Australian Government

Net Zero Economy Authority

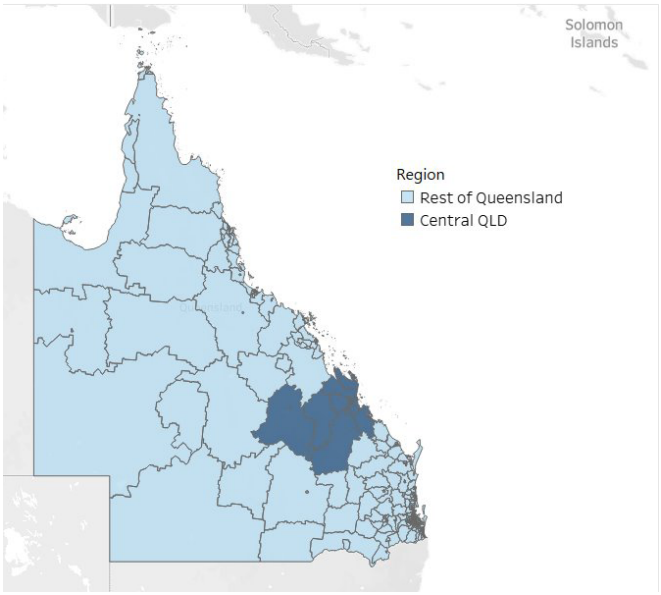
NZEA RESEARCH BRIEF

Regional transition analysis

Central Queensland

Research Summary

Central Queensland is an economic powerhouse, underpinned by the manufacturing, mining and energy industries. The region is well placed to draw on its industrial history to attract new investment and jobs aligned with its skilled industrial workforce – with deep-water port infrastructure, heavy industry, ammonia production, established energy expertise, and proximity to Asian markets providing the region with several comparative advantages to support its economic transition over coming years.

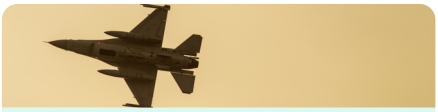


Key Findings from analysis

1. Gladstone's heavy industry cluster, including alumina, aluminium, LNG, and ammonia facilities, anchors the region as one of Australia's key energy and industrial hubs
2. Key investment and job creation opportunities include engineering, construction and operation for the expanding renewable energy industry; defence manufacturing and sustainment, leveraging the regions existing Defence presence; and green metals and advanced minerals processing taking advantage of existing refining capabilities.
3. Central Queensland's workforce is expected to grow over the next 25 years under each of the three transition scenarios considered, growing between 7% to 20% over the next 25 years
4. The high rates of vocational education are a key strength for the fossil fuel workforce, and position these workers well to move into utilities, construction and renewables projects as power stations and coal mines close, however there will be barriers to overcome. Successful transition will depend on coordinated transition supports from government and industry, as well as leveraging recent investments in education and training facilities to provide flexible reskilling opportunities.

Investment potential

There are several promising areas for industrial expansion in Central Queensland, building on the comparative advantage of the region. Growth in these sectors would help diversify the economy and support job creation, in addition to the expected natural growth of the region.



Defence manufacturing and sustainment

Central Queensland has the potential to grow into a leading hub for defence manufacturing, sustainment and training, building on its existing industrial base, strategic location and workforce. Shoalwater Bay and the Rockhampton-Gladstone defence corridor provide opportunities to expand into defence-related manufacturing, maintenance, and logistics. By leveraging these strengths, Central Queensland can attract investment from the defence industry, create long-term skilled jobs, and position itself as a critical contributor to Australia's sovereign defence capability.

Hydrogen

Gladstone's designation as a hydrogen hub, combined with strong pilot activity, established port infrastructure, and proximity to Asian markets, positions the region to scale hydrogen production, exports and develop downstream industries. This capability can be leveraged for both green ammonia production and green metals, leveraging existing production facilities and enabling co-location opportunities for low carbon processing and advanced manufacturing.

Green metals and minerals processing

Emerging projects in high-purity alumina, vanadium, and green iron demonstrate Central Queensland's potential to expand value-added processing and exports in green metals and critical minerals. By moving further downstream, Central Queensland can capture more of the critical minerals value chain, diversify its economy, and create high-skill, future-facing jobs beyond coal and traditional alumina refining.

Key investment opportunities

The region has a range of other potential investment opportunities which can build off its skilled industrial workforce and established training institutions. The following table provides a high level analysis of some of these opportunities.

