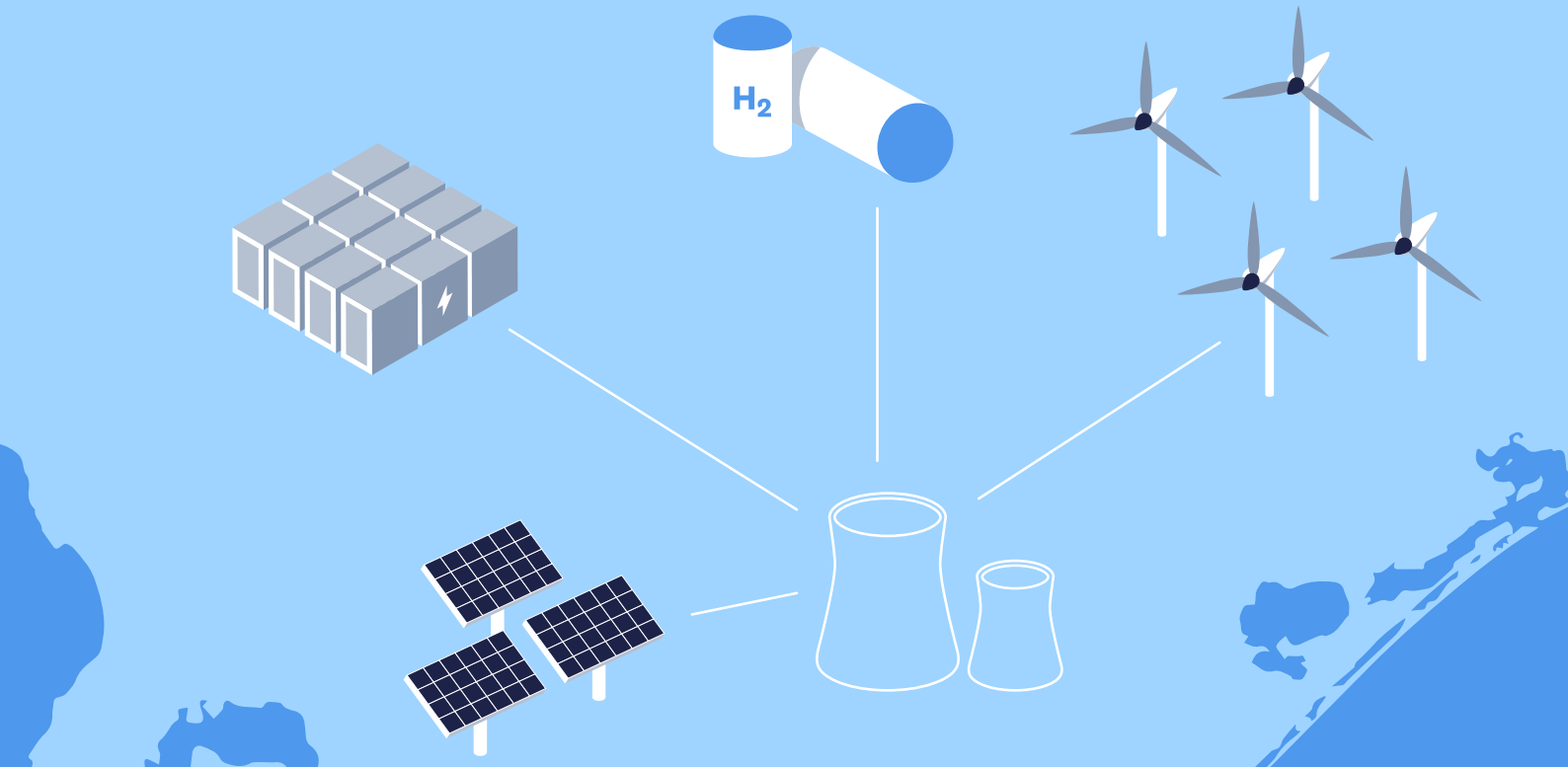
Blueprint Institute

Breaking new ground

Challenges and opportunities of a changing energy landscape in regional Australia



