OXFORD ECONOMICS AUSTRALIA

Regional Economic Transition Analysis – Regional Investment in the Latrobe Valley

Final report

December 2025

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To discuss the report further please contact:

Emily Dabbs

Head of Macroeconomic Consulting, ANZ

edabbs@oxfordeconomics.com

Level 6, 95 Pitt St Sydney, Sydney, 2000, NSW

Tel: +61 424 389 909

EXECUTIVE SUMMARY

KEY FINDINGS

Latrobe Valley's resource base and energy infrastructure give it a unique advantage.

- Electricity, gas, water, and waste services remain central to Latrobe's economy (~16% of value added), reflecting its legacy as Victoria's power generation hub, supported by extensive grid infrastructure, brownfield assets, and skilled energy workers.
- Mining and supporting industries continue to underpin the region's industrial profile, alongside major employers in health, education, and public administration, which sustain workforce demand.
- Latrobe's role as Victoria's transmission backbone, its proximity to the Gippsland Offshore Wind Zone, and existing energy infrastructure position it for emerging net zero opportunities.

New opportunities are emerging, but must build on the existing workforce and industry base.

- The decline of coal-fired generation is reshaping Latrobe's economy, but transferable skills in trades, engineering, and plant operations can pivot.
- Renewable opportunities include offshore wind, geothermal energy and large-scale batteries, supported by Latrobe's existing substations.
- Industrial diversification potential exists in waste-to-energy, bioenergy, hydrogen, and CCS, which can repurpose legacy assets and create circular economy value.
- Gippsland's agricultural base and Latrobe's industrial land can expand value-added processing & packaging.

Major projects are underway or planned in energy, infrastructure, and regional innovation.

- Over a dozen projects feature in Latrobe's pipeline, including the Delburn Wind Farm, Wooreen Battery Energy Storage System, Latrobe Magnesium, and the CarbonNet CCS project.
- Projects such as Marinus Link and Star of the South have the potential to deliver thousands of job in the broader Latrobe and Gippsland region, supporting Latrobe's opportunity as Victoria's energy transition hub.
- Precincts such as the Morwell Innovation Precinct, Gippsland Logistics and Manufacturing Precinct (GLaMP), and the Latrobe Aerospace Precinct add to the region's diversification capacity.

Offshore wind, food and fibre, and logistics present key opportunities.

- Latrobe can specialise in generator and gearbox overhauls, HV transmission works, and long-term operations and maintenance services for offshore wind once projects are operational from 2032.
- Its proximity to Gippsland producers, combined with available industrial land and potential for cold-chain facilities, supports near-term opportunities in food and fibre processing, packaging, and exports.
- The Gippsland Logistics and Manufacturing Precinct (GLaMP) in Morwell provides a foundation for intermodal freight, clean transport hubs, and regional consolidation of Gippsland's food and fibre exports.

Barriers to investment remain, particularly in infrastructure and workforce transition.

- Uncertainty around demand signals, long lead times (e.g. offshore wind approvals), and complex regulatory pathways limit investor confidence.
- Energy, transport, and logistics gaps will need to be addressed to support continued growth, while the lack of a nearby port constrains accessibility.
- Skills shortages in energy technologies, logistics, and processing are a key constraint, although Latrobe's strong vocational base and transferable industrial workforce offer a foundation for reskilling.

Latrobe's strategic plans show ambition, but need stronger alignment across government.

- State strategies (e.g. Victorian Offshore Wind Implementation Statement, Victorian Energy Jobs Plan) and local documents (Latrobe – Our Transition, Regional Development Aspirations) identify clear opportunities in energy, bioenergy, food, and logistics.
- However, gaps remain in infrastructure sequencing, cross-tier coordination, and governance structures, with delivery often reliant on under-resourced local strategies.
- Stronger integration of local, state, and federal priorities, alongside costed and sequenced delivery plans, will be critical to converting opportunities into realised projects.

INTRODUCTION

NZEA has engaged Oxford Economics to support evidence-based action in transition-affected regions.

Project Overview

The Net Zero Economy Authority (NZEA) commissioned this project to understand opportunities presented by the net zero transition for regional communities. There are a number of regions central to Australia's energy system and industrial base that face disproportionate exposure to structural shifts as emissions-intensive activities decline. The Hunter, Central Queensland and Latrobe Valley were prioritised for this project due to the size and complexity of their region and economies, but the analytical framework can be deployed in other regions. These regions also present opportunities to lead in clean energy generation, advanced manufacturing, and resource-based value-adding, provided that the right policy, investment and workforce conditions are in place. The project seeks to inform strategic planning and intervention by forecasting how regional economies will evolve under different decarbonisation scenarios.

Oxford Economics was engaged to deliver a structured, scenario-led analysis across three core domains. These include forward-looking forecasts of industry and labour market change, an assessment of each region's comparative advantages and investment potential, and a detailed examination of transition pathways for fossil fuel and related workers. The analytical framework integrates AEMO's 2025 transition scenarios with regional planning assumptions, closure timelines, and infrastructure settings to ensure alignment with real-world transition drivers. Regional priorities and economic exposures have been informed by the NZEA's own statistical framework, which identifies both downside risks and economic opportunities across Australia's key regions.[1] The analytical framework used within this project can be deployed across other NZEA priority regions beyond the Hunter, Central Queensland and Latrobe Valley.

The project aims to generate region-specific insights that can support practical decision-making across multiple levels of government. By quantifying the scale and timing of industrial change, identifying investment barriers, and mapping reskilling needs, the work creates an evidence base that links long-term economic modelling with near-term policy and program levers. This enables a more coordinated approach to managing transition risk while positioning each region to attract and retain high-value activity.

This work provides a foundation for coordinated, place-based action across governments, industry and communities. Outputs will support the NZEA's role in shaping policy, allocating resources, and engaging stakeholders on transition risks and opportunities. By identifying emerging demand for labour and skills, sectoral growth trajectories, and enablers of investment readiness, the project aims to assist in sequencing investment, workforce support and infrastructure development. Ultimately, the analysis will help ensure that transition efforts are locally grounded, forward-looking, and capable of delivering resilient and inclusive economic outcomes.

Project Components

The project was structured into three core analytical components to align with NZEA's transition objectives. Each stream was applied consistently across the Hunter, Central Queensland, and Latrobe Valley regions. Separate reports were developed for each component in each region to ensure depth, comparability, and regional specificity. In addition, a summary report has been developed synthesizing the key insights across all three project components.

Regional Economic Forecasts

This stream provides scenario-based projections of industry composition, employment, and skills demand across 5, 10, and 25 years. These forecasts are based on AEMO's 2025 transition scenarios and represent regional futures based on current trends and industrial structures within the region. Outputs include identification of sectors likely to decline, grow, or emerge, the timing of major structural shifts, and profiles of key workforce cohorts.

Regional Investment Analysis

Focusing on each region's strategic position, this stream identifies comparative economic advantages, evaluates barriers to investment, and highlights opportunities to attract net zero aligned industries. It also outlines region-specific enablers such as infrastructure, workforce capability, and resource availability that could support long-term industrial development beyond what is identified in the *Regional Economic Forecasts* report.

Worker Transition Analysis

Centred on transition-affected workers, this stream delivers occupational pathway mapping, retraining requirements, and an assessment of local training system capacity. It also provides targeted support strategies to address cohort-specific barriers and enable workforce mobility within the regional economy. The analysis considers both the likely future economic structure of the region as identified in the *Regional Economic Forecasts* report and opportunities identified in the *Regional Investment Analysis* report.

This report identifies region-specific investment opportunities and delivery conditions to guide NZEA's coordinated transition response.

Purpose of this Report

This report provides an integrated assessment of net zero investment opportunities and enabling conditions in a priority region. It forms part of the regional investment analysis stream of the project and supports the Net Zero Economy Authority's (NZEA) broader mandate to coordinate transition-aligned investment across Australia. The focus is on identifying the most viable and impactful opportunities for regional net zero transformation, and the institutional, workforce and infrastructure conditions required to deliver them.

The report draws on a wide range of data to build a detailed picture of regional comparative advantage and investment readiness. This includes analysis of natural and industrial assets, infrastructure availability, workforce capabilities, and policy alignment. It also reviews and expands the regional project pipeline, assesses shortlisting criteria, and examines region- and sector-specific barriers that may delay or limit project delivery. Where applicable, regional economic impacts are estimated using input-output modelling.

Findings from this report will help guide investment prioritisation and coordination across government and industry. The outputs are designed to help NZEA and its partners understand which opportunities are most aligned with regional strengths, where delivery gaps exist, and what enabling actions, such as funding, approvals or reskilling, are needed to accelerate progress. The report also supports more targeted public strategy and policy development. These findings are intended to be validated by NZEA with regional.

The structure and methodology are consistent across all NZEA priority regions. While data availability and project pipelines vary, each report follows a shared framework to ensure comparability and provides a basis for validation with local communities . The analysis is forward-looking and focuses on a medium-term investment horizon.

Report Structure

The report is structured around five core analytical components: comparative advantage, project pipeline, investment prioritisation, barriers and enablers, and gaps in public strategy. Each stream builds on the previous to form an integrated view of regional investment potential and delivery readiness.

COMPARATIVE ADVANTAGE: This section assesses each region's underlying strengths across natural resources, workforce, infrastructure, industry base, and policy settings. It provides the foundation for identifying which types of investments the region is best positioned to attract and scale.

INVESTMENT OPPORTUNITIES: A long list of ~20 net zero-aligned project types per region is compiled and validated using public and internal sources. This includes tagging by sector, technology, project status, and expected job and investment outcomes.

INVESTMENT BARRIERS AND ENABLERS: This section identifies the conditions that may support or constrain project delivery, including infrastructure readiness, market viability, workforce alignment, governance and regulatory processes. A regional barrier and enabler profile is produced to inform investment facilitation.

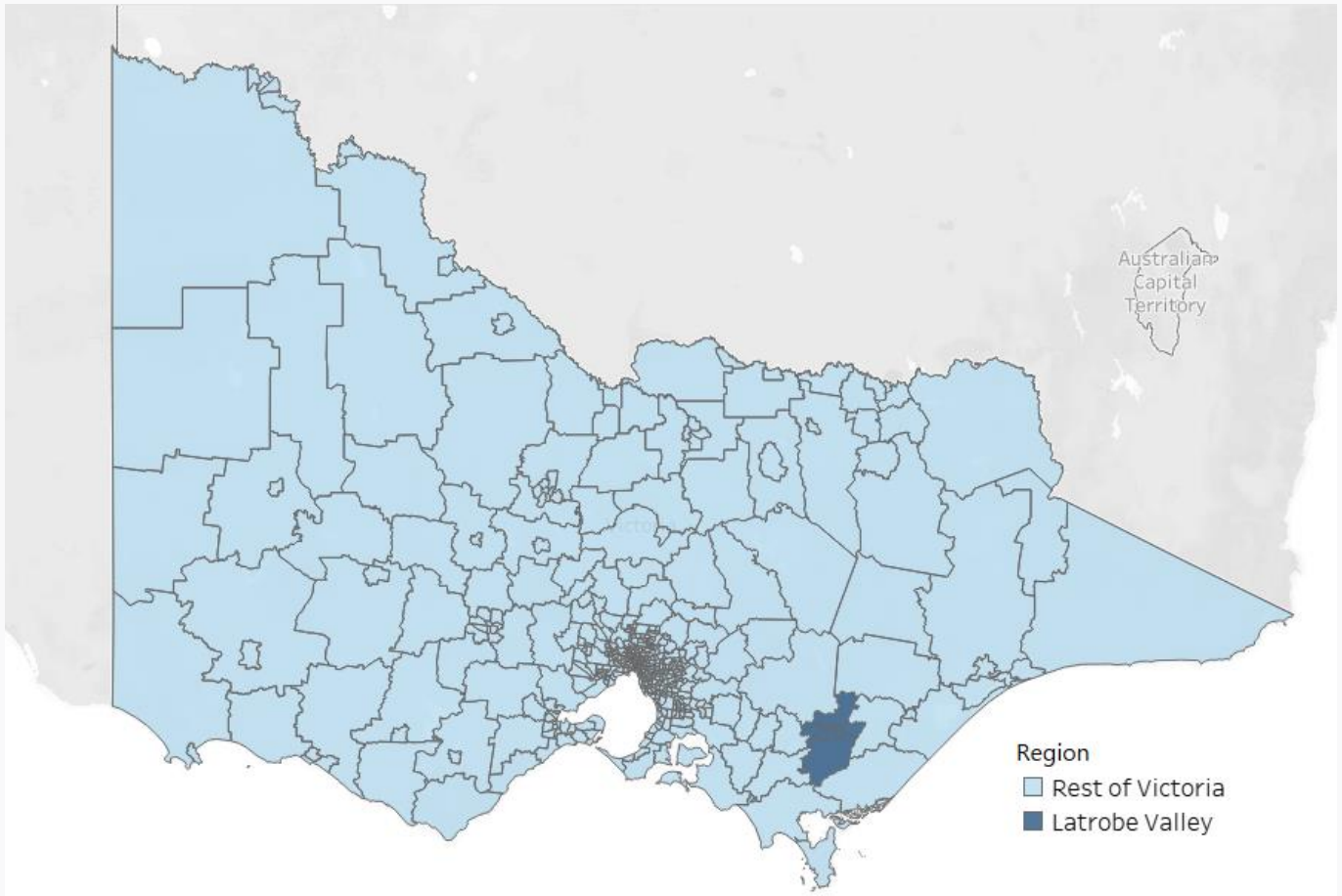
PUBLIC STRATEGY GAPS: Regional strategies and policy documents are reviewed to assess alignment with the identified opportunities and enabling conditions. A standardised scorecard highlights strengths, gaps and recommendations for improved strategic coordination and delivery.

APPROVALS: Analysis of typical and specialist approvals required across key stages of net zero projects.

APPENDICES: This section provides technical detail on the definitions, approaches and data sources used within the analysis of this report. We also provide supplementary methodological descriptions, maps, and scorecards.

The analysis in this report is focused on the Latrobe Valley which is defined as the combination of six SA2 regions.

Latrobe Valley map



Latrobe Valley SA2 listing

State	Working Zone Name	SA2 Name	SA2 Code
VIC	Latrobe Valley	Churchill	205041094
VIC	Latrobe Valley	Moe - Newborough	205041095
VIC	Latrobe Valley	Morwell	205041096
VIC	Latrobe Valley	Traralgon - East	205041493
VIC	Latrobe Valley	Traralgon - West	205041494
VIC	Latrobe Valley	Yallourn North - Glengarry	205041098

Source: Net Zero Economy Authority, Australian Bureau of Statistics
Note: *All analysis in this report is confined to the Latrobe Valley region. Gippsland, which extends south from Latrobe Valley to the coast is considered a different Working Zone and is not included in the core analysis. Gippsland has been considered in identifying priority project types for Latrobe Valley through comparative advantage and policy alignment assessments. Unless otherwise specified, all employment figures refer exclusively to Latrobe Valley.*

COMPARATIVE ADVANTAGE

Latrobe has comparative advantages in electricity generation, mining, healthcare and education with potential in aerospace and manufacturing.