Project type	Lead Times*	Job Contribution	Policy	Comparative Advantage	Average Rating**	Description
Defence maintenance/sustainment	Short	5.00	5.00	5.00	5.00	Proximity to Shoalwater Bay enables long-term sustainment, logistics, and support.
Hydrogen	Medium	5.00	4.00	4.00	4.33	Gladstone is a proposed Hydrogen Hub, but state government support is mixed.
Defence manufacturing	Short	3.00	5.00	5.00	4.33	Established heavy industry base supports advanced defence manufacturing.
Green metals	Medium	3.00	4.00	5.00	4.00	Anchor projects in alumina and green iron highlight export potential.
Minerals processing	Short	2.00	5.00	5.00	4.00	Transport, logistics, regional minerals, provide a strong base for downstream refining.
Urea and ammonia production	Short	4.00	4.00	3.00	3.67	Hydrogen and ammonia capabilities and infrastructure position CQ for green ammonia.
Energy from waste facilities	Long	4.00	3.00	4.00	3.67	Local feedstock and industrial hubs support waste-to-energy opportunities.
LCLFs, biofuels and biochemicals from waste streams	Medium	3.00	4.00	4.00	3.67	Agricultural by-products can drive new biofuel and biochemical industries.
Battery energy storage systems (BESS)	Medium	1.00	5.00	5.00	3.67	Supports renewable integration and grid reliability across CQ.
Renewables component manufacturing	Short	5.00	4.00	2.00	3.67	Heavy industry skills enable manufacturing of wind, solar and battery parts.
Pumped hydro energy storage	Long	2.00	4.00	5.00	3.67	Regional sites provide potential long-duration renewable energy storage.
Transport and logistics	Medium	4.00	4.00	3.00	3.67	Ports, rail and road networks enable freight, defence and export growth.
Circular economy manufacturing	Short	1.00	5.00	4.00	3.33	Industrial land and by-products create opportunities for recycling and reuse.
Food and fibre product manufacturing	Short	2.00	5.00	3.00	3.33	Agricultural base supports expansion of value-added processing.
Offshore wind farms	Long	4.00	2.00	3.00	3.00	Central Queensland currently has no approved projects, with only early feasibility studies and investigations in proposed areas.
Solar farms	Medium	1.00	5.00	3.00	3.00	High solar irradiance underpins large-scale renewable energy projects.
Onshore wind farms	Medium	1.00	5.00	3.00	3.00	Hybrid resources enable scalable wind developments inland from Gladstone.
Mine rehabilitation	N/A	3.00	1.00	5.00	3.00	Large legacy mine sites offer demand for remediation and environmental services.
Carbon capture, utilisation and storage (CCUS)	Long	5.00	2.00	1.00	2.67	Recent ban of CCS activity in GAB limits opportunity and comparative advantage.
Geothermal heating and power	Long	2.00	1.00	2.00	1.67	Geothermal potential exists but remains unproven and high risk.
Data centres	Short	1.00	2.00	1.00	1.33	Proximity to renewables offers low-carbon digital infrastructure opportunities.

*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

Economic change

Central Queensland's exposure to heavy industry, particularly coal mining, is expected to drive workforce transition over the next 25 years, as global demand for coal falls and mines reach end of life. Non coal mining is expected to perform better, benefiting from the region's deposits of gold and magnesium.

Central Queensland's workforce is expected to continue shifting towards public services. The growth in renewable energy projects in the region is also expected to support growth in the utilities, construction and professional services workforces. Unlocking the industrial investment opportunities outlined in the Regional Investment Analysis would support additional industrial job growth.

Worker transition

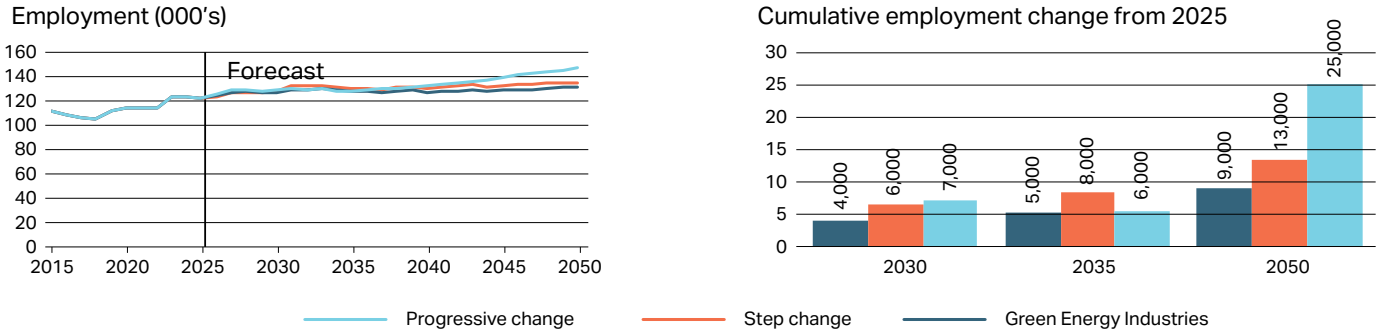
There are an estimated 12,400 fossil fuel workers in Central Queensland, predominately employed in coal mining, making up approximately 10% of the region's workforce. The fossil fuel workforce is heavily concentrated around machinery operators & drivers (46%) and technicians & trade workers (34%). They tend to be closer to retirement age than the non-fossil fuel workforce and are primarily male (85%).