Latrobe Valley, Victoria

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This series

This paper is part of a series exploring the specific challenges and opportunities facing those regions housing the majority of Australia's coal assets. We take a close look at each region, reviewing local economic opportunities in the context of a changing economic mix. This research equips policymakers with the information necessary to act and embrace the potential of our regions. The series builds on two of our past releases—*From the ground up: A Blueprint for economic diversification in regional Australia*, and our *Voices from the regions* polling. These papers drew on international examples, as well as the perspectives of local communities, to recommend a cohesive policy framework to renew economies, by empowering communities and supporting workers through the shift to a clean energy economy.

About Blueprint Institute

Every great achievement starts with a blueprint.

Blueprint Institute is an independent public policy think tank established in the era of COVID-19, in which Australians have witnessed how tired ideologies have been eclipsed by a sense of urgency, pragmatism, and bipartisanship. The challenges our nation faces go beyond partisan politics. We have a once-in-a-generation opportunity to rethink and recast Australia to be more balanced, prosperous, resilient, and sustainable. We design blueprints for practical action to move in the right direction.

For more information on the institute please visit our website: blueprintinstitute.org.au

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Executive summary

The emerging clean energy economy offers a window of opportunity for Victoria's Latrobe Valley. Capturing this potential requires a targeted and proactive policy approach that leverages the region's entrenched advantages and lays the bedrock for sustained prosperity.

Regional communities in the Latrobe Valley—contained within the federal electorates of Monash and Gippsland—have long formed a cornerstone of our economy. They house significant coal assets, which have brought power into our homes and businesses, foreign capital to our shores, and provided employment to thousands of Australians.

Across the country, a massive change is already underway. Coal-fired generators are facing increased competition, with most confronting expedited retirements—unviable in the face of ever-cheaper renewable energy. The days of insatiable global demand for our thermal coal exports are also numbered. COP26 galvanised international support for decarbonisation and coal is one of the main targets. With unanimous agreement to 'phase-down' coal-fired generation secured at Glasgow last October, even China and India are now pursuing net-zero agendas.

This shift should be met with optimism, not trepidation, in the Latrobe Valley.

"Institutions set up to deal with Hazelwood's sudden closure in 2017, such as the Latrobe Valley Authority, have shown us that locally led initiatives can spur economic diversification. As we look to the future, vast opportunities such as the Valley's offshore wind resources, among others, can further support the region's bright future."

– David Cross, CEO

That's because the region can prosper in the clean energy economy. The only question is whether policymakers have the courage and foresight to help local communities capitalise on emerging opportunities.

Few nations in the world share our combination of sunshine, wind, and access to financial and human capital. In addition, we possess an abundance of rare earth elements and critical minerals such as lithium—an essential input into the production of clean energy assets like batteries and critical technologies like computer chips.

These opportunities exist in the Latrobe Valley.

Blueprint's modelling indicates that approximately 3,900 jobs in renewable energy projects will be created in the Latrobe Valley over the next eight years. Of these, 740 are permanent, long-term positions. These are new jobs, drawn only from projects that are registered with the regulator and have either already commenced construction, or boast both clear construction dates and funding routes.

But to secure enduring prosperity in the Latrobe Valley, we must do more. Based on current commitments, renewable energy will not create enough ongoing employment to offset the 1,631 coal industry jobs at risk in the region. The vast majority of renewable jobs are short-term construction positions, with far fewer long-term stable jobs in maintenance and operations.

The diversification of local employment beyond renewables—to areas such as clean industry development, critical minerals mining, and the auxiliary industries to support them, as well as other emerging sectors—will be necessary to provide meaningful and stable employment to the region's communities and support Australia's broader economic growth. Thus, this report also explores the opportunities that are available to the region beyond renewable energy generation.

Lasting prosperity is attainable in the Latrobe Valley, but it will require broad stakeholder collaboration, and in some cases, targeted government support. The policy required to ensure effective diversification of our regions can be found in Blueprint's report, From the ground up.