Comparative advantage summary

Segment	Industry	LQ*	Growth**	Skilled labour***	% of economy ****	Infrastructure and endowments
Established advantage	Education and Training	1.27	1.0%	1,989	5%	• TAFEs and Federation University • Major hospitals and clinics
	Healthcare and Social Assistance	1.16	2.0%	4,100	11%	• Gippsland REZ, grid access, Gippsland basin
Net zero opps.	Electricity, Gas, Water and Waste	4.14	1.0%	1,476	16%	• Coal reserves & logistics • Potential Clean Hydrogen Industrial Hub, Morwell Innovation Centre
	Mining	1.39	-3.2%	174	11%	• Gippsland Logistics and Manufacturing Precinct (GLaMP)
Latent potential	Manufacturing	0.83	0.5%	1,070	5%	• Offshore wind zone and agriculture • Aerospace technology precinct
	Professional, Scientific & Technical	0.31	1.7%	915	3%	
Enabling industries	Admin. and Support Services	1.07	1.3%	274	1%	
	Construction	1.04	0.6%	1,854	9%	
	Agriculture, Forestry and Fishing	0.96	0.6%	356	3%	• Fertile soil, paper mill and timber in adjacent regions
	Transport, Postal and Warehousing	0.91	2.2%	170	2%	• Freight rail and regional airport
	Other Services	0.70	0.9%	950	2%	
	Information, Media & Telco	0.68	0.5%	253	2%	
	Wholesale Trade	0.64	2.1%	218	2%	
	Financial and Insurance Services	0.55	0.7%	397	4%	
Population serving	Public Administration and Safety	1.20	1.7%	1,684	8%	
	Accommodation and Food Services	1.16	1.2%	555	2%	
	Retail Trade	1.06	0.7%	794	4%	
	Rental, Hiring and Real Estate	0.74	0.7%	259	12%	
	Arts and Recreation Services	0.63	1.5%	213	0%	

Source: ABS; REMPLAN; Oxford Economics Analysis

** Location quotient of employment in 2025 relative to national levels; **Employment growth forecast 2025-2035 - step change scenario; *** Defined as workers in industry with skill level 3 and above; ****Defined as the percentage of regional GVA*

Description

The Latrobe region is one of Victoria's most important industrial centres, historically anchored by its role as the state's energy hub. Electricity, gas, water and waste services account for around 16% of regional value added, supported by extensive grid infrastructure, coal reserves, and logistics links. Mining also remains significant, underpinned by long-standing expertise in extraction and rehabilitation. Alongside this, healthcare and education are major employers, with Federation University, regional TAFEs, and large health services sustaining skills, training, and service demand.

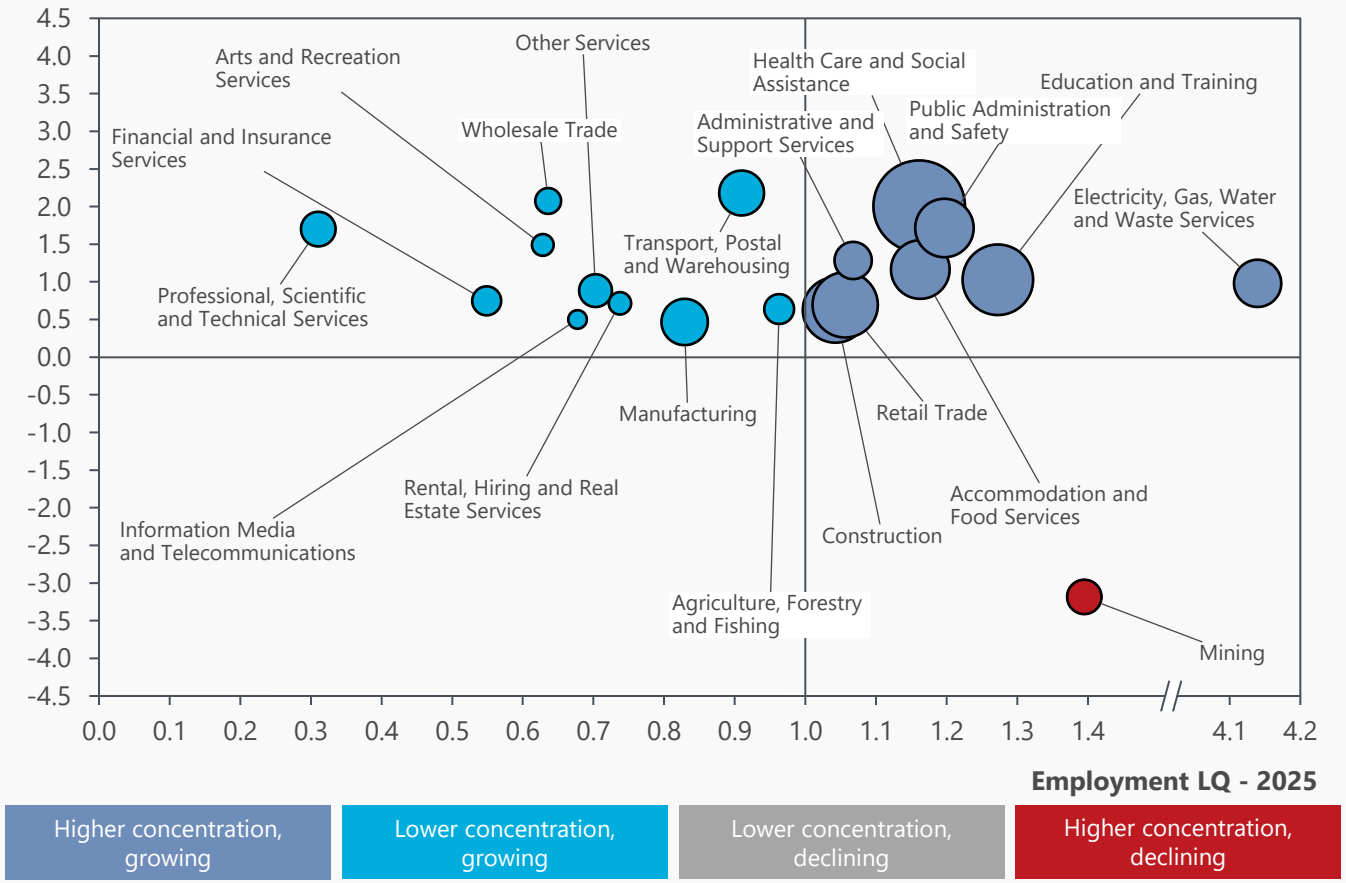
The region's industrial and infrastructure profile positions it strongly for net zero transformation. Existing transmission networks, skilled workers, and the nearby Gippsland Basin enable diversification into renewables such as offshore wind, geothermal, and large-scale battery storage. Waste-to-energy projects[2] and the conversion of agricultural and forestry by-products into bioenergy and biofuels also present opportunities. Rehabilitation of former coal mines[3] provides scope for environmental restoration and redevelopment into renewable energy precincts, or new industrial uses.

Latrobe retains a skilled industrial workforce and established training institutions that provide a base for advanced manufacturing and defence. Although employment in traditional manufacturing is forecast to stay stable (0.5%/year) by 2035, the region has capacity to pivot towards higher value activities such as precision engineering, and defence equipment manufacturing. The Aerospace Precinct[4] at Latrobe Regional Airport offers scope for testing, R&D, and small-scale production, supported by partnerships with Federation University, TAFE, and industry.

Beyond manufacturing and defence, the region's comparative advantages extend across agriculture, forestry, and food and fibre. Fertile land, established processing capability, and proximity to key transport corridors provide opportunities for value-added production, including dairy, horticulture, and timber products. Combined with emerging waste-to-energy projects, these sectors position Latrobe to diversify its economy while contributing to Victoria's broader net zero objectives.

Latrobe's economy is transitioning from mining to growing service sectors, with strong employment in health, education, and public administration.

Regional employment – Location Quotients, Forecast growth, [Bubble size = 2025 Employment]



Source: ABS; Oxford Economics Analysis

Occupation trends in the Latrobe region

The Latrobe region's employment profile reflects a partial shift from legacy industries toward growing service-based sectors. Health care and social assistance (forecast growth 2.0% per year), education and training (1.0%), and public administration and safety (1.7%) are among the largest and fastest-expanding industries, each with strong employment bases.

Despite the planned power station closures in the region, employment in the Electricity, Gas, Water and Waste services sector is expected to continue growth (1%) over the next ten years. The importance of this industry in the region's economy is reflected by its substantial location quotient (LQ) of 4.14, indicating employment representation in this sector is over 400% larger than the national average.

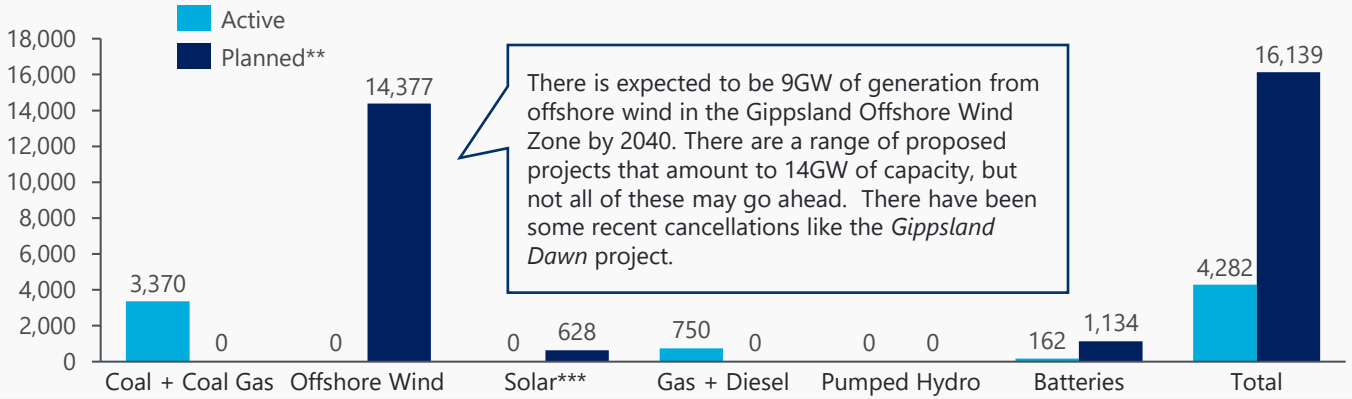
Healthcare and social assistance, meanwhile, is the largest employer in the region (~6,700 jobs) - more than 50% larger than the second largest employing industry, education and training (~4,000 jobs). Similarly, these sectors have employment location quotients (LQs) above 1.0, indicating they are more concentrated in Latrobe than the national average. Aside from the utilities sector, this growth is likely driven by population ageing and increasing demand for community and support services.

In contrast, traditionally dominant sectors are in decline. Mining is forecast to decline at ~3.2% annually over the 10 years to 2035, based on the decreasing use of brown coal and upcoming closure of coal fired power stations[5]. While Australia's manufacturing industry has weakened over the past year[6], manufacturing employment in Latrobe is projected to hold steady, growing at 0.5% annually through to 2035.

Several smaller but growing sectors, like professional, scientific and technical services (1.7% annual growth), wholesale trade (2.0%) and arts and recreation services (1.5%), are expanding from a smaller base. These trends point to diversification; while such sectors are less concentrated than nationally, their growth potential suggests they could play a larger role in Latrobe's future.

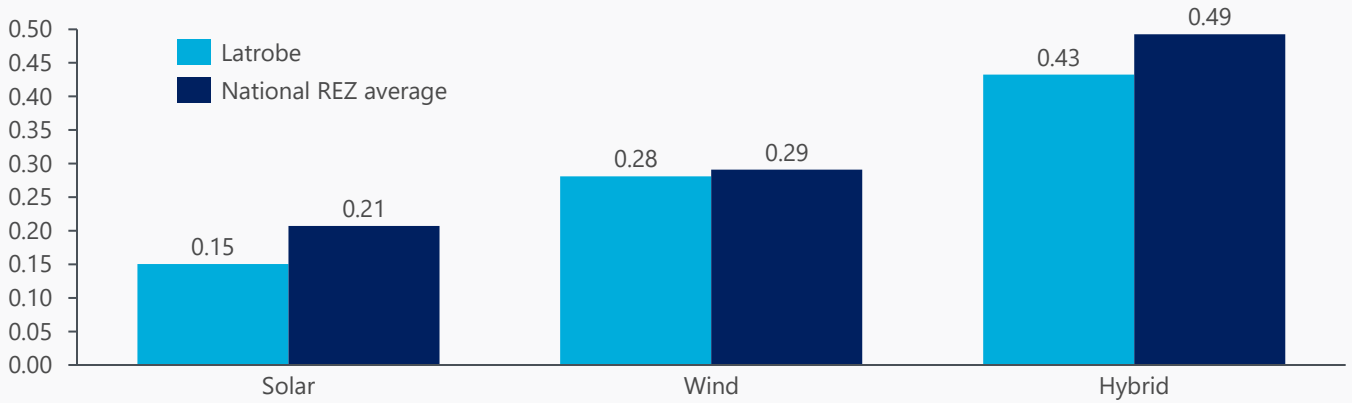
Latrobe and the broader Gippsland region has strong potential to transition from coal to wind, with smaller opportunities in solar and batteries.

Total generation by fuel type (MW) – Nameplate capacity – Active and planned



Source: AEMO Planned, Committed and Proposed projects.

Renewable energy capacity factors* – Latrobe region



Source: Geoscience Australia

Energy and renewables profile of the Latrobe and Gippsland region

The Latrobe Valley and broader Gippsland region's energy profile is on the cusp of a significant transformation, with major investments planned in renewable energy infrastructure. While the region's current generation capacity is still dominated by coal and gas (3,370 MW), future capacity is overwhelmingly skewed toward renewables, particularly offshore wind. Planned offshore wind projects currently account for an estimated 14,377 MW of new capacity, representing the bulk of the region's 16,139 MW in total planned generation.

Renewable energy performance in the Latrobe Valley is mixed. Solar capacity factors (15%) lag the national REZ average (21%), while wind and hybrid factors are more competitive.

Unlike other parts of Victoria, the Latrobe Valley has seen limited uptake of large-scale solar and onshore wind. This reflects both resource constraint, such as lower inland wind speeds, weaker solar irradiance, and legacy land impacts from brown coal mining. The Victorian Government's Renewable Energy Zones (REZs) planning directs investment toward the highest-quality resource areas first (e.g. Western Victoria for onshore wind, Murray River for solar, Gippsland coast for offshore wind). In the Latrobe Valley itself, policy emphasis has instead centred on industrial diversification opportunities such as food and fibre processing, advanced manufacturing, waste-to-energy, and offshore wind servicing and maintenance.

Latrobe's comparative advantages lie in its industrial legacy and infrastructure readiness. The region benefits from existing high-voltage transmission assets, a skilled energy-sector workforce, and proximity to Victoria's largest energy demand centres, particularly Melbourne's dense residential and commercial load. These strengths position Latrobe as the state's hub for offshore wind servicing, grid integration, and hybrid energy projects.

**Estimated as the average capacity factor across areas of region overlapping designated REZ areas. National average measured across average of all designated REZ areas; ** Includes upcoming projects tagged by AEMO as anticipated, committed or proposed (note only proposed generation projects greater than 1000MW and proposed storage projects greater than 1500MW are included here; ***Includes proposed Hazelwood North solar farm.*

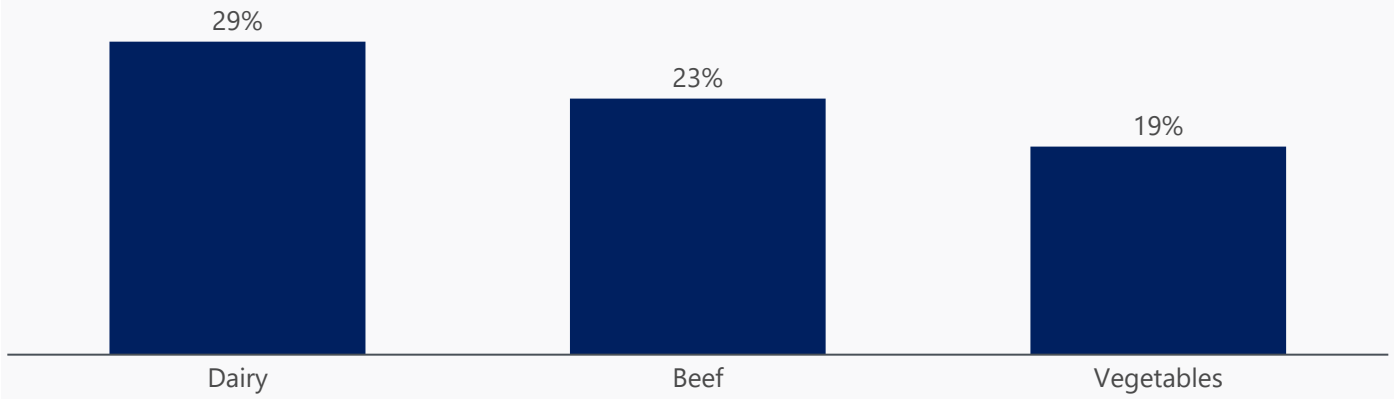
The Latrobe Valley and adjacent Gippsland region have resources in coal, geothermal, mineral sands, agriculture, and timber.

