportunities for self-determined participation and benefit sharing.

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Hunter Region First Nations Community Snapshot

Region by Numbers	
Population	47,867 (6.9%)
Median Age	22 ↓
Median Household Income	$1,745 ↑
Tertiary Attainment[1]	39.3% ↓
Unemployment Rate[2]	9.5% ↑
Top Occupations	
• Community & personal services	2,760
• Technicians & trades	2,423
• Laborers	2,283
Relevant Industries	
• Construction	1,364
• Mining	865
• Manufacturing	728
Indigenous Businesses[3]	> 311
Aboriginal Community Controlled Organisations (ACCOs)	> 70

Traditional Owners

- **Awabakal** (4 clan groups)
- **Darkinyung**
- **Gaewegal**
- **Wonnarua/Wanaruah**
- **Worimi** (18 clan groups)

Land Use

Worimi Conservation Lands Joint Management Program (national parkland)
Worimi LALC - Ownership of Crown Land at Anna Bay[4]
NSW Local Land Services - Aboriginal Community Advisory Group (ACAG)

Native Title & LALCs

Awabakal LALC (Newcastle)
Bahtabah LALC (East Lake Macquarie)
Biraban LALC (West Lake Macquarie)
Mindaribba LALC (Maitland/Cessnock)
Wanaruah LALC (Musswellbrook/ Singleton)
Worimi LALC (Port Stephens)
Darkinjung LALC (Central Coast)

Business & Enterprise

Key Business Sectors
- Construction
- Facilities Management
- Education & Training

Tourism:
- Muurrung Marai walking tours
- Worimi sand dune adventures
- Culinary Social Enterprises

Advisory/Support:
- NSW IBC Hunter Regional Business Hub
- Ungooroo Aboriginal Business Advisory Initiative
- Yarpa Indigenous Business & Employment Hub

Grant Programs:
- Aboriginal Affairs NSW - Cultural Grants Program 2024-2025
- NSWALC Small Community Grants
- NSW Aboriginal Economic Development and Business Growth Program: Booma Food Group & Winjirra Events

1 Percentage of First Nations people aged 15 years and older who have completed Certificate III or higher qualification
2 Percentage of First Nations people aged 15 years and older in the labour force that are unemployed
3 Supply Nation registered and certified businesses within 100km of Newcastle
4 Claimed under the Aboriginal Land Rights Act 1983 (NSW)

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In supporting First Nations Communities in the Hunter, it is critical to:

- Recognise and support the right to self-determined participation and benefit realisation through practical activities that:
  - Facilitate the right of First Nations people to be self-determining (including the right of Free, Prior, and Informed Consent) in matters that impact their land, waters and communities.
  - Support First Nations people to participate in the transition and realise economic, social, environmental and cultural benefits as defined by them.
- Inform and influence government, non-government and private sector policies and practices to:
  - Increase investment in First Nations led initiatives.
  - Increase energy security for First Nations communities, particularly those whose access is impacted by systems issues such as remote location or financial barriers.
- Measure, monitor and report on First Nations participation and benefit sharing in the net zero transition.

Initially the NZEA focus is on building our understanding of First Nations businesses, industries and economic opportunities in the Hunter. Through ongoing engagement with First Nations communities and implementation of the Hunter Delivery Program, the NZEA will continue to refine its intelligence, identify practical actions and support First Nations leadership throughout the region's transition.

4.5 Building understanding, engagement and collaboration

The successful delivery of the net zero transition depends not only on investment and industry development but also on community understanding, engagement and collaboration. The NZEA commissioned community sentiment research found that the Hunter has some of the highest levels of awareness and understanding of the transition of any priority region, with 73-78% of residents aware of the transition and 67-72% demonstrating an understanding of what happens to workers when power stations close. Stakeholders identified the need for strong and consistent communication focused on filling knowledge gaps and responding to regional concerns.

Research undertaken on regional economic transitions across the world suggests that strong coordination, trusted relationships and ongoing engagement are important enablers of successful place-based approaches (Urbis unpublished). Regions that have successfully managed industrial change have typically established clear mechanisms for collaboration between governments, industry and communities, while investing in communication, workforce pathways and local partnerships to help communities understand and participate in change. The findings of this research demonstrate that community confidence is strengthened when people can see tangible local benefits and have clear opportunities to contribute to shaping their region's future.

Consistent with these findings, the NZEA is strengthening its place-based approach in the Hunter by expanding its regional presence and supporting opportunities for collaboration across government, industry and the community. This includes establishing a Hunter Stakeholder Coordination Group, developing a regional communications strategy, supporting education and awareness initiatives such as Net: Zed's Transitioning Economies program, and facilitating knowledge sharing with international partners.

Together, these actions aim to build understanding of the transition, strengthen regional and cross-governmental partnerships, and increase community confidence in the opportunities emerging from the Hunter's future economy.