Workers have high rates of vocational education with the potential to underpin industrial investment in the region with a deep skills base in engineering, electrical trades, logistics and plant operations. Approximately 83% are in highly specialized roles with skillsets closely linked to the electricity generation or coal mining sector, with 17% in back office or transferable on-site functions. A high percentage (88%) of these workers are likely to be able to transition to similar roles in other industries. There may be some challenges for workers in specific communities and towns where similar role opportunities are less accessible.

Regional employment demand for roles similar to fossil fuel roles is expected to remain relatively steady over the forecast period. Demand from industrial sectors is expected to decrease as a share of employment, however demand for construction, professional services and utility workers is expected to grow. Priority areas identified in the Regional Investment Analysis present potential growth additional opportunities which leverage off the skills set of for fossil fuel workers. The widespread presence of office roles across all industries presents a viable pathway for back office staff in the fossil fuel sector.

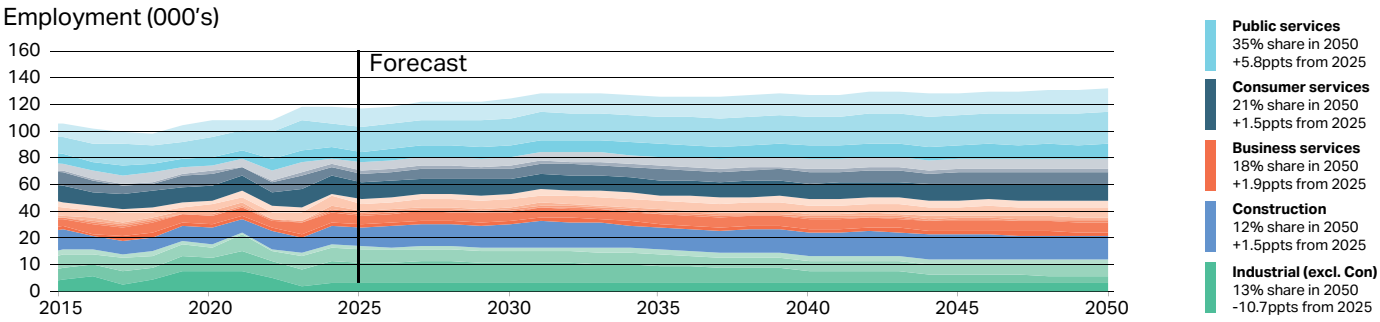
Where reskilling is required, a strong presence of VET facilities in the region, alongside recent investments to expand capacity, will support workers to be effectively retrained. Since merging with CQ TAFE, CQUniversity has invested more than $80 million in new and upgraded facilities across the region. The university's Centre for Hydrogen and Renewable Energy, based in Gladstone, supports the growth of hydrogen and renewable energy industries by delivering applied research, industry-aligned training, and workforce development The university also collaborates with industry partners to deliver flexible training in emerging areas like automated mining technologies. .

Central Queensland workforce outlook by scenario



Source: Oxford Economics based on AEMO scenarios

Central Queensland employment make-up under Step Change



Source: Oxford Economics based on AEMO scenarios

Public services includes Health, Education & Public Administration & Safety.
Consumer services includes Retail Trade, Accommodation & Food Services, Arts & Recreation and Other Services.
Business Services includes Wholesale Trade, Transport & Warehousing, Information & Media, Financial Services, Property Services, Professional Services and Administration Services.
Industrials excluding Construction includes Agriculture, Mining, Manufacturing & Electricity, Gas, Water & Waste Services.
***Note:** Employment figures are rounded to the nearest hundred*

About the research

The Authority engaged Oxford Economics Australia (OEA) to understand potential opportunities and transition pathways over the next 25 years in three of the Authority's priority regions in Central Queensland, the Hunter and the Latrobe Valley.

The project methodology used three scenarios from the Australian Energy Market Operator's (AEMO) 2025 Draft Inputs, Assumptions and Scenarios Report focused on achieving net zero emissions by 2050. These scenarios (Progressive, Step Change and Green Energy Industries) were scaled to a regional level taking into account the contribution of industries to regional economic activity and employment, regional employment rates and population demographics (eg age, education profile, migration flows), drawing on national publicly available data sets; ABS census, ABS labour force data, and state government population projections.

The research also explored potential opportunities to leverage the industrial capabilities of the regions to drive further economic growth and job creation, and potential career transition options for fossil-fuel workers. The findings provide a point in time analysis.

Findings from the research will be validated by NZEA with regional stakeholders. This analysis is one of many inputs to building the Authority's understanding of likely transition dynamics in priority regions, alongside ongoing engagement with regional stakeholders, other commissioned and internal analyses and consultation across Commonwealth and State governments.

Further information

If you are interested in finding out more about the Central Queensland region, visit our current priority regions page.
netzero.gov.au/central-queensland