Summary of mineral deposits and mines – Latrobe region

Mineral	EDR + SR + IR*		Total Producing Mines	Total Unutilised Deposits	Forecast Real Price Growth
Name	Mass	% Aus Total	Number	Number	CAGR 2024-2027
Brown Coal	70,000 Mt	53.5%	2	26	-8.4% (Thermal Coal**)

Source: Geoscience Australia AIMR, DISR Resources and Energy Quarterly

Gippsland region farms' share of Victorian produce (%)



Source: Department of Jobs, Precincts and Regions 2022, Gippsland Regional Economic Development Strategy

** Economic Demonstrated Resources + Subeconomic Demonstrated Resources + Inferred Resources; **FOB Newcastle 6000Kcal*

Minerals and endowments of the Latrobe and Gippsland region

The Latrobe Valley region possesses mineral and natural resource assets that position it for emerging industrial opportunities. The most prominent is its legacy of brown coal reserves, which have historically underpinned the region's electricity generation. While the role of coal is shifting in the energy transition, these reserves may offer long-term potential for alternative uses such as carbon capture and storage or materials manufacturing. In particular, the CarbonNet[7] project is advancing plans for a large-scale, commercial carbon capture and storage network in Gippsland, which could underpin low-carbon industrial activity.

Beyond coal, the region is adjacent to the Stockman copper and zinc project[8] in East Gippsland, which, once operational, is expected to produce significant quantities of copper concentrate with zinc by-products, both essential for renewable energy technologies and electrification.

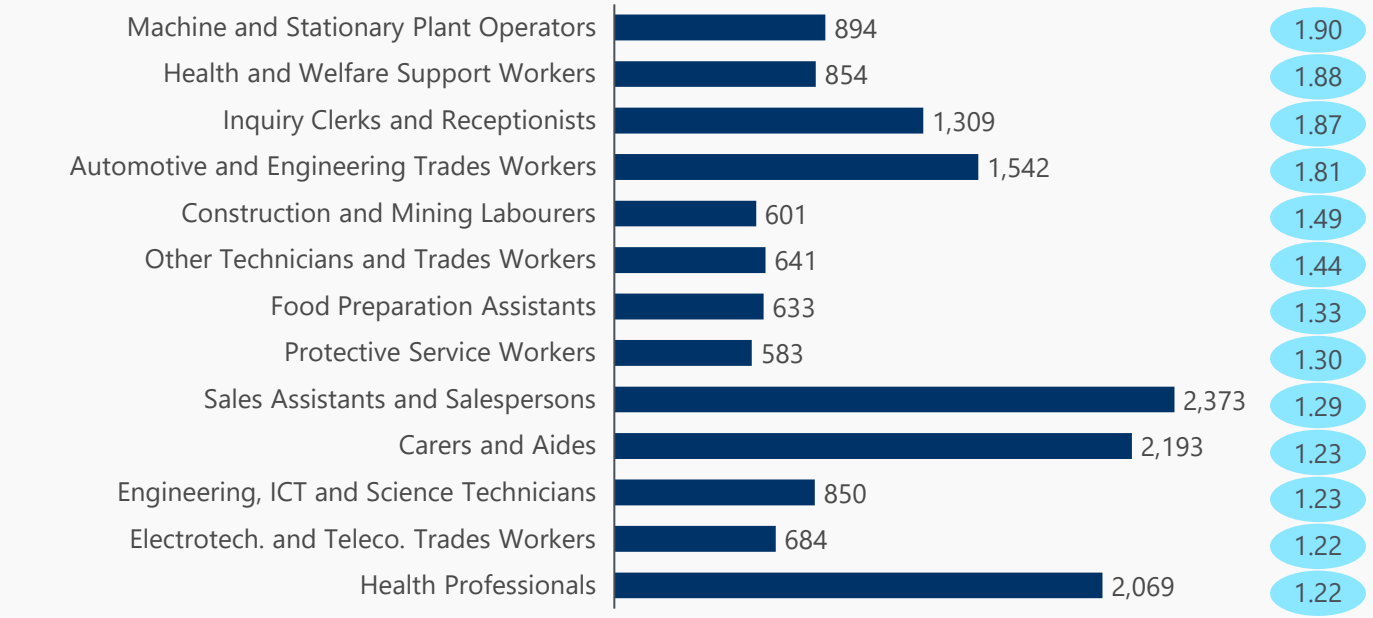
The region sits atop a vast shallow aquifer[9] (~65 °C at 600 m depth) that spans thousands of square kilometers, making it ideal for low-cost, low-emissions geothermal heat. Successful projects like the Gippsland Regional Aquatic Centre[10] and the Smart Geothermal Industrial Loop[11] pilot demonstrate commercial viability, institutional backing and potential application in manufacturing processes.

The region is also known to contain mineral sands deposits, which include valuable elements such as zircon, rutile, and ilmenite, used in advanced manufacturing, ceramics, and pigments. While not yet a major production hub, recent projects in the adjacent Gippsland region, such as the planned Gippsland Critical Minerals project[12], demonstrate the opportunity to expand exploration and development.

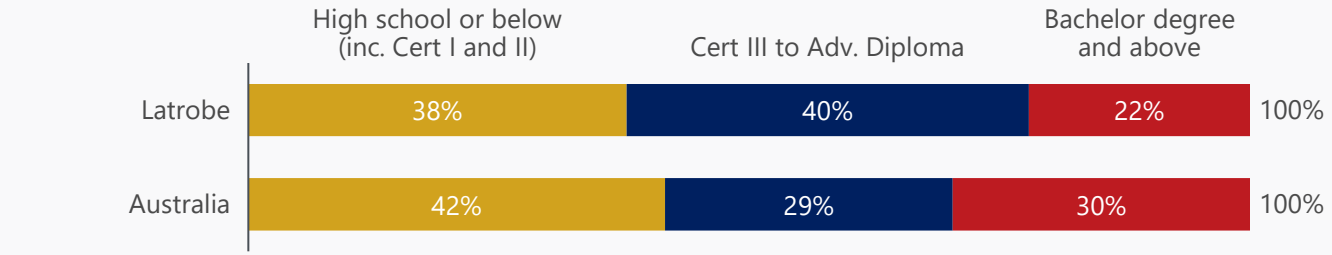
In addition to its mineral assets, Latrobe Valley supports extensive plantation forestry, with both softwood and hardwood contributing to timber supply. Gippsland accounts for 28 per cent of Victoria's farmland[13], with the Macalister Irrigation District and Radiata Pine plantations underpinning major agricultural output. These resources support existing industries in sawmilling, paper production and food processing, while also offering growth opportunities in engineered wood products, biomass and bioenergy.

Latrobe's workforce has a high concentration of trades, care, and vocational occupations, supported by above-average attainment of vocational qualifications.

Top ten occupations by location quotient (employment and LQ)



Educational attainment (% highest level attainment)



Source: ABS Census

Skills trends in the Latrobe region

The Latrobe region's workforce exhibits a strong orientation toward technical, vocational, and care-related occupations, reflecting its industrial history and evolving regional economy. Several of the top occupations by location quotient include Machine and Stationary Plant Operators (LQ 1.90), Automotive and Engineering Trades Workers (LQ 1.81), Construction and Mining Labourers (1.49), and Electrotechnology and Telecommunications Trades Workers (LQ 1.22).

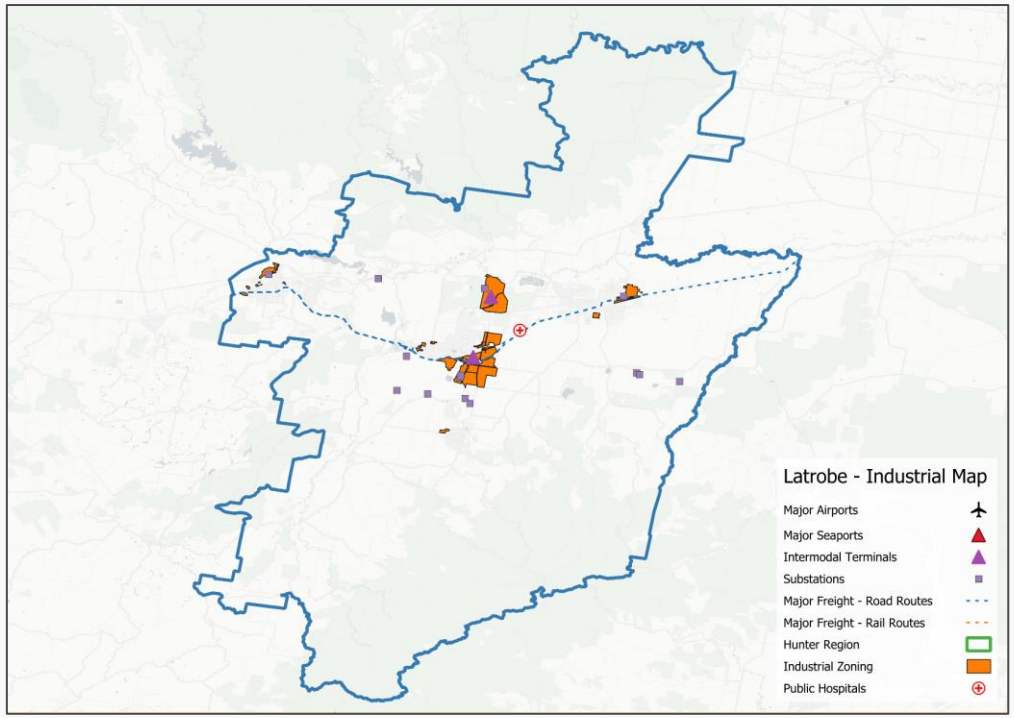
This profile points to a deep skills base in engineering, trades, and plant operations, reflecting the regions historical focus in mining, power generation, and heavy industry. These capabilities remain a key comparative advantage for future industrial activity, supporting the transition toward advanced manufacturing, clean energy, and infrastructure development.

In parallel, Latrobe has a high concentration of employment in health and social care occupations, including Health and Welfare Support Workers (LQ 1.88), Carers and Aides (LQ 1.23), and Health Professionals (1.22). This aligns with the region's growing health care sector and the demographic demand for aged and community care services. The presence of Inquiry Clerks and Receptionists and Protective Service Workers (LQ 1.87) also highlights a significant public-facing and community services workforce, which reflects both local service needs and public administration employment.

Educational attainment data reinforces this profile. A large proportion (40%) of Latrobe residents have completed Certificate III to Advanced Diploma qualifications, significantly above the national average of 29%. This suggests a workforce that is highly trained in vocational education and well-aligned with practical, hands-on industries. However, only 22% of residents hold a tertiary qualification, compared with 30% nationally. This highlights an opportunity to strengthen pathways to higher education, particularly in health, engineering, and digital fields, as the region diversifies and embraces knowledge-based industries.

Latrobe Valley has significant industrial land, local training infrastructure, and freight connectivity, but limited port access.

Infrastructure map – Latrobe region



1,769 Ha. industrially zoned land

3 TAFE campuses

1 Public Hospital

2 Intermodal Terminals

Source: Geoscience Australia, Digital Atlas of Australia

Infrastructure trends in the Latrobe region

Latrobe Valley's infrastructure offers key enablers and some constraints for its transition to a clean energy and industrial hub. The region includes 1,769 hectares of industrially zoned land, supporting investment in renewables, hydrogen, battery manufacturing, and clean industry. A key asset is the Gippsland Logistics and Manufacturing Precinct[14] (GLaMP) in Morwell, a 40-hectare serviced site with Princes Freeway access and future rail links to the Gippsland Intermodal Freight Terminal. GLaMP is positioned to attract advanced manufacturing and logistics, driving jobs and economic growth, and is complemented by the emerging Morwell Innovation District as a hub for new industry and knowledge exchange.

Two intermodal freight terminals support freight transfer to the Port of Melbourne. Three TAFE campuses in Morwell, Traralgon, and Warragul provide training in energy, manufacturing, electrotechnology, and automation, while Federation University delivers tertiary education and research and development expertise. The new Latrobe Aerospace Technology Precinct[15] adds advanced manufacturing and aerospace testing capacity, and Federation University's Churchill campus[16] offers degrees in engineering, science, and environmental studies, boosting local R&D and higher education. The Latrobe Regional Hospital supports workforce health and liveability[17].

The region is also home to a network of oil and gas pipelines and some of Victoria's strongest electricity transmission infrastructure, including high-voltage 500kV and 220kV lines connecting the Valley's large-scale coal and gas generators to Melbourne. The terminal at Loy Yang Power Station links the mainland and Tasmanian energy grids via the BassLink interconnector[18]. The Latrobe Valley has a strong engineering and fabrication workforce, developed through decades of energy and heavy industry operations.

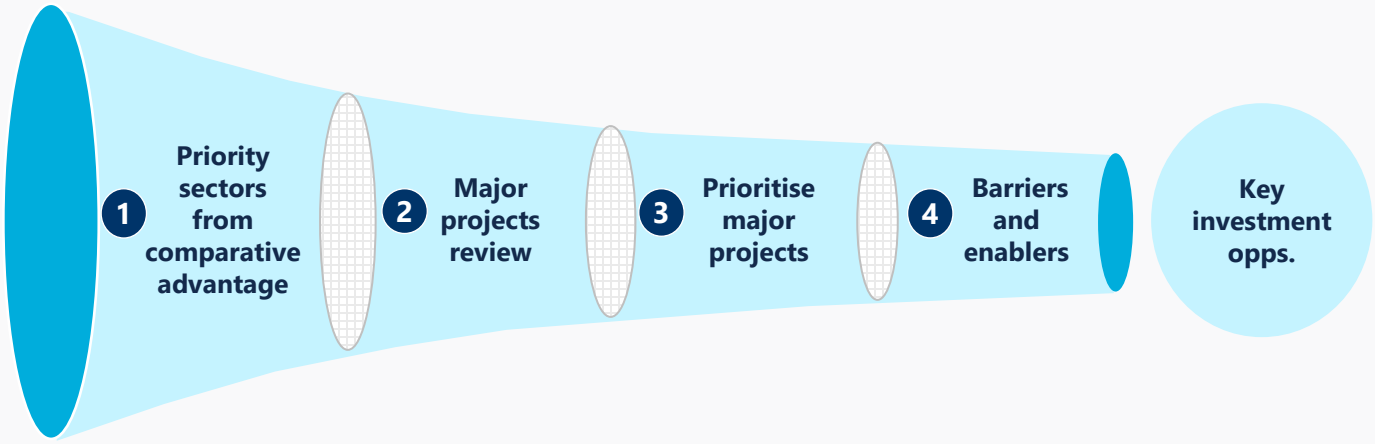
However, the absence of a major port or large airport* constrains rapid freight and personnel movement. While road and rail links exist, they are not purpose-built for high-volume, high-speed exports, meaning upgrades to freight corridors and intermodal capacity may be needed.