5. Hunter delivery partners and community priorities

5.1 Engagement to inform the Hunter Delivery Program

The Hunter Delivery Program is informed by stakeholder engagement, First Nations engagement and community sentiment research undertaken across the region.

Engagement was conducted to understand the opportunities, challenges and support required to help workers, businesses and communities navigate the transition to a net zero economy.

The engagement process focused on workforce transition, economic diversification and ensuring local communities benefit from the investment and growth opportunities associated with the transition. The findings have informed the development and prioritisation of actions within the Hunter Delivery Program.

In addition to regional stakeholder engagement (see detail below), the NZEA also consulted with federal and state government agencies, and established an ongoing stakeholder consultation mechanism namely, the Hunter Advisory Committee. All levels of government and Committee members were given the opportunity to review and inform the Hunter Delivery Program.

Implementation of the Delivery Program will require ongoing collaboration between the Australian Government, State and local governments, industry, unions, education providers, First Nations organisations, community organisations and other regional partners to coordinate investment and deliver outcomes for the region. See Chapter 6 – Monitoring and Evaluation, for more detail.

5.2 Key issues and community priorities identified through engagement

Across engagement activities, stakeholders consistently identified four key priorities for the Hunter region's transition:

- Workforce support
- Economic development opportunities
- Community participation and local benefits, and
- First Nations inclusion and economic empowerment.

These priorities have informed the actions contained in the Hunter Delivery Program.

5.3 Regional Stakeholder Engagement

To better understand regional priorities and identify practical actions, the NZEA engaged with government, industry, unions, education providers, community organisations, First Nations groups and other stakeholders.

Through workshops held in Singleton and Lake Macquarie, and a dedicated First Nations workshop in Newcastle, approximately 160 participants identified opportunities, challenges and support needs associated with the Hunter's transition.

Stakeholder feedback reinforced the importance of workforce transition, economic diversification and ensuring communities benefit from investment and growth. Participants highlighted opportunities to build on the region's existing strengths, particularly in renewable energy and the circular economy, construction and infrastructure, health and social care, tourism, defence and advanced manufacturing, and education and training.

Stakeholder feedback has directly informed the development of the Hunter Delivery Program. For example, participants called for the development of "a clear, coherent regional action plan with clear actions, defined targets, aligned investments, and accountability for delivery". The development of the Hunter Delivery Program responds directly to this request by providing a coordinated framework to translates regional priorities into practical, deliverable actions, helping to align investment and guide implementation to support the Hunter's economic transition.

Stakeholders also identified the need to "develop a plan to coordinate investment with a focus on investment attraction to the region". This is reflected in the Delivery Program action to "develop and deliver an investment attraction campaign for emerging industrial precincts." The NZEA has already commenced work in this area through the development of the Hunter Investment Prospectus in partnership with the NSW Government, supporting regional economic development and industry growth.

Participants further highlighted the importance of establishing ongoing regional governance and engagement arrangements, including a regional advisory group to provide governments with a coordinated source of regional advice. This feedback has informed the Delivery Program action to establish a Hunter stakeholder coordination group to help define, drive and oversee efforts to manage the region's transition.

6. Monitoring and evaluation

Monitoring and evaluation of the implementation of the actions in the Hunter Delivery Program, as well as the broader changes experienced across the Hunter through the transition will help all levels of governments better understand the areas progressing and those in need of more focus as the transition progresses.

Drawing on the approach adopted by the Greater Barrier Reef Marine Park Authority to the Reef 2050 Plan, the NZEA will regularly release a Hunter Delivery Program activities report which will provide an overview of the steps taken to implement the actions from the Delivery Program. This will include opportunities for stakeholder feedback on the implementation process, the actions themselves, and any lessons learned.

As part of the monitoring and evaluation process, the NZEA will engage with federal and state government agencies, regional businesses and community organisations, and broader stakeholders, providing regular updates to the Hunter Advisory Committee. Data and progress will also be updated to ensure an ongoing robust, evidence-based, approach.

In addition to the activities report the NZEA will monitor key metrics that will inform how the transition is progressing with respect to:

- The economy
- Workers
- Industries
- Investment
- First Nations, and
- The net zero transition.

The initial metrics are available from the NZEA website at nzea.gov.au. The NZEA will seek to expand on these metrics as it continues to develop a broader transition monitoring and reporting framework for its priority regions.

This approach complements existing reporting on the Hunter, including the Hunter regional profiles developed by the NZEA that provide key information. Bringing together key metrics from different sources in a single location will support better engagement, decision-making and planning. This will include:

- a summary of why the region was selected
- key carbon-intensive industries
- major industries and sectors
- significant investment projects
- energy and transmission infrastructure
- workforce information
- population and demographics, and
- housing and accommodation insights.

This approach will allow the NZEA to respond to changing economic conditions, emerging opportunities, and stakeholder feedback, ensuring actions continue to accelerate the industrial transition and deliver measurable economic, environmental and social outcomes.

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