The report called for:

- the creation of coal adaptation authorities, supported with $20 million in initial federal funding and ongoing funding paid for through coal royalties collected by state governments, to empower local communities;
- the development of a national coalfield and infrastructure renewal and repurpose strategy in concert with state and local governments to ensure that existing assets are utilised to help communities pivot and access new opportunities;
- well-designed support for workers through job search and retraining services, income insurance and, where necessary, early retirement packages.

In Victoria this would look like bolstering the existing Latrobe Valley Authority which has already done good work since Hazlewood's closure in 2017. The communities of Latrobe should not be left to carry the economic cost of our collective responsibility to act on climate. Policymakers must level with regional Australians—this means being honest about the decline of coal and proactive in designing policy that can help communities adapt and thrive.

As this series will illustrate, the regions can lead us into a new era of prosperity. The opportunities are there for the taking. Our polling shows that voters in the Latrobe Valley are demanding their leaders step up. We hope that this research enables policymakers to move fast and embrace these opportunities with confidence.

Latrobe Valley, Victoria

Gippsland & Monash

Nestled between the Strzelecki and Baw Baw ranges, the Latrobe Valley is one of Victoria's most vibrant regional economic hubs, hosting a coal-fired electricity sector that has powered the state for decades. The Valley is home to around 76,000 people, situated largely between the townships of Traralgon, Morwell, and Moe, roughly 150 kilometres to the east of Melbourne. The region punches above its weight, with an annual economic output of $13.5 billion, and it supplies 70% of Victoria's total energy.

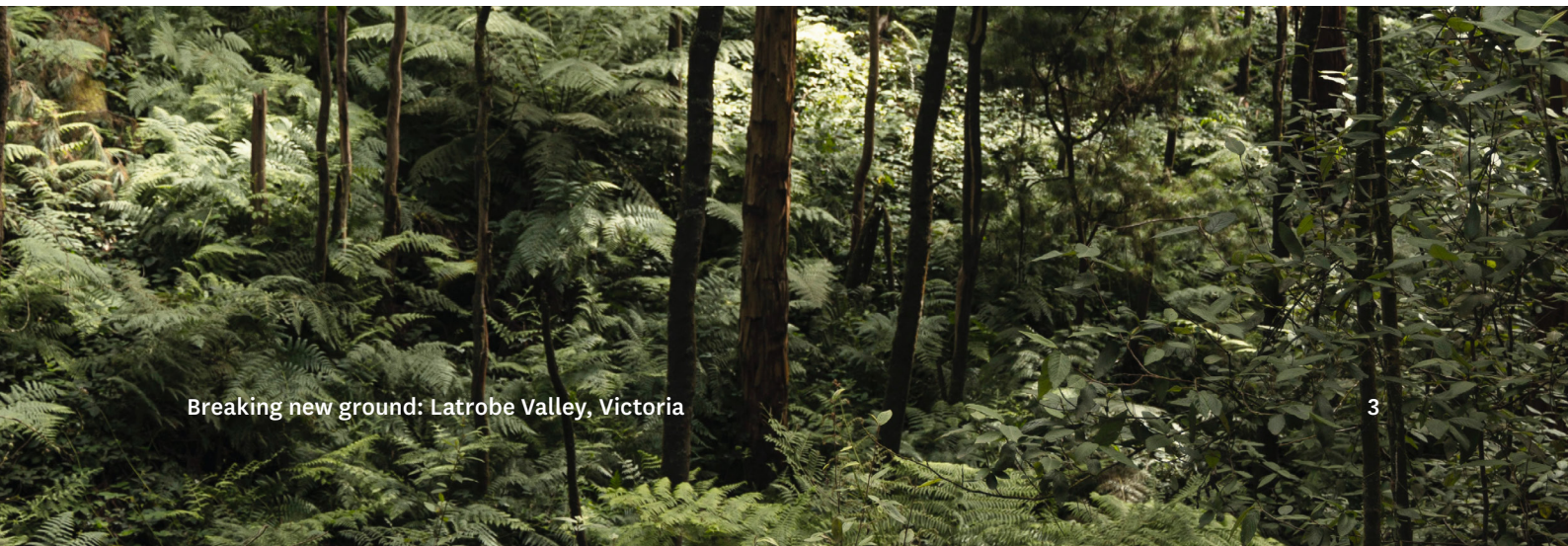
While the Valley itself is centrally located around Traralgon, it is part of two vast federal electorates—Monash and Gippsland—which stretch from Melbourne's outer suburbs all the way to the New South Wales border. Like other regions explored in this series, these seats house communities that have first prospered and then suffered under the auspices of the fossil fuel-dominated grid.