**We note the presence of the Latrobe Regional Airport[19] – however this primarily supports only general aviation and emergency services.*

INVESTMENT OPPORTUNITIES

A four step process was used for identifying and prioritising opportunities.

Investment opportunities methodology



Output

Priority sectors
- Established advantages
- Net zero opportunities
- Sectors with latent potential

21 opportunities identified by
- Value
- Likelihood of realisation
- Job creation potential
- Alignment with net zero industries

Top 3 opportunities ranked by
- Economic impact
- Jobs
- Comparative advantage
- Lead times
- Policy alignment

Top 3 opportunities
- Barriers
- Enablers
- Constraints
- Key actions to unlock investment

Key investment opportunities for NZEA to focus on and prioritise in each region

Description

The methodology for identifying investment opportunities in Latrobe builds on the region's comparative advantages while aligning with national net zero objectives. It begins by identifying priority sectors where Latrobe has structural strengths and growth potential,. These sectors reflect both the region's established industrial base and its capacity to transition into globally competitive industries.

The next step is a review of Latrobe's major projects pipeline to develop a long list of 21 opportunities. Each is assessed against economic value, likelihood of realisation, and job creation potential, ensuring the pipeline captures projects that can deliver economic transformation and are commercially and technically feasible.

This is then narrowed to the top three opportunities with the greatest impact. Selection is based on economic contribution, alignment with the Latrobe's comparative advantage, job creation potential, lead times, and policy consistency. This ensures the region focuses on opportunities that are both ambitious and achievable.

Finally, the methodology considers the barriers and enablers shaping delivery. These include demand signals and offtake agreements, access to enabling infrastructure such as energy, water, and ports, policy and regulatory clarity, and availability of specialist workforce skills. Understanding these factors highlights the key actions required to unlock investment and accelerate delivery.

The outcome is a focused set of two to four priority opportunities for Latrobe, supported by evidence of their economic potential, enabling requirements, and policy alignment. These opportunities form the basis for targeted investment attraction and coordinated delivery across government, industry, and the community.

Project types have been prioritised based on multi-domain criteria, tailored to the specific conditions of the Latrobe region.

Comparative advantage alignment

Denoted by a qualitatively derived comparative advantage score out of 5:

1. No alignment with regional strengths or capabilities
2. Minimal alignment; limited local advantages
3. Moderate alignment with some key strengths (e.g. workforce or land)
4. Strong alignment with multiple comparative advantages
5. Excellent alignment; leverages core regional assets and priorities

Project lead times*

Based on a region-specific rank of project types by expected lead time (defined as the time between project inception and construction commencement):

Short Term: Lead time of less than 3 years

Medium Term: Lead time of between 3 and 5 years

Long Term: Lead time of greater than 5 years

Typical job contributions

Based on a quintile rank of project types by expected job-year contribution within 10 years of construction starting:

1. Fewer than 600 jobs; short-term or low-quality employment
2. 600–1,600 jobs; limited regional employment impact
3. 1,600–2,800 jobs; moderate and/or specialised workforce impact
4. 2,800–4,400 jobs; strong job creation with varied roles
5. 4,400+ jobs; transformative workforce impact across skill levels

Government policy alignment

Derived from a review of government documents, as well as a review of the Major Projects Listing.

1. Not mentioned at local, state or commonwealth level; no relevant projects identified in region
2. Mentioned once at a local, state or commonwealth level; or projects identified in region
3. Mentioned twice at a local, state or commonwealth level; or projects identified in region
4. Mentioned three times at a local, state or commonwealth level; or projects identified in region
5. Mentioned at local, state and commonwealth level; and projects identified in region.

Methodology

Project types were prioritised using an equally weighted average of three index scores: comparative advantage, job contribution, and government policy alignment. Each index was scored out of 5 using a tailored methodology. The final score provides a comparative view across project types for the Latrobe region.

Comparative advantage was assessed qualitatively, based on factors such as resource endowment, industrial base, infrastructure readiness, workforce availability, and regulatory context. Given the variability across project types, no single indicator set was universally applicable. The assessment relied on structured expert judgement, informed by the most relevant metrics for each case.

Job contribution scores were based on estimated job years, combining construction and ongoing employment over a 10-year operational period. Estimates were drawn from project-level data, supplemented with desktop research where necessary. Final scores were assigned by ranking each project type into quintiles.

Policy alignment scores reflected the presence of each project type in local, state, and federal policy documents, and in Latrobe's major project pipeline.

A separate **lead time analysis** was conducted to support the evidence base. Lead times (from inception to construction) were estimated using proprietary modelling for energy projects and desktop research for others. While not included in scoring, these estimates informed comparative advantage assessments and delivery timelines.

**Note that lead times are not considered when deriving a project type's rating or subsequent prioritisation. Details and categorisation are retained here for illustrative purposes.*

Latrobe has key investment opportunities in offshore wind, food & fibre product manufacturing and transport & logistics.

Project type	Lead Times*	Job Contribution	Policy	Comparative Advantage	Average Rating**	Description
Offshore wind farms	Long Term	4.00	4.00	5.00	4.33	Strong coastal wind resources and legacy grid infrastructure. Broad policy support, but with recent project uncertainty
Food and fibre product manufacturing	Short Term	2.00	5.00	5.00	4.00	Established agricultural base in Gippsland region supports expansion. Existing precinct.
Transport and logistics	Medium Term	4.00	4.00	4.00	4.00	Road and rail links connect to Melbourne and Gippsland ports. Planned precinct.
Carbon capture and storage (CCS)	Long Term	5.00	4.00	3.00	4.00	Suitable geology for CO_2 storage near Loy Yang. Currently limited projects outside of CarbonNet.
Hydrogen	Medium Term	5.00	3.00	3.00	3.67	Planned pilot projects planned and proximity to upcoming generation projects. However, projects not focused on green hydrogen and Latrobe not designated as a hydrogen hub.
Energy from waste facilities	Long Term	4.00	4.00	3.00	3.67	Existing industrial land and local waste but community concerns, policy and feedstock barriers
Renewables component manufacturing	Short Term	5.00	3.00	3.00	3.67	Potential local content requirements for nearby OSW projects. Little existing industry.
Circular economy manufacturing	Short Term	1.00	5.00	4.00	3.33	Industrial base can enable recycling and material recovery ventures.
Defence maintenance/sustainment	Short Term	5.00	2.00	3.00	3.33	Upcoming Aerospace Technology Precinct but limited direct industry presence to date.
Urea and ammonia production	Short Term	4.00	3.00	3.00	3.33	Applicability as fertiliser input for surrounding region, but requires policy support.
LCLFs, biofuels and biochemicals from waste streams	Medium Term	3.00	4.00	3.00	3.33	Strong forestry residues and agricultural waste feedstocks.
Defence manufacturing	Short Term	3.00	3.00	3.00	3.00	Upcoming Aerospace Technology Precinct but limited direct industry presence to date.
Solar farms	Medium Term	1.00	5.00	3.00	3.00	Good grid access and existing projects, but few employment opportunities.
Battery energy storage systems (BESS)	Medium Term	1.00	4.00	4.00	3.00	Strong applicability based on grid integration and generation projects.
Green metals	Medium Term	3.00	3.00	2.00	2.67	Few notable mineral deposits in the region aside from coal.
Geothermal heating and power	Long Term	2.00	2.00	4.00	2.67	High comparative advantage due to existing aquifer, but limited applications to date.
Mine rehabilitation	N/A	3.00	1.00	4.00	2.67	Extensive coal mines will require rehabilitation, but little discussion in policy.
Onshore wind farms	Long Term	1.00	4.00	2.00	2.33	Several onshore farms planned, but substantially smaller than planned OSW projects.
Minerals processing	Short Term	2.00	3.00	1.00	2.00	Some mineral sands resources present, but little utilisation to date.
Data centres	Short Term	1.00	2.00	2.00	1.67	Largely unviable because distance from metro demand creates latency disadvantages, despite ample water and energy reserves; limited long-term jobs contribution beyond construction.
Pumped hydro energy storage	Long Term	2.00	1.00	1.00	1.33	Limited topography.

**Note that lead times are not considered when deriving a project type's rating or the subsequent prioritisation. Details and categorisation are retained here for illustrative purposes.*
***Additional detail on methodology to derive scores is present in report appendices.*

Key opportunities Weakest 1 2 3 4 5 Strongest

Latrobe can become Victoria's engineering and servicing hub for offshore wind, leveraging its industrial base and workforce.

Summary of opportunity – Offshore wind farms

Victoria has legislated ambitious targets of 2 GW offshore wind by 2032[23], scaling to 9 GW by 2040 in the Gippsland Offshore Wind Zone. While the turbines and offshore construction will occur on Gippsland's coast, Latrobe's proximity, industrial land, and deep engineering base position it as the onshore hub for operations, maintenance, and heavy engineering services. Latrobe cannot expect large-scale activity until at least 2032, but longer-term diversification potential is significant, particularly in O&M, heavy maintenance, transmission tower works, and advanced component servicing. Enabling transmission projects are also expected to add to employment. This complements existing strengths and provides a pathway for transition away from coal.

Latrobe advantages

- Established heavy engineering firms with capability in generators, gearboxes, and ancillary equipment. Skilled transitioning workforce in mechanical, electrical, and operational trades.
- Proven transmission infrastructure expertise from SEC heritage and private industry (e.g. tower construction).
- Strong utilities and grid backbone (VicGrid REZ connection, AusNet, AEMO integration).
- Industrial precincts (Morwell Innovation Precinct, GLAMP) offering land, utilities, and co-location opportunities.

Actions to realise opportunity

- Position Latrobe as Victoria's offshore wind O&M/engineering hub.
- Secure investment in training and accreditation for HV technicians, turbine specialists, safety officers.
- Ensure VicGrid's Victorian Transmission Plan explicitly supports Latrobe-based O&M and servicing centres.
- Build partnerships with OEMs and Tier-1s to integrate Latrobe firms into servicing and component contracts.
- Market Latrobe's heavy engineering capacity as complementary, not competing, with OEM supply chains.

Estimated economic impacts*

	Offshore Wind Farms**	
	Construction	Ongoing
Investment	$7,822m	$192m p.a.
GVA	$1,499m	$53m p.a.
Employment	1,466 jobs	198 jobs p.a.

Key project examples

- Great Eastern
- Star of the South
- Kut Wut Bratauallung
- Orsted Developments for offshore wind farms
- VicGrid Transmission Plan – enabling Latrobe to act as grid hub for REZ + offshore wind

Key opportunity areas

Immediate priorities (2025-2030)

1. Upskill Latrobe's workforce for offshore wind servicing and safety compliance.
2. Secure state recognition of Latrobe as instrumental in the provision of local content to nearby offshore REZ's.
3. Attract anchor tenants/OEM service partnerships into Morwell or GLAMP.

Medium-term opportunities (2030-2035)

4. Establish facilities for generator and gearbox overhauls (>$2m per overhaul every ~2 years).
5. Transmission tower fabrication and servicing linked to VicGrid upgrades.
6. Logistics and warehousing support for component staging and replacement.

Longer-term opportunities (post-2035)

7. Full-scale O&M base for turbines (servicing, marine support, HV equipment).
8. Advanced manufacturing niches (secondary steel, cable termination, switchgear).
9. Recycling/re-use of blades, cables, and steel as assets age.

** Expected investment CAPEX, and Construction and Ongoing employment impacts are taken as averages from publicly available project information. Expected Ongoing investment and GVA impacts are inferred using ratios. See more details in the Appendix.*
*** These estimates reflect the typical total direct investment, GVA and Employment impacts of an offshore windfarm. Note that for such windfarms off the Gippsland coast, we estimate that only 7% of these Construction jobs and 69% of Operational jobs are likely to be sourced from the Latrobe region. This was estimated based on an assessment of which ports are likely to be used, as well as an estimate of the relative employment in relevant industries in Latrobe compared to the wider region.*

Latrobe can leverage Gippsland's agricultural base to become a food & fibre manufacturing hub, creating near-term jobs and long-term export growth.

Summary of opportunity – Food and fibre product manufacturing

Latrobe's proximity to Gippsland's agricultural heartland (dairy, meat, horticulture, and timber) positions it as a natural hub for food and fibre product manufacturing. With industrial land, strong utilities access, and transport connections, Latrobe can support value-added processing, packaging, and cold-chain logistics that strengthen the region's export profile. This opportunity builds on existing regional strengths, supports diversification away from coal, and can be realised earlier than offshore wind.

Latrobe advantages

- Located close to Gippsland's major agricultural producers, reducing transport costs and spoilage.
- Existing and planned industrial land and utilities infrastructure (e.g., Morwell Innovation Precinct, GLAMP).
- Workforce with transferable industrial and processing skills from energy and manufacturing.
- Proximity to Melbourne markets and export ports.
- Policy alignment: Victorian strategies emphasise regional food manufacturing precincts and value-adding for exports.

Actions to realise opportunity

- Leverage Morwell Innovation Precinct for training, R&D, and industry partnerships in food technologies.
- Activate GLAMP and nearby industrial land for food processing, cold storage, and packaging.
- Develop training and skills programs for food processing, packaging, and quality assurance.
- Attract anchor tenants (large food processors and exporters) to secure long-term demand.

Estimated economic impacts*

	Food and Fibre Product Manufacturing	
	Construction	Ongoing
Investment	$300m	$108m p.a.
GVA	$79m	$36m p.a.
Employment	528 jobs	110 jobs p.a.

Key project examples

- Morwell Innovation Precinct – R&D, training, and skills support.
- Morwell Food Manufacturing Precinct – with the potential to support 1,700 jobs once fully operational
- GLAMP – logistics and cold-chain integration with food exports.
- Bioenergy from food/agricultural waste – aligned with Gippsland Bioenergy Map.
- Producer partnerships – with Gippsland dairy, beef, horticulture and timber industries.

Key opportunity areas

Immediate priorities (2025–2030)

1. Position Latrobe as Gippsland's food processing and packaging hub.
2. Develop cold storage and packaging facilities for dairy, meat, and horticulture.
3. Build partnerships with local producers to aggregate supply and reduce costs.

Medium-term opportunities (2030–2035)

4. Expand into advanced processing (cheese, milk powders, meat products, frozen/packaged horticulture).
5. Integrate food logistics and intermodal transport at GLAMP to streamline supply chains.
6. Link food and fibre processing with circular economy (bioenergy from waste streams).

Longer-term opportunities (post-2035)

7. Position Latrobe as a specialised food export hub for high-value Asian markets.
8. Attract advanced manufacturing in fibre/bioproducts (timber-based packaging, bioplastics).
9. Develop innovation partnerships with universities/TAFE for food technology and R&D.

** Expected investment CAPEX, and Construction and Ongoing employment impacts are taken as averages from publicly available project information. Expected Ongoing investment and GVA impacts are inferred using ratios. See more details in the Appendix.*

Latrobe can become Gippsland's central freight hub, leveraging GLAMP to capture food logistics, intermodal freight, and low-carbon transport opportunities.

Summary of opportunity – Transport and logistics

The Gippsland Logistics and Manufacturing Precinct (GLAMP) in Morwell positions Latrobe as a potential regional freight and logistics hub, strategically located between Gippsland's food and fibre producers and metropolitan export markets. Opportunities include intermodal freight consolidation, cold-chain logistics, and low-carbon freight solutions such as hydrogen or EV depots. While the state supports regional rail freight upgrades, aligned action is required to deliver them in the Latrobe Valley, particularly given there is currently no freight service along the Gippsland line. Leveraging its industrial land, grid infrastructure, and workforce, GLAMP presents a practical near-term diversification pathway.

Latrobe advantages

- Strategic location at the junction of Gippsland's producers (dairy, meat, horticulture, timber) and Melbourne's ports/markets.
- GLAMP precinct offers zoned industrial land, infrastructure.
- Existing energy and industrial base supports cold storage, packaging, and advanced logistics facilities.
- Workforce with transferable skills from power generation, transport, and industrial operations.
- Policy alignment: State investment into regional freight corridors and Renewable Energy Zones

Actions to realise opportunity

- Achieve policy alignment for enabling rail corridor work with DTP.
- Develop a modern intermodal rail–road terminal at GLAMP to consolidate freight flows.
- Invest in cold-chain and temperature-controlled storage to support Gippsland food exports.
- Secure anchor tenants (major logistics operators, food exporters, recyclers) to underpin throughput.
- Formalise partnerships with producers and exporters to reduce costs and improve supply chain resilience.

Estimated economic impacts*

	Transport and Logistics	
	Construction	Ongoing
Investment	$575m	$115m p.a.
GVA	$153m	$34m p.a.
Employment	312 jobs	266 jobs p.a.

Key project examples

- Gippsland Logistics and Manufacturing Precinct, Morwell
- Cold-chain and food logistics hub: aggregation and packaging facilities for dairy, meat, horticulture exports.
- Low-carbon freight precinct: hydrogen/EV depot pilots leveraging Gippsland REZ clean energy.
- Intermodal freight terminal upgrades: connecting Latrobe to Melbourne ports and reducing backhaul inefficiencies.

Key opportunity areas

Immediate priorities (2025–2030)

1. Secure investment into GLAMP rail–road terminal and intermodal upgrades.
2. Expand cold storage and packaging for food & fibre logistics.
3. Anchor tenant attraction and long-term contracts with logistics operators.

Medium-term opportunities (2030–2035)

4. Establish hydrogen and EV truck depots for clean freight solutions.
5. Integrate waste-to-energy/recycling operations to support circular supply chains.
6. Develop advanced intermodal facilities for containerised exports.

Longer-term opportunities (post-2035)

7. Position Latrobe as Gippsland's central freight hub servicing multiple industries.
8. Link GLAMP to broader Victorian Freight Network and Inland Rail connections.
9. Integration with offshore wind servicing.
10. Expand food and fibre value-added manufacturing precincts alongside logistics.

** Expected investment CAPEX, and Construction and Ongoing employment impacts are taken as averages from publicly available project information. Expected Ongoing investment and GVA impacts are inferred using ratios. See more details in the Appendix.*

INVESTMENT BARRIERS AND ENABLERS

Latrobe's transition depends on tackling infrastructure, skills, and regulatory barriers, while leveraging its industrial base to drive growth.

Key barriers

Commercial and market risk

Investors remain cautious due to uncertain demand signals, global competition, and fluctuating commodity/energy prices.

Policy and regulatory uncertainty

Complex approval pathways, overlapping responsibilities, and shifting policy priorities create uncertainty for proponents.

Infrastructure gaps and constraints

Energy, water, transport and port/logistics infrastructure require significant upgrades to support emerging industries.

Specialist skills in short supply

Specialist technical and trade skills are in short supply, while competition for labour across sectors creates retention challenges.

Key enablers

Commercial certainty

Clear demand signals and long-term offtake arrangements can anchor investment.

Governance and regulatory certainty

Streamlined approvals and coordinated policies at federal, state, and local levels provide confidence.

Infrastructure and utilities access

Repurposing existing industrial assets and strategic new investment strengthen the Latrobe's comparative advantage.

Workforce transition and R&D potential

A strong existing industrial base, transferable trade skills, and local research partnerships position the region to adapt and innovate.

Description

The Latrobe region has significant strengths for industrial transition, but progress relies on addressing barriers in commercial certainty, infrastructure, skills, and regulatory processes. Growth across offshore wind, transport and logistics, and food product manufacturing requires de-risking through clear demand signals, streamlined approvals, modernised infrastructure, and a skilled workforce pipeline.

In offshore wind, barriers include high input costs, uncertain grid connection pathways, and the complexity of licensing and approvals[24], while opportunities lie in leveraging Latrobe's transmission backbone and heavy engineering capability for turbine servicing and generator overhauls.

In transport and logistics, gaps in intermodal capacity, road bottlenecks, and cold-chain infrastructure raise costs and limit scalability, but the region's proximity to Melbourne and Gippsland producers provides a strong base for precinct development and fleet decarbonisation pilots.

In food product manufacturing, utilities constraints, trade-waste management, and skills shortages slow investment, but co-location opportunities at the Morwell precinct, access to Gippsland's agricultural hinterland, and demand for low-carbon, value-added exports offer a pathway to growth.

Region-wide, barriers include grid congestion, fragmented governance, and competition for skilled labour, while enablers include industrial land, transferable energy-sector workers, strong research institutions, and policy signals such as Renewable Energy Zones, circular economy strategies, and food manufacturing precinct funding. Clearer alignment of state and national transition goals will be critical to positioning the Latrobe region as a leader in clean energy, logistics, and value-added manufacturing.

Offshore wind in Gippsland faces barriers, but Latrobe's transmission backbone and industrial base provide a strong platform to unlock growth.

Key barriers

- Offshore wind development in Gippsland is constrained by grid connection capacity and delays. Significant upgrades are required to integrate offshore wind into the Latrobe Valley network, including reinforcement of 220/500 kV transmission, system strength investments, and new substations. Port and logistics infrastructure gaps limit construction scalability.[25] Heavy-lift, marshalling, and assembly facilities are required closer to Gippsland's declared areas, but no port currently has full capability.
- Permitting and regulatory complexity is a barrier, with overlapping Commonwealth and state approvals. Timelines for seabed surveys, biodiversity offsets, and environmental approvals create uncertainty and add cost.[26]
- Latrobe and the broader Gippsland Region's existing industrial base lacks specialised offshore capabilities. Skills shortages require education and training to transition employees from coal and utilities industries.[27]
- Victoria's offshore wind rollout is stalled by the absence of guaranteed offtake support. Without certainty on underwriting and enabling infrastructure, developers are unwilling to commit to progressing projects.

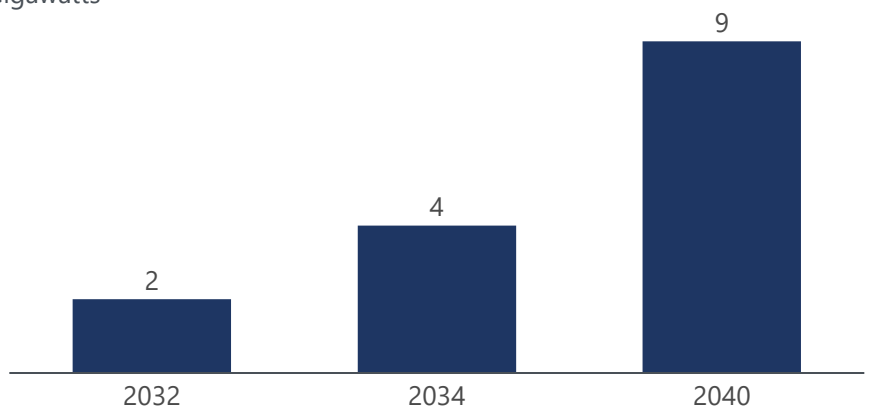
Key enablers

- Latrobe is home to Victoria's transmission backbone. Repurposing existing switchyards, substations, and HV expertise provides a strong base for connecting offshore wind power into the grid and supporting long-term operations[28].
- The region has brownfield industrial sites and engineering workshops suited to balance-of-plant fabrication, component servicing, and long-term O&M bases.
- Heavy maintenance capability from the power sector is directly transferrable to offshore wind. A transferable workforce from coal and power generation (electrical fitters, plant operators, mechanical engineers) offers a skilled labour pool that can be retrained.
- Policy and funding signals, including the Victorian OSW targets (2 GW by 2032, scaling to 9 GW by 2040), Federal transmission investment, and offshore wind precinct planning, provide certainty and investor confidence.[29]

Opportunities

- Position Latrobe as the grid integration hub for Gippsland offshore wind, with new system strength services, synchronous condensers, and flexible demand centres co-located with transmission assets.
- Develop a renewable energy precinct in Morwell/Traralgon to co-locate offshore wind O&M facilities with training centres, manufacturing, logistics.
- Train and redeploy workers from power stations into offshore wind construction, operations, and safety roles through targeted transition programs (HV technicians, rope access, marine HSE).
- Capture long-term industrial spin-offs, such as fabrication of secondary steel, cable storage/termination, and recycling of turbine components, anchoring Latrobe's role in the wider OSW value chain.

Victoria's legislated offshore wind energy generation targets
Gigawatts



Source: VicGrid 2024, Gippsland Offshore Wind Transmission 2GW Project

Freight growth is constrained by bottlenecks and costs, but GLAMP and Latrobe's location enable intermodal, food logistics, and clean freight opportunities.

Key barriers

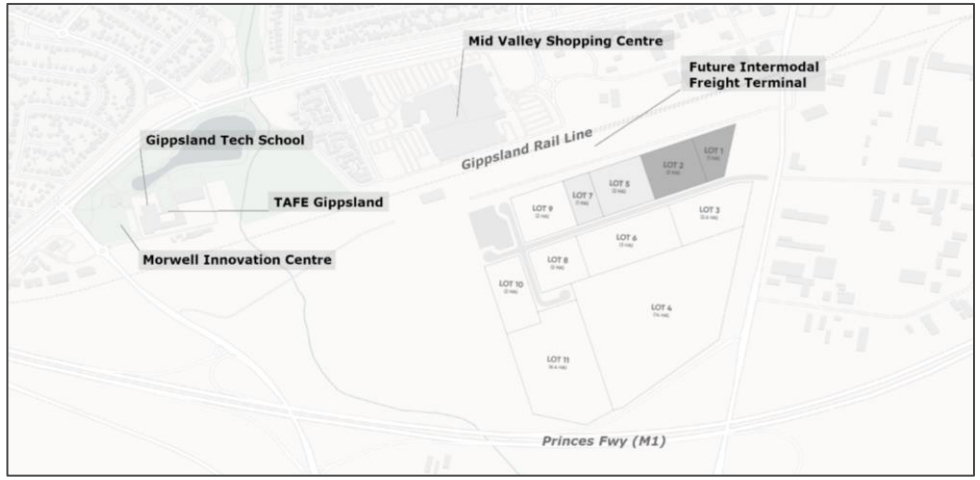
- The Princes Highway and connecting arterials face congestion and axle weight limitations, while rail sidings and intermodal capacity are limited, raising costs for producers and slowing freight flows.[30]
- Current infrastructure is fragmented, with limited large-scale temperature-controlled storage and value-added processing facilities state-wide.
- Developing modern automated warehouses, intermodal yards, and fleet depots requires high upfront investment. Without anchor tenants and throughput certainty, projects can stall.
- Truck drivers, forklift operators, and supply chain managers are in short supply across Victoria[31]. Latrobe faces additional challenges from competition with construction and mining for labour.

Key enablers

- The Gippsland Logistics and Manufacturing Precinct in Morwell offers zoned industrial land, road and rail interfaces, and access to utilities, making it a strong base for logistics consolidation.
- Latrobe is strategically located between Gippsland's food and fibre producers (dairy, beef, horticulture, timber) and metropolitan markets/ports, reducing backhaul inefficiencies.
- The Valley's legacy infrastructure (HV electricity, water, brownfield land) supports development of cold storage, packaging, and advanced intermodal facilities.
- State government investment into regional freight corridors and REZs provides a dual rationale for logistics hubs, serving both agri-food and clean energy supply chains.
- Latrobe's transitioning power sector workforce has transferable mechanical, electrical, and operational skills that can be redeployed into logistics and manufacturing operations.

Opportunities

- Developing a modern rail–road terminal at GLAMP would create an intermodal freight hub that captures Gippsland's outbound flows and reduces costs for exporters.
- Creating a regional aggregation hub for dairy, meat, and horticulture with shared cold storage, packaging, and export facilities would strengthen cold-chain and food logistics.
- Hosting hydrogen and EV heavy vehicle depots at GLAMP, while leveraging nearby renewable energy zones, would establish a low-carbon freight precinct and pioneer clean logistics.
- Attracting major logistics operators and integrating waste-to-energy and recycling systems would bring in anchor tenants and underpin throughput while providing valuable industrial by-products.



Source: OEA Analysis, Gippsland Logistics and Manufacturing Precinct

Food and fibre processing has high capital and regulatory requirements, but Latrobe is in close proximity to production centres in Gippsland.

Key barriers

- Food processing requires reliable access to electricity, gas, water, and trade-waste treatment. Current capacity is limited at some sites[32], creating additional costs for expansion.
- Gippsland produces high volumes of dairy, beef, horticulture, and timber, but a large share of value-added processing still occurs in Melbourne due to insufficient cold-chain, packaging, and export facilities in Latrobe, as demonstrated by the employment by region below.
- Establishing modern processing plants, packaging lines, and export-ready facilities requires high upfront investment. Smaller regional firms struggle to finance or scale without anchor tenants and govt. support.
- Food technologists, maintenance fitters and industrial electricians are in short supply across Victoria[33], and Latrobe competes with metropolitan hubs for talent.
- Market access and competition: Access to export markets requires certification and biosecurity compliance. Competing with established hubs like Shepparton, Warrnambool, and Melbourne.

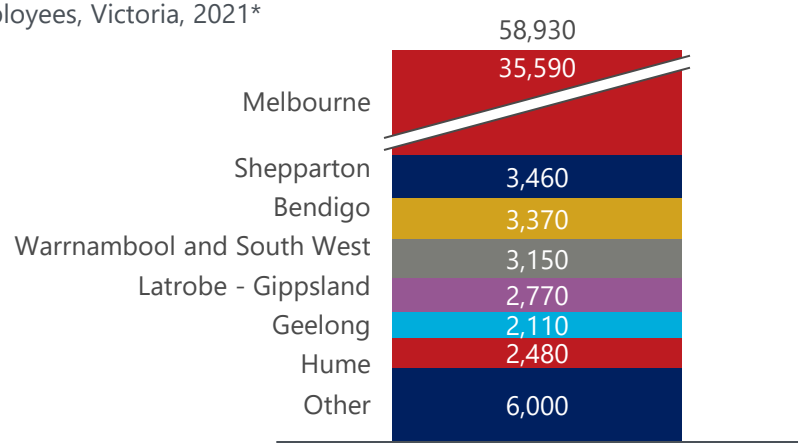
Key enablers

- The Latrobe City Food Manufacturing Precinct, which is a Victorian Government–backed initiative with $10 million committed to enabling infrastructure, offering serviced land and shared utilities for food processors[34].
- Latrobe sits at the centre of one of Australia's strongest agricultural regions, with ready access to dairy, beef, vegetables, and horticultural output that can underpin new processing facilities.
- The Valley's brownfield industrial base provides large sites with access to power, water, gas, and transport links, reducing set-up costs compared to greenfield development.
- Proximity to Renewable Energy Zones and geothermal resources enables manufacturers to access low carbon energy in the medium term.
- Latrobe's power generation workforce has transferable skills (mechanical, electrical, operational) that can be retrained for roles in food and fibre manufacturing.

Opportunities

- Developing shared cold storage, packaging, and export facilities at Morwell would consolidate Gippsland's dairy, meat, and horticulture flows while reducing leakage to Melbourne.
- Attracting large processors such as dairy, meat, and plant protein companies would help anchor the Morwell precinct and stimulate secondary suppliers.
- Co-locating food processing with the Gippsland Logistics and Manufacturing Precinct would strengthen integration with regional logistics infrastructure.
- Supporting waste-to-value initiatives such as bioenergy, fertiliser, and biochemicals from food by-products could be complementary.
- Position Latrobe as a supplier of premium, low-carbon food products and market as high-value export opportunities into Asian markets.