While the fossil fuel electricity generation sector is the Valley's second-largest employer, accounting for 1,219 jobs and 4.2% of the total workforce, the people of Gippsland have been increasingly exposed to the worst effects of climate change. It is difficult to forget the images of residents huddled on Mallacoota's beaches, stalked by haunting blood-red skies that carpeted Australian newspapers during the 2019–20 Black Summer bushfires. And this is without mentioning the devastating 2014 Hazelwood mine fire—ignited by a bushfire—which burned for 45 days and led to tragic deaths and far-reaching public health consequences.

After decades of prosperity, the Latrobe Valley is now experiencing the inescapable decline of Australia's coal sector and the consequences of an unplanned shift. In 2017, 750 former staff and contractors of the Hazelwood power station were displaced by the station's early shutdown, with minimal notice, thirteen years ahead of its planned 2030 closure. All three of the region's remaining coal-fired stations have recently had their closure dates brought forward—and it's unlikely to be the last time that happens.

Unlike many of Australia's other coal mining regions, Latrobe's brown coal deposits are of poor quality and volatile, rendering them uncompetitive in international thermal markets, and unviable for metallurgical processes. This means that, unfortunately, there is no future for Latrobe's mines beyond the nearing retirement of local power generators.

Having experienced Hazelwood's recent closure, the region is uniquely placed to understand the need to plan around the clean energy shift. Several steps have already been taken to support former Hazelwood employees, including the establishment of the Latrobe Valley Authority, which offers foundations for coordinating and consulting with stakeholders to support proactive regional adaptation. But more must be done as the region's remaining generators phase down. There are abundant opportunities in renewables and emerging green sectors that can be embraced with the assistance of focused policy.