Food product manufacturing employment
Employees, Victoria, 2021*



*Source: * ABS Census of Employment, 2021*

PUBLIC STRATEGY GAPS

Latrobe's strategies set a clear vision for energy transition, but delivery depends on stronger enabling conditions.

Public-facing investment strategies at Commonwealth, State, and Local levels were assessed against five key criteria: (1) strategic priorities and comparative advantage; (2) priority investment opportunities; (3) funding, infrastructure and enabling conditions; (4) coordination across government; and (5) governance and monitoring. Each was rated on a 1–5 scale, with higher scores indicating greater clarity, specificity, and alignment (see Rating Criteria Interpretation in Appendix). The assessment highlights strong regional framing of comparative advantages and sectoral opportunities, yet also reveals gaps in delivery frameworks, multi-tier coordination, and formal governance mechanisms.

In the Latrobe region, the Commonwealth Government emphasises national-scale enablers such as offshore wind, large-scale renewables, and energy exports through CEFC and ARENA, while the Victorian Government focuses on planning, infrastructure, supply chains, training, food and fibre manufacturing, and waste-to-energy as part of a broader energy system approach. Regional and local governments often take a place-based approach, integrating health, education, food and fibre opportunities, circular economy, and environmental restoration to diversify the economy, support local businesses, and strengthen community resilience.

Strategic priorities and comparative advantage are widely recognised across strategies. Most strategies clearly articulate Latrobe's comparative advantages, especially its concentration of energy infrastructure, industrial land, logistics capability, and skilled workforce. Recent documents such as the *Regional Development Aspirations and Renewable Energy Impact & Readiness Study* scored highly (4-5), with detailed references to hydrogen, offshore wind, and supply-chain positioning. The *Offshore Wind Supplier Showcase* also rated strongly, identifying sector-specific advantages and workforce potential. Older documents such as *Our Transition* and the *Latrobe City Investment Roadmap* referenced these strengths more generally, with less supporting justification.

Priority investment opportunities are also well-articulated. Performance was solid in articulating sectoral priorities, especially for clean energy, offshore wind, and advanced manufacturing. Documents such as the *Renewable Energy Impact & Readiness Study* and *Offshore Wind Supplier Showcase* provided well-scoped pathways, sectoral priorities, and supplier enablement strategies (scores of 4-5). Other documents presented broader thematic directions such as liveability, skills, and housing but lacked detail on project readiness, resulting in mid-range scores (3-4).

Across funding, infrastructure and enabling conditions, infrastructure mapping was a relative strength. The *Latrobe Valley and Gippsland Transition Plan* and *Renewable Energy Impact & Readiness Study* detailed enabling infrastructure, workforce pathways, and regional enablers (scoring 4-5). However, across most documents there was less detail on the enabling processes that could accelerate project delivery. This indicates that while enabling conditions are well described, the absence of sequenced delivery frameworks constrains investment readiness.

Coordination across government was uneven. Cross-government alignment was generally implied rather than explicit. Most strategies acknowledged partnerships and state-regional alignment but offered little detail on Commonwealth linkages, leading to consistent mid-range ratings (3). The Transition Plan was the exception, explicitly setting out roles for communities, industry, local government, state agencies, and the Commonwealth, and therefore achieved a higher rating (5).

Governance and monitoring remains the least developed area. Most documents mentioned partnerships or stakeholder engagement without specifying accountability, structures, or monitoring frameworks (scoring 2-3). Only the *Latrobe Valley and Gippsland Transition Plan* embedded a clear Outcomes Framework led by the Latrobe Valley Authority, supported by commitments to evaluation and public reporting, supported by extensive consultation, which secured a top score (5).

Overall, the assessment reveals that several Latrobe and Gippsland strategies, particularly the *Made In Victoria 2030 Statement, Gippsland 2035 Transition Plan*, the *Renewable Energy Impact & Readiness Study*, and the *Offshore Wind Supplier Showcase*, demonstrate strong alignment with the NZEA's place-based approach to net zero transition. These documents were proactive in identifying comparative advantages, specifying high-priority opportunities, and mapping enabling infrastructure and workforce pathways. However, highly detailed governance and funding commitments were scarce. Addressing these gaps, by embedding formalised governance structures across all strategies, developing sequenced and costed infrastructure investment plans, and ensuring consistent cross-tier coordination will be critical if strategic priorities are to translate into delivered projects. In short, while Latrobe's policy landscape is strong on vision and sectoral positioning, particularly across renewables, bioenergy and logistics, it remains underpowered on the enabling conditions that will ultimately determine delivery.

Key public facing investment strategies were assessed against five criteria.

Criteria	Sub-criteria	Cth	State				Local				Commentary
		INZEA ROF	RDA for Latrobe	Gippsland REDS	MIV 2030	Gippsland 2035 TP	SGLC RIRS	Our Transition	Latrobe IR	OW SS	
Strategic priorities and comparative advantage	Identifies and targets comparative advantage	5	4	5	4	4	4	3	4	4	• Most documents reference regional strengths, especially in energy and manufacturing. OWSS, SGLC RIRS and Gippsland REDS provide clear sector positioning or dedicated comparative advantage sections; others are broader in scope.
	Targets high growth/high employment sectors	3	4	4	5	4	4	3	4	5	• Strong targeting of renewable energy, hydrogen, and advanced manufacturing across all tiers. OWSS and MIV stand out by identifying key priority areas, with OWSS outlining specific workforce projections
Priority investment opportunities	High priority investment opportunities are identified	4	3	3	4	4	4	3	4	4	• Investment priorities are generally identified, though detail varies. OWSS and Latrobe IR outline clearer opportunities; local documents tend to group projects at a higher level.
	Opportunities align with NZEA projects/sectors focus	5	3	4	5	4	4	3	3	5	• NZEA-aligned sectors (e.g. offshore wind, hydrogen, transition industries) are mentioned frequently, though explicit NZEA framing is limited to federal strategies.
Infrastructure and enabling conditions	Infrastructure and enabling conditions identified	3	3	4	4	5	5	3	4	3	• Infrastructure enablers (e.g. ports, grid, skills) are mentioned, with best coverage in SGLC RIRS, Gippsland 2035 TP and OWSS. Most others offer general intent rather than project-level detail.
Coordination	Priorities shared across Cth, State and Region	4	3	4	4	5	3	3	3	3	• Modest cross-government alignment. Gippsland 2035 TP stands out by identifying explicit coordination mechanisms and roles for industry and all levels of government. Generally. documents reference broader state or national policy but lack strong integration across tiers.
Governance and monitoring	Governance and coordinating mechanisms in place	3	3	3	3	5	3	3	2	2	• Governance frameworks are referenced but tend to be high-level or informal. Gippsland 2035 TP stands out through extensive engagement by the LVA with key stakeholders.

Weakest 1 2 3 4 5 Strongest

MAJOR APPROVALS

Navigating approvals effectively is critical to accelerating the Latrobe's investment pipeline across multiple sectors.

Delivering large-scale net zero projects in Victoria requires navigating a structured but often complex approvals framework. Approvals are staged across four broad phases: (1) Early development, (2) Environmental planning and development approvals, (3) Financial and network arrangements, and (4) Construction and commissioning. Timelines vary considerably by technology, from around three years for projects such as green ammonia to more than a decade for offshore wind, reflecting the scale of approvals, assessments, and specialist licences required.

Early development focuses on strategic planning and policy alignment. Projects must demonstrate consistency with national and state net zero strategies, alongside Victorian Government initiatives such as Renewable Energy Zones (REZs) through VicGrid. Engagement with Commonwealth programs, including ARENA, CEFC, and the National Hydrogen Strategy, is often critical for feasibility funding. At this stage, proponents secure site identification and tenure, negotiate land access agreements, and address Aboriginal cultural heritage requirements. Mining leases or exploration licences may also apply. Specialist approvals can be triggered, including Defence clearances, CASA aviation reviews for tall structures such as wind turbines, and preliminary feasibility licences for offshore projects. This stage is often decisive in determining whether a project can advance to formal environmental assessment.

The bulk of regulatory assessment occurs during Environmental planning and development approvals, typically under the Victorian Environment Effects Statement (EES) process administered by the Department of Transport and Planning. Developers submit a referral under the Environment Effects Act 1978, with the Minister determining whether an EES is required. Where triggered, scoping requirements are issued, and proponents prepare a comprehensive EES for public exhibition and independent assessment. At the Commonwealth level, projects may also require approval under the Environment Protection and Biodiversity Conservation (EPBC) Act 1999, where impacts on matters of national environmental significance are likely. Depending on outcomes, projects may proceed without additional approvals, or require a full EPBC assessment that can extend timelines by 6–12 months. Specialist approvals in Victoria include Aboriginal heritage permits, biodiversity offsets, water access licences, and for offshore projects, a Commonwealth Offshore Infrastructure Licence under the Offshore Electricity Infrastructure Act 2021. Further requirements may include industrial relations management plans, aviation obstacle assessments, and formal Defence clearances.

Once environmental approvals are secured, projects move into the Financial and network approvals phase. A critical milestone is securing a grid connection agreement with AusNet Services or another Victorian distribution network service provider, under the National Electricity Rules. Registration with AEMO as a market participant or generator is mandatory. In parallel, proponents must establish a commercial revenue model, often through long-term power purchase agreements (PPAs), offtake contracts, or government underwriting. Project-specific licences may also be required, including pipeline licences for hydrogen and CCS projects or electricity generation licences under the Electricity Industry Act 2000 (Vic). In some cases, final CEFC or ARENA investment approval depends on these commercial and technical arrangements being in place. For offshore wind, proponents must also transition from feasibility to a commercial licence before construction can begin.

The final phase involves construction and commissioning. Proponents are required to prepare a Construction Environmental Management Plan (CEMP) in line with EES approval conditions, and secure operational licences such as an EPA licence under the Victorian Environmental Protection Act. Safety and technical approvals also apply, including compliance with Work Health and Safety (WHS) regulations and dangerous goods laws governing the storage and transport of hazardous materials. Occupational health and safety clearances must be met before operations commence.

While the staged framework is consistent across technologies, total lead times vary significantly. Offshore wind projects are the most protracted, with multiple marine, seabed, and aviation assessments, offshore infrastructure licences, and Commonwealth approvals extending average timelines to more than 11 years. By comparison, hydrogen electrolysers (around 43 months), battery storage (42 months), and solar farms (45 months) progress more quickly. Transmission projects (51 months) and hydrogen/ammonia pipelines (48 months) fall in the mid-range, while onshore wind projects average six years due to biodiversity, land access, and aviation constraints.

In Victoria, the approvals pathway is highly layered and multi-jurisdictional, with triggers across both State and Commonwealth processes. Early strategic alignment and stakeholder engagement are essential, but the environmental approvals stage is the most resource-intensive, often taking two years or more. Commercial, network, and construction approvals build sequentially on this foundation. Although certain approvals are technology-specific, each project must be assessed individually, reflecting local site conditions and policy triggers. While complex, this structured framework provides a clear roadmap for proponents, enabling them to plan investment and manage risk across the full net zero project lifecycle.

Major approvals are required across four key stages of net zero projects.

	3 – 6 months	12 – 24 months		6 – 12 months	12 - 36 months
	Early development phase	**Environmental planning & development approvals**		**Financial & network**	**Construction & commissioning**
Typical approvals	▪ Strategic Planning and Policy Alignment ○ Vic Government strategic support (e.g. REZ via VicGrid) ○ Commonwealth programs (e.g. ARENA, CEFC, National Hydrogen Strategy) ○ Preliminary stakeholder engagement ▪ Site Identification and Tenure ○ Land access agreements Native title/Aboriginal cultural heritage ○ Mining lease or exploration license considerations	▪ Victorian EES Process (Environmental Effects Act 1978)[1]: ○ Referral submitted under the EEA Act (1978) to the Minister for Planning. ○ Scoping requirements for the EES are issued if triggered. ○ Environmental Impact Statement (EES) [4] prepared and publicly exhibited. ○ Assessment conducted by the Minister for Planning to inform approval decisions	▪ Commonwealth Environmental Approval – EPBC Act[2]. May result in: ○ Not a controlled action – no further approval needed. ○ Controlled action – requires Environment Protection and Biodiversity Conservation (EPBC) approval, often assessed jointly with Vic EES. ○ Extending timelines by 6-12 months, depending on the decision.	▪ Grid connection agreement with AusNet or other Victorian DNSP. ▪ Registration with AEMO as market participant or generator. ▪ Revenue model or offtake arrangements (e.g. long-term contracts, government underwriting).	▪ Construction Environmental Management Plan (CEMP). ▪ EPA Licence under Vic Environmental Protection Act. ▪ Occupational Health and Safety clearances.
Specialist approvals	▪ Initial Defence clearance ▪ Commonwealth aviation review (CASA) ▪ Strategic land access constraints ▪ Funding Pre-Approvals (ARENA/CEFC) – Early Feasibility Stage ▪ Offshore Wind Pre-Licensing	▪ Cultural Heritage Management Plan ▪ Biodiversity offset approvals ▪ Water Access Licences or Water Use Approvals ▪ Commonwealth Offshore Infrastructure Licence (Offshore Electricity Infrastructure Act 2021)[3]	▪ Development Consent for Infrastructure/Works (Planning and Environment Act 1987) ▪ Formal Defence clearance ▪ Aviation obstacle assessment ▪ Discharge / effluent approvals ▪ Expanded stakeholder engagement obligations ▪ Industrial Relations Management Plan (IRMP)	▪ Pipeline Licence (for hydrogen or CCS) ▪ Electricity Generation Licence under the Electricity Industry Act 2000 (Vic) ▪ Final ARENA/CEFC investment approval ▪ Offshore Wind Commercial Licence (Post-Feasibility)	▪ Safety and technical approvals (WHS Regulations, Dangerous Goods (Road and Rail Transport)

Notes: (1) Victorian Environmental Effects Statement (EES) pathway applies to most major net zero projects. Triggered by investment size, energy capacity, or location in REZ. (2) Required if project has a significant impact on Matters of National Environmental Significance (MNES). Referral to Department of Climate Change, Energy, the Environment and Water (DCCEEW). Noting this does not take into account amendments to the EPBC Act made by the Parliament in November 2025 (3) Offshore wind projects can involve significantly longer timeframes of 7-10 years before operational (4) This includes design and engineering reports, transport, grid and geotechnical assessments and typically a Cultural Heritage Management Plan

TECHNICAL APPENDICES

A range of opportunities was considered, resulting in a long list of 21 major opportunities for shortlisting.

Major project types for consideration

1 Circular economy manufacturing	8 Solar farms	15 Data centres
2 Energy from waste facilities	9 Renewables component manufacturing	16 Green metals
3 Food and fibre product manufacturing	10 Urea and ammonia production	17 Geothermal heating and power
4 Hydrogen	11 Onshore wind farms	18 Minerals processing
5 LCLFs, biofuels and biochemicals from waste streams	12 Battery energy storage systems (BESS)	19 Pumped hydro energy storage
6 Defence maintenance/sustainment	13 Carbon capture and storage (CCS)	20 Offshore wind farms
7 Aerospace and defence manufacturing	14 Transport and logistics	21 Mine rehabilitation

Prioritisation criteria

The Latrobe Valley's investment assessment identifies 21 potential opportunities spanning clean energy, circular economy, industrial projects, and enabling industries. Clean energy and storage make up a significant share, with possibilities in hydrogen and ammonia to decarbonise heavy industry and support fertiliser production, alongside renewable generation in onshore and offshore wind, solar, and geothermal power. These would rely on the Valley's transmission backbone and the development of the Gippsland Renewable Energy Zone. Complementary opportunities include energy storage through pumped hydro and battery systems (BESS), while carbon capture and storage (CCS) could offer pathways to repurpose legacy industrial assets.

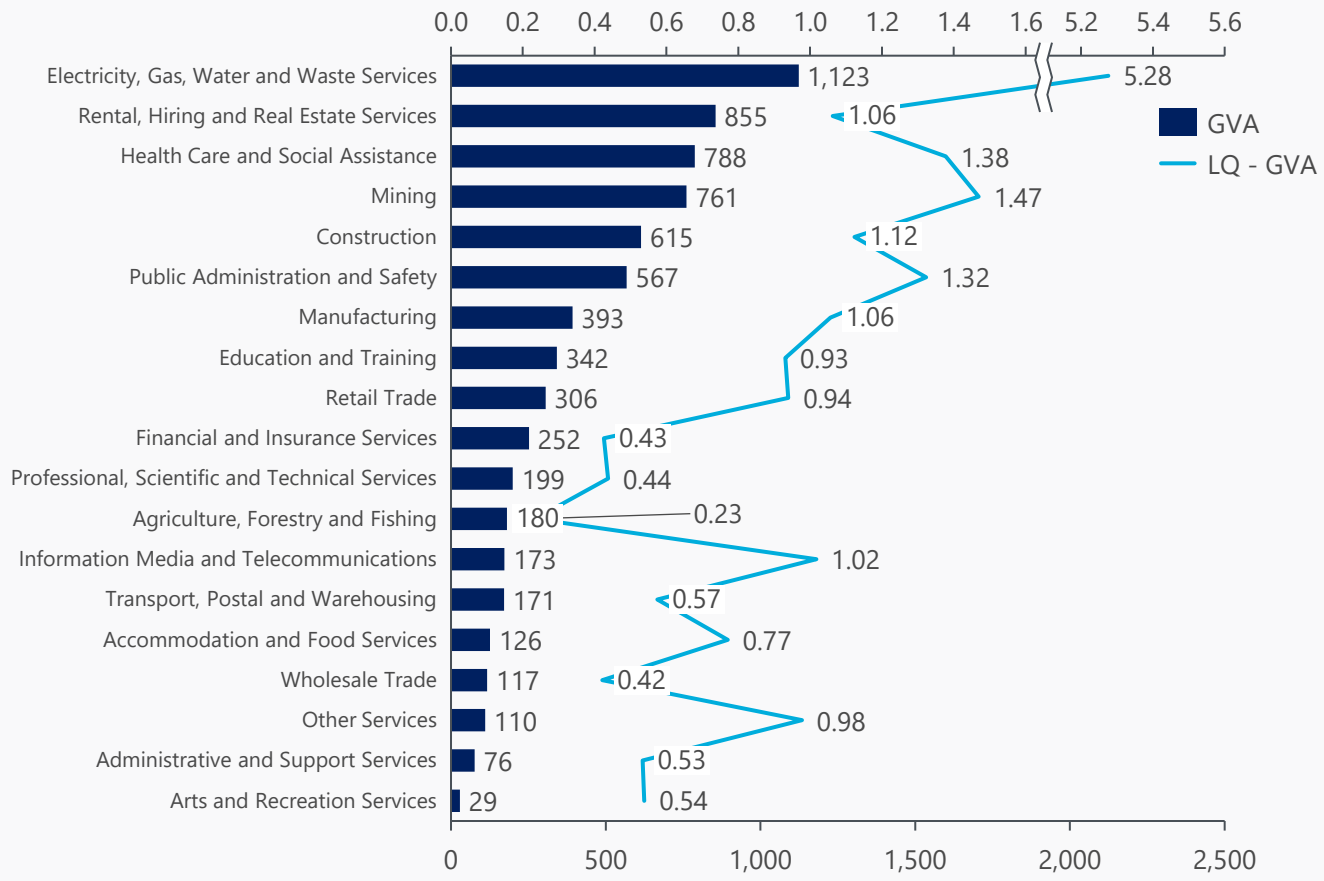
Other opportunities under consideration include renewables component manufacturing to strengthen domestic supply chains, and potential for minerals processing and green metals, using Latrobe's industrial base and access to utilities. In agribusiness, food and fibre product manufacturing could support more value-added processing for both domestic and export markets. The circular economy and industrial diversification provide further options. Energy-from-waste facilities and low-carbon fuels, biofuels, and biochemicals could convert waste streams into new industrial inputs. Opportunities also exist in mine rehabilitation, with environmental restoration and re-use of industrial land.

Beyond energy and industry, enabling and service-related opportunities are also identified. These include defence sustainment and maintenance, expansion of transport and logistics through the Gippsland Logistics and Manufacturing Precinct (GLAMP), and potential investment in data centres, which could leverage Latrobe's transmission assets and connectivity to meet rising digital demand.

Together, these 21 categories represent potential opportunities to diversify the Latrobe economy, create skilled employment, attract private investment, and support a long-term transition. Their scale, timing, and feasibility will depend on policy settings, market conditions, and investor confidence.

Energy, real estate and healthcare are the largest industries in the Latrobe Valley.

GVA – 2024 GVA ($m), Location quotients – Latrobe region



Source: REMPLAN 2024

Industry trends in the Latrobe region

Mirroring employment trends, industrial output in the Latrobe region has historically been concentrated in the electricity, gas, water and waste services, which contributed an estimated $1.12b in GVA in 2024. With a very high location quotient (LQ=5.28), this sector remains the defining feature of the regional economy, reflecting Latrobe's legacy role as Victoria's power generation hub. Mining ($761m GVA, LQ=1.47) and manufacturing ($393m GVA, LQ=1.06) also for part of the industrial base, sustained by long-standing extraction, engineering and processing capabilities. Looking ahead, Latrobe is well positioned to capture opportunities from Victoria's offshore wind developments off the Gippsland coast, which will require grid connections, workforce skills, and broader local content[20] both during the construction and development phases of these projects.

Other significant contributions come from service sectors aligned with demographic demand. Health care and social assistance ($788m GVA, LQ=1.38) and public administration and safety ($567m GVA, LQ=1.32). Together, these industries highlight Latrobe's growing role as a regional service hub, complementing its industrial specialisations. Major hospitals and clinics in Morwell and Traralgon anchor this sector.

Although Latrobe's direct agricultural output is relatively small ($180m GVA, LQ=0.23), the region benefits from its position within Gippsland, one of Victoria's most productive food-and-fibre areas. The Latrobe City Food and Manufacturing Precinct in Morwell[21] has been developed to capture this advantage, offering approved zoning, strong utility service, and proximity to the Princes Freeway and Melbourne markets. This precinct provides opportunities for processors to expand and co-locate with existing operators, such as Lion's Morwell facility[22] (the largest yoghurt plant in Australia) which employs around 160 staff and produced 90,000 tonnes annually for domestic and export markets.

Public facing documents and strategies were assessed against key criteria.

Criteria	Sub-criteria	1	2	3	4	5
Strategic priorities and comparative advantage	Identifies and targets comparative advantage	No reference to regional strengths or comparative positioning.	Mentions potential strengths but lacks clear targeting or rationale.	Identifies broad regional strengths, but limited justification.	Clearly articulates regional advantages with industry/economic basis.	Defines regional advantage with data, sectors, and strategic positioning.
	Targets high growth/high employment sectors	Does not mention target sectors or employment outcomes.	Mentions sectors broadly but lacks analysis or specificity.	Identifies sectors with some justification; lacks detail on employment impact.	Targets growth/employment sectors with some supporting evidence.	Targets high-employment, high-growth sectors with supporting analysis.
Priority investment opportunities	High priority investment opportunities are identified	No prioritisation of opportunities or vague general goals.	Some opportunities mentioned but not prioritised or scoped.	Identifies key sectors or industries but lacks project specificity.	Prioritised opportunities clearly identified, but detail varies.	Well-developed list of prioritised, investment-ready opportunities.
	Opportunities align with NZEA projects/sectors focus	No alignment or relevance to NZEA sectors/projects.	Vague mention of sectors that may overlap with NZEA.	General alignment to NZEA sectors, with implied relevance.	Strong alignment with NZEA sectors but not core framing.	Direct and deliberate alignment to NZEA focus areas and technologies.
Funding, infrastructure and enabling conditions	Infrastructure and enabling conditions identified	No enabling infrastructure mentioned or completely absent.	Lists general needs but does not connect to delivery or sequencing.	Enabling infrastructure needs listed with some planning detail, but limited costing or delivery information.	Infrastructure detail strong; partially integrated with development plans.	Sequenced, costed, and planned infrastructure enabling investment.
Coordination	Priorities shared across Cth, State and Region	No indication of shared priorities or integrated planning.	Minimal reference to inter-government coordination.	Coordination is implied through planning references.	Cross-government links or shared actions referenced.	Clearly aligned state/federal/regional priorities across tiers.
Governance and monitoring	Governance and coordinating mechanisms in place	No governance frameworks or partnerships described.	Limited or high-level governance references.	Outlines governance structure or local partnerships.	Governance structures defined with roles across levels.	Robust governance, including partnerships, councils, taskforces.

Lead times for each project were quantified and categorised as short, medium and long term.

Lead time classification by project type – Latrobe region

Project Type	Months*	Term
Offshore wind farms	110	Long
Food and fibre product manufacturing	24	Short
Transport and logistics	48	Medium
Carbon capture and storage (CCS)	72	Long
Hydrogen	43	Medium
Energy from waste facilities	84	Long
Renewables component manufacturing	30	Short
Circular economy manufacturing	24	Short
Defence maintenance/sustainment	36	Short
Urea and ammonia production	36	Short
LCLFs, biofuels and biochemicals from waste streams	48	Medium
Defence manufacturing	36	Short
Solar farms	43	Medium
Battery energy storage systems (BESS)	41	Medium
Green metals	48	Medium
Geothermal heating and power	84	Long
Mine rehabilitation	N/A	N/A
Onshore wind farms	62	Long
Minerals processing	36	Short
Data centres	18	Short
Pumped hydro energy storage	79	Long

Lead times by project type and region were compiled using a range of sources. Lead time is defined as the period between project inception and the commencement of construction.

For energy-related project types (solar farms, onshore wind, offshore wind, BESS, pumped hydro, and hydrogen), estimates were derived from a proprietary econometric model developed by Oxford Economics for AEMO. This model draws on a national dataset of approximately 600 energy projects and provides state-specific estimates.

For non-energy project types, lead times were estimated by reviewing press releases and other public communications to identify the date of project inception and construction start. Australian examples were prioritised, though international sources were used where local precedents were unavailable (e.g. geothermal energy).

Lead times were then categorised according to the following designation, which broadly aligns with terciles of project type lead times:

- Short Term: 3 years or less
- Medium Term: 3 to 5 years
- Long Term: Over 5 years

No lead time is assigned to “mine rehabilitation” projects, as rehabilitation planning is typically required during active mining operations.

**Note these lead times include pre-construction approvals.*

Construction and ongoing jobs have been quantified for each project based on the major project database and converted to a score.

Job contribution classification by project type – Latrobe region

Project Type	Average construction jobs	Average ongoing jobs p.a.	Job contribution score
Offshore wind farms	1466	198	4.00
Food and fibre product manufacturing	528	110	2.00
Transport and logistics	312	266	4.00
Carbon capture and storage (CCS)	1504	683	5.00
Hydrogen	790	383	5.00
Energy from waste facilities	539	385	4.00
Renewables component manufacturing	820	702	5.00
Circular economy manufacturing	132	36	1.00
Defence maintenance/sustainment	367	600	5.00
Urea and ammonia production	1359	300	4.00
LCLFs, biofuels and biochemicals from waste streams	733	103	3.00
Defence manufacturing	148	263	3.00
Solar farms	249	18	1.00
Battery energy storage systems (BESS)	148	7	1.00
Green metals	700	200	3.00
Geothermal heating and power	358	68	2.00
Mine rehabilitation	317	176	3.00
Onshore wind farms	286	19	1.00
Minerals processing	206	138	2.00
Data centres	217	40	1.00
Pumped hydro energy storage	600	39	2.00

Estimates of average employment (by headcount) for each project type were sourced from a range of materials.

For roughly half of the project types, average construction and ongoing job estimates were calculated by taking the mean of reported figures for projects listed in the Major Projects database. To address incomplete data and preserve available information, missing construction or ongoing job counts were imputed using a ratio between construction and ongoing employment derived from entries with complete data.

Where fewer than three projects had available job data for a given type, additional desktop research was undertaken to identify comparable projects domestically and internationally. In all cases, a minimum of three projects with relevant construction and ongoing job estimates were identified to support the averaging process.

To calculate a job contribution score, estimated “job years” were derived for each project type. This assumed a project operational life of 10 years, beyond which ongoing jobs were not counted. The resulting job years were then ranked into quintiles to generate the contribution score.

Projects were scored based on their importance and prevalence across local, state and commonwealth strategies and polices.

Policy alignment classification by project type – Latrobe region

Project Type	Local Alignment	State Alignment	Cth Alignment	Major Project Alignment	Policy Rating
Offshore wind farms	1	1	1	1	5.00
Food and fibre product manufacturing	1	1	1	1	5.00
Carbon capture and storage (CCS)	0	1	1	1	4.00
Transport and logistics	1	1	0	1	4.00
Hydrogen	1	0	1	0	3.00
Energy from waste facilities	1	0	1	1	4.00
Renewables component manufacturing	0	1	1	0	3.00
Circular economy manufacturing	1	1	1	1	5.00
Defence maintenance/sustainment	0	0	1	0	2.00
Urea and ammonia production	0	0	1	1	3.00
LCLFs, biofuels and biochemicals from waste streams	1	1	1	0	4.00
Defence manufacturing	0	0	1	1	3.00
Solar farms	1	1	1	1	5.00
Battery energy storage systems (BESS)	0	1	1	1	4.00
Green metals	0	0	1	1	3.00
Geothermal heating and power	1	0	0	0	2.00
Mine rehabilitation	0	0	0	0	1.00
Onshore wind farms	0	1	1	1	4.00
Minerals processing	0	0	1	1	3.00
Data centres	0	0	1	0	2.00
Pumped hydro energy storage	0	0	0	0	1.00

To determine a policy alignment rating for each project type, we reviewed key local, state, and Commonwealth policy documents. Where a document explicitly identifies a project type, we increase its policy alignment score by one. A further point is added if a project of that type appears in the region's Major Project listing.

This results in a score ranging from 1 to 5. A score of 5 indicates strong policy alignment (i.e. the project type is prioritised across multiple levels of government and is present in the regional project pipeline), while a score of 1 reflects minimal alignment (i.e. the project type is not mentioned in local, state, or federal policy, and no related projects are identified as upcoming in the region).

The policy documents reviewed include those nominated by NZEA, as well as additional sources identified by Oxford Economics.

At the state level for VIC, these included:

- *Victoria 2025-26 State Budget*
- *Plan for Victoria*
- *Sustainability Victoria Strategic Plan 2024-2027*
- *Gippsland Regional Economic Development Strategy*

At the regional level, documents included:

- *Latrobe – Our Transition 2023*
- *Regional Development Aspirations for the Latrobe Valley and Gippsland*
- *Gippsland Bioenergy Map*

Comparative advantage scores were informed through an assessment of industry, workforce, endowments and infrastructure

Comparative advantage scoring system

Each project type was assigned a comparative advantage score on a five-point scale:

1. No alignment with regional strengths or capabilities
2. Minimal alignment; limited local advantages
3. Moderate alignment with some key strengths (e.g. workforce or land)
4. Strong alignment with multiple comparative advantages
5. Excellent alignment; leverages core regional assets and priorities

Comparative advantage factors considered

The assessment considered the following dimensions of regional advantage:

- **Natural resources** – availability of physical assets such as land, water, raw materials, critical minerals and renewables potential (MW), that provide a foundation for economic activity.
- **Industrial base** – industrial advantages (LQs, GVA) and growth rates (% CAGR), and related supply chains, with potential for growth, diversification, and value-adding.
- **Infrastructure readiness** – deepwater ports, rail networks, highways, intermodal hubs, water and energy infrastructure, higher education and training facilities, and health and community infrastructure
- **Workforce and skills** – concentrations of skilled trades, specialisations, R&D and knowledge workers, and vocational training, with assessment of educational institutions.
- **Precincts and clusters –** established and emerging hubs of economic activity, supported by co-located businesses, infrastructure, training facilities, and supply chains.

The comparative advantage scores assigned to different project types in the Latrobe Valley were designed to capture the degree to which each opportunity leverages the region's industrial base, workforce, infrastructure and natural endowments. This assessment provides a foundation for identifying the projects most likely to deliver new, sustainable economic opportunities during the transition to net zero. Because the factors underpinning comparative advantage vary across project types, the scoring relied on structured qualitative assessment informed by the most relevant indicators for each industry.

The strongest alignment was found in offshore wind, transport and logistics, and food and fibre product manufacturing. Offshore wind scored highly due to the Valley's proximity to the declared Gippsland offshore wind zone, its established energy and utilities industries, and its strong engineering and technical workforce, all of which position the region as a favourable location for an operations and maintenance hub. Transport and logistics opportunities reflect the Valley's strategic location, industrial land availability and freight connections to Melbourne and Gippsland ports, alongside planned precinct developments (GLAMP). Food and fibre product manufacturing builds on Gippsland's extensive agricultural base and established processing precincts, supporting expansion into higher value-added production.

Moderate alignment was recorded for sectors such as LCLFs, waste-to-energy, hydrogen, CCS. These industries can leverage existing energy infrastructure, endowments and transferable skills, but require additional investment and ecosystem development to reach scale. For example, current hydrogen projects are not focused on green hydrogen and Latrobe is not designated as a hydrogen hub.

By contrast, large-scale solar, onshore wind and ICT/digital services displayed weaker alignment. Solar and onshore wind face constraints from resource quality and project scale compared with other renewable regions, while ICT and data centres are limited by ecosystem depth, digital workforce availability and distance from metropolitan markets.

In summary, the comparative advantage framework highlights that the Latrobe Valley's endowments provide the strongest platform for investment in offshore wind, food and fibre manufacturing, and logistics, with emerging opportunities in energy transition industries. These strengths can guide prioritisation of opportunities most likely to succeed and deliver long-term regional benefits.

Victorian State Significant Development or State Significant Infrastructure is required for most net zero projects while others depend on project context.

Phase	Approval	Relevant Legislation	When It's Required
Early Development	Strategic Planning and Policy Alignment	N/A (strategic/policy context)	• Initial internal planning and alignment with national/state net zero or energy transition strategies.
	Vic Govt strategic support (e.g. REZ)	Electricity Industry Act 2000 (Vic)	• Required if project is located within a Renewable Energy Zone or seeking support from VicGrid.
	Commonwealth programs (e.g. ARENA, CEFC)	ARENA Act 2011, Clean Energy Finance Corporation Act 2012 (Cth)	• Applies when seeking Commonwealth funding or concessional finance for feasibility or project development.
	Preliminary stakeholder engagement	N/A	• Undertaken for all projects to manage social licence, Indigenous engagement, and community support.
	Initial Defence clearance	Defence Act 1903 (Cth)	• Applies if the project is located near military zones or may interfere with defence operations or radar.
	Commonwealth aviation review (CASA)	Airspace Protection Regulations under the Civil Aviation Act 1988 (Cth)	• Required for tall structures (e.g., wind turbines) near flight paths or controlled airspace.
	ARENA/CEFC early feasibility stage	ARENA Act 2011, CEFC Act 2012 (Cth)	• Optional but common if applying for early-stage grant funding or concessional finance.
	Offshore Wind Pre-Licensing (via OEI Act 2021)	Offshore Electricity Infrastructure Act 2021 (Cth)	• Required for feasibility rights within a declared offshore wind zone under the Offshore Electricity infrastructure Act (2021).
Environmental Planning & Development Approvals	EES Referral (triggered)	Environmental Effects Act 1978 (Vic)	• Mandatory if project has significant environmental effects
	EPBC Act Referral & Approval	Environment Protection and Biodiversity Conservation Act 1999 (Cth)	• Mandatory if the project is likely to impact Matters of National Environmental Significance (MNES).
	Planning Permit	Planning & Environment Act 2006 (Vic)	• Most projects
	Cultural Heritage Management Plan (CHMP)	Aboriginal Heritage Act 2006 (Vic)	• Required if site is in area of cultural heritage sensitivity
	Flora & Fauna Guarantee (FFG) Act Permit	FFG Act 1988 (Vic)	• Required where project impacts mapped biodiversity or threatened species habitat.
	Offshore Infrastructure Licence	Offshore Electricity Infrastructure Act 2021 (Cth)	• Needed to progress feasibility studies in declared offshore wind zones.
	Formal Defence Clearance	Defence Act 1903 (Cth)	• Applies if Defence identifies unacceptable risks after initial consultation.

Typical later stage approvals include grid connection agreements, registration with AEMO, electricity generator licence and CEMP.

Typical Timing	Approval	Relevant Legislation	When It's Required
Environmental Planning & Development Approvals (continued)	Aviation Obstacle Assessment	Civil Aviation Act 1988 (Cth)	• Required for formal confirmation that the structure does not pose aviation risks.
	EPA Works Approval	Environmental Protection Act 2017 (Vic)	• Required for prescribed industrial facilities
	IRMP (Industrial Relations Management Plan)	Varies (often required under project-specific agreements)	• Applies to government-backed or labour-intensive projects to ensure fair workforce practices.
Financial & Network	Grid connection agreement	National Electricity Law / Rules	• Required to connect to the transmission or distribution network (e.g. Transgrid, DNSP).
	Registration with AEMO	National Electricity Rules (NER)	• Applies to market participants such as generators, retailers, or scheduled loads.
	Revenue model / offtake arrangements	Varies (e.g., contract law, underwriting guidelines)	• Required to underpin investment through PPAs, long-term contracts, or government underwriting.
	Pipeline Licence (Hydrogen or CCS)	Pipelines Act 2005 (Vic)	• Needed for the transport of hydrogen, CO2, or other products via pipeline.
	Electricity Generation Licence	Electricity Industry Act 2000 (Vic)	• For retail/export projects exceeding threshold.
	Final Future Made in Australia/National Reconstruction Fund/ARENA/CEFC Investment Approval	ARENA Act 2011, CEFC Act 2012, Future Made in Australia Bill (2024), National Reconstruction Fund Corporation Act (2023)	•Applies where earlier feasibility support progresses to full funding or co-investment.
	Offshore Wind Commercial Licence	Offshore Electricity Infrastructure Act 2021 (Cth)	• Required to construct and operate offshore generation assets post-feasibility.
Construction	Construction Environmental Management Plan (CEMP)	Condition of SSD/SSI approval under EP&A Act 1979 (NSW)	• Must be submitted prior to construction under SSD/SSI approval conditions.
	Environmental Protection Act Licence (EPA)	Environmental Protection Act 2017 (Vic)	• Needed for waste discharge, emissions, etc.
	Safety and technical approvals	Occupational Health and Safety Act 2004 (Vic), Dangerous Goods Act 1985 (Vic)	• Required where high-risk construction or dangerous goods storage/transport is involved.

The approvals process timeline ranges from 36 months for green ammonia plants to 110 months for offshore wind.

Project Type	Early Development	Environmental Planning & development approvals	Financial & Legal Approvals	Construction & Commissioning	Typical lead time to construction
Offshore Wind	Offshore feasibility licence, seabed lease, Defence clearance	EES (marine, fisheries, aviation, noise), EPBC, Marine & Coastal Act consent, Planning Scheme Amendment, CASA	Crown Land Lease, Grid Connection Agreement	Commercial Licence, CEMP	**110 months**
Transmission Line	Critical infrastructure declaration, land access	EES (visual, noise, biodiversity), EPBC (if needed), Water Access Licence, Aboriginal Heritage	Landowner Consent, Grid Connection Agreement	Utilities Impact Plan, CEMP	**68 months**
Onshore Wind	REZ support, land access, aviation review	EES (BDAR, visual, noise, aviation), EPBC (if triggered), Aboriginal Heritage, Biodiversity Offset, CASA	Grid Connection Agreement, Aboriginal Heritage Permit	CEMP, Easement Acquisition	**61 months**
Hydrogen/Ammonia Pipeline	Land corridor selection, border engagement	EES (groundwater, flora/fauna, risk), EPBC (if triggered), CASA (if height threshold), Aboriginal Heritage	Cross-border Permit, Pipeline Licence, Landowner Consent	Pipeline Management Plan, CEMP	**48 months**
Solar Farm	REZ support, land access, ARENA/CEFC	EES (BDAR, noise, visual, heritage), EPBC (if triggered), Aboriginal Heritage, Biodiversity Offset	Aboriginal Heritage Permit, Grid Connection Agreement	CEMP, Construction Approvals	**43 months**
Hydrogen Electrolyser	ARENA/CEFC support, land access	EES (water, noise, risk, waste), EPBC (if triggered), Water Access Licence, Aboriginal Heritage, Effluent Licence	MHF Licence, EPL, Grid Connection Agreement	CEMP, Delivery Management Plan	**43 months**
Battery (BESS)	Land access, local council engagement	EES (risk, noise, safety), EPBC (if needed), Aboriginal Heritage, Planning Permit	EPL, MHF Licence, Grid Connection Agreement	Emergency Plan, CEMP	**41 months**
Green Ammonia Plant	ARENA/CEFC support, land access	EES (emissions, risk, heritage), EPBC (if triggered), Aboriginal Heritage, Water Access Licence, Effluent Licence	MHF Licence, EPL, Grid Connection Agreement	CEMP, Safety Risk Plan	**36 months**

GVA and employment effects have been estimated based on construction and operational spend, employment and local content proportions.

Estimating GVA and employment effects

As indicated in the investment opportunity section of this report, for each project type, estimates of the construction and annual ongoing spend, employment contribution, and GVA contribution were derived.

Average construction spend, and direct construction and annual ongoing employment impacts are taken as averages from publicly available project information. Where possible, this was sourced from the major project list (that is, the estimates derived reflect the averages of proposed and upcoming projects across the Hunter Region, Latrobe Valley and Central Queensland region). Ongoing spend was not sourced from projects due to a lack of data. In cases where a low number of projects were identified across these regions, desktop analysis was undertaken to identify comparable projects from either outside these regions domestically, or where this was not possible, internationally. To estimate the construction and ongoing GVA and ongoing Spend, several data were acquired, including:

- An estimate of the construction spend.
  This was sourced using averages from the major project list. In cases where there were not enough projects on the major project list, estimates of construction spend were sourced from other projects domestically.

- An estimate of the ratio between construction and ongoing spend.
  Desktop research was undertaken for each project type to identify the approximate ratio between construction and ongoing spend using exemplar projects. Once again, domestic projects were prioritised, but where data was not available, international projects were used in their place.

- Estimated profiles on the proportional distribution of construction and ongoing spend (note: separate profiles for construction and ongoing) across 1-digit ANZSIC industries for each project type.
  For each prioritised project type, this was inferred using a combination of: 1) detailed cost breakdowns and technical documentation on construction and ongoing spend where available, and; 2) professional judgement based on available documentation where quantitative estimates were not readily available.

- Estimated domestic local content proportions assumptions at a 1-digit ANZSIC industry level for each prioritised project type
  Likewise, for each prioritised project type, the proportion of local content in the estimated spend in each ANZSIC industry was derived. That is, the proportion of spend that was not spent on sourcing inputs from overseas.

- Ratios between the gross output and GVA of 1-digit ANZSIC industries at a national level
  These were sourced using industry value-added coefficients (GVA per dollar of output), applied with the domestic A-matrix (direct allocation of imports).

Using these data, we first estimated for each prioritised project type the average annual ongoing spend. Then, construction and ongoing spend was decomposed into ANZSIC 1-digit industries, and local content proportion assumptions were made. Finally, gross output to GVA ratios were used to infer GVA contribution. We further note that we have not considered either indirect (supply chain) or induced (employee spending-driven) GVA or employment effects due to the small regions under consideration.

Project types have been defined to support the analysis.

Project type definitions – Latrobe region

Project Type	Definition
Offshore wind farms	Large-scale wind turbines located offshore to generate electricity from wind resources. Does not include any infrastructure beyond landfall.
Hydrogen	Production, storage, or distribution of green hydrogen (hydrogen produced using renewable energy).
Transport and logistics	Facilities or terminals focused on the moving of goods and materials efficiently between locations. Does not include roads or rail.
Food and fibre product manufacturing	Processing agricultural outputs into food, textiles or related products.
Energy from waste facilities	Plants that convert waste materials into usable energy.
Carbon capture and storage (CCS)	Technology capturing and storing CO2 emission, or otherwise reusing CO2 emissions before, or instead of, storage.
Renewables component manufacturing	Production of parts and equipment for renewable energy systems. This includes parts for renewable-facilitating technologies, such as batteries.
Circular economy manufacturing	Manufacturing using recycled inputs or designed for reuse and minimal waste.
Defence maintenance/sustainment	Ongoing repair, servicing and support for defence assets and equipment.
Urea and ammonia production	Facilities producing ammonia or urea, and associated chemicals (e.g. nitric acid, ammonium nitrate).
LCLFs, biofuels and biochemicals from waste streams	Production of fuels and chemicals from waste materials.
Defence manufacturing	Fabrication of weapons, vehicles and equipment for defence forces.
Solar farms	Large-scale installations generating electricity from photovoltaic solar panels.
Battery energy storage systems (BESS)	Facilities storing electricity in batteries for later use.
Green metals	Low-carbon production and processing of metals.
Geothermal heating and power	Energy generation or heating using underground geothermal heat.
Mine rehabilitation	Restoration and remediation of land disturbed by mining activities.
Onshore wind farms	Land-based wind turbines generating electricity from wind resources.
Minerals processing	Refining and transforming raw minerals into usable materials or products.
Data centres	Facilities housing computer systems for data storage, processing, and management.
Pumped hydro energy storage	Facilities storing electricity by pumping water uphill and releasing downhill.

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Contacts

EUROPE

Oxford (Headquarters)
Tel: +44 (0)1865 268 900

London
Tel: +44 (0)20 3910 8000

Belfast
Tel: + 44 2892 635400

Milan
Tel: +39 02 8295 2521

Frankfurt
Tel: +49 69 96 758 658

Paris
Tel: +33 (0)1 78 91 50 52

Stockholm
Tel: +46 (0) 8 446 887 65

AFRICA AND MIDDLE EAST

Cape Town
Tel: +27(0)21 863-6200

Dubai
Tel: +971 56 396 7998

AMERICAS

New York
Tel: +1 (646) 786 1879

Philadelphia
Tel: +1 (646) 786 1879

Mexico City
Tel: +52 155 5419-4173

Boston
Tel: +1 (617) 780 2265

Chicago
Tel: +1 (847) 993-3140

Los Angeles
Tel: +1 (424) 303 3449

Toronto
Tel: +1 (905) 361 6573

ASIA PACIFIC

Singapore
Tel: +65 6850 0110

Sydney
Tel: +61 (0)2 8458 4200

Hong Kong
Tel: +852 3974 8842

Tokyo
Tel: +81-(0)3-4588-2798