The task at hand

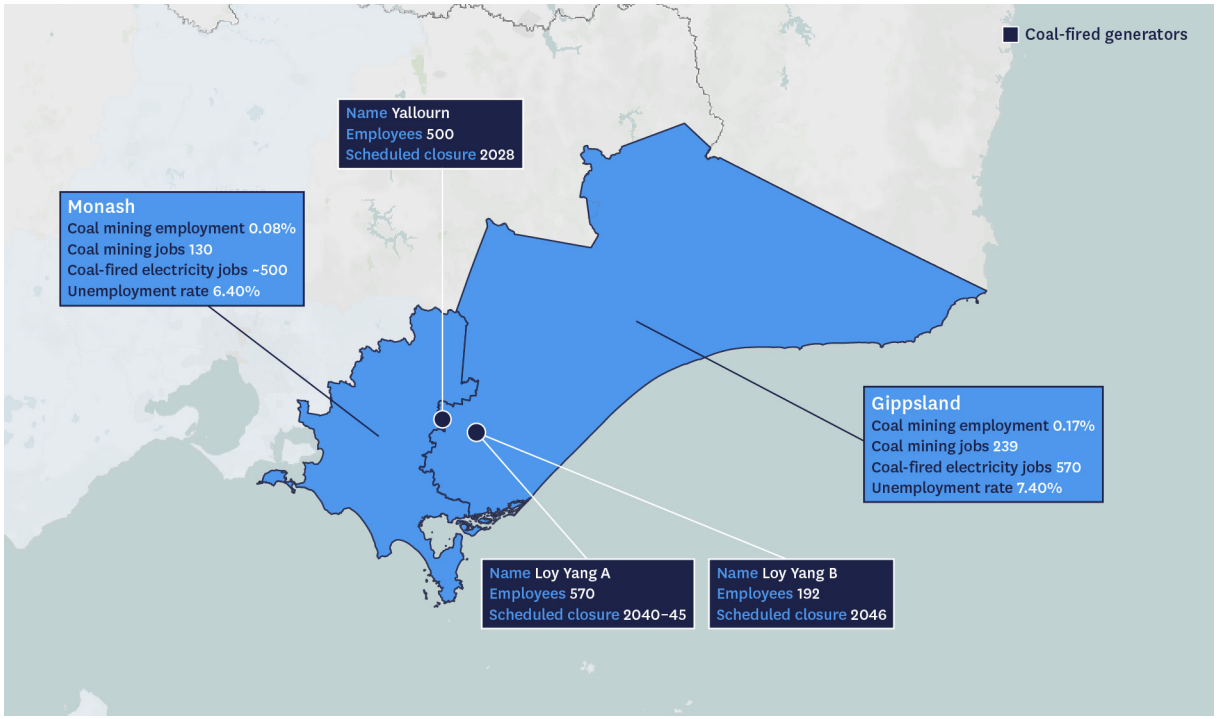


Figure 1 Latrobe Valley, Victoria demographics and coal assets

Source Australian Bureau of Statistics, Company websites, Blueprint Institute Analysis

It is no miracle that the Latrobe Valley has prospered through the fossil fuel era. Its coalfields boast 25% of the known global brown coal reserves, with a total of 65 billion tonnes found in the region. Two large-scale open-cut mines feed into the three remaining power stations: Yallourn, Loy Yang A, and Loy Yang B. Although brown coal's high moisture content renders it an inefficient energy source and uncompetitive in global markets, Latrobe's abundant local deposits have allowed it to profit—while brown coal remains a shrinking, but still leading, source of electricity in Victoria.

Electricity generation and coal mining is the industry of employment for 4.2% in the Latrobe Valley, with 1,100 workers directly employed in the region's coal-fired generators. The sector is not just significant for those directly employed, but also for the broader community, which benefits from the localised economic output. The electricity generation, gas, water, and waste sectors make the greatest contribution to economic output in the region, which at $3.5 billion accounts for 26% of Latrobe's total economic output.

However, the outlook for the region's coal-fired power stations is poor. The cost of maintaining ageing infrastructure as well as competition from cheaper renewable sources is displacing their traditional competitive advantage. Yallourn, which currently provides more than 500 direct jobs, has broken down 50 times since 2017, and its owners recently brought forward its planned closure from 2032 to 2028. Both Loy Yang A and B have also had their closures brought forward from 2048 in recent announcements to 2040–45 and 2046 respectively. Plans to construct large batteries across the region are also weighing against the continuing viability of expensive baseload coal power in Victoria's energy market.

If the Victorian government follows through on its current target of halving state emissions by 2030, the early closure of these stations is not just likely, but inevitable. Modelling released to support the government's 2030 emissions reduction target assumes emissions cuts in excess of the "projected…decline" of coal-fired energy generation. This will see significant job losses not only in the power stations, but also the brown coal mines that feed them. As we noted above, Victorian brown coal is not exported,

and the product's poor quality pours cold water on that prospect. This guarantees that Latrobe faces a more urgent adaptation and transition task than other coal regions that supply thermal and metallurgical to international markets.

Considering the economic and societal role of coal in the Latrobe Valley, along with an unemployment rate already much higher than the national average and a Year 12 completion rate of only 35.1%, the region will require significant leadership, investment and support in order to thrive as the demand for coal continues to trend downwards.

The opportunities—what's on offer?

A variety of new opportunities are available which will enable the Latrobe Valley to prosper long into the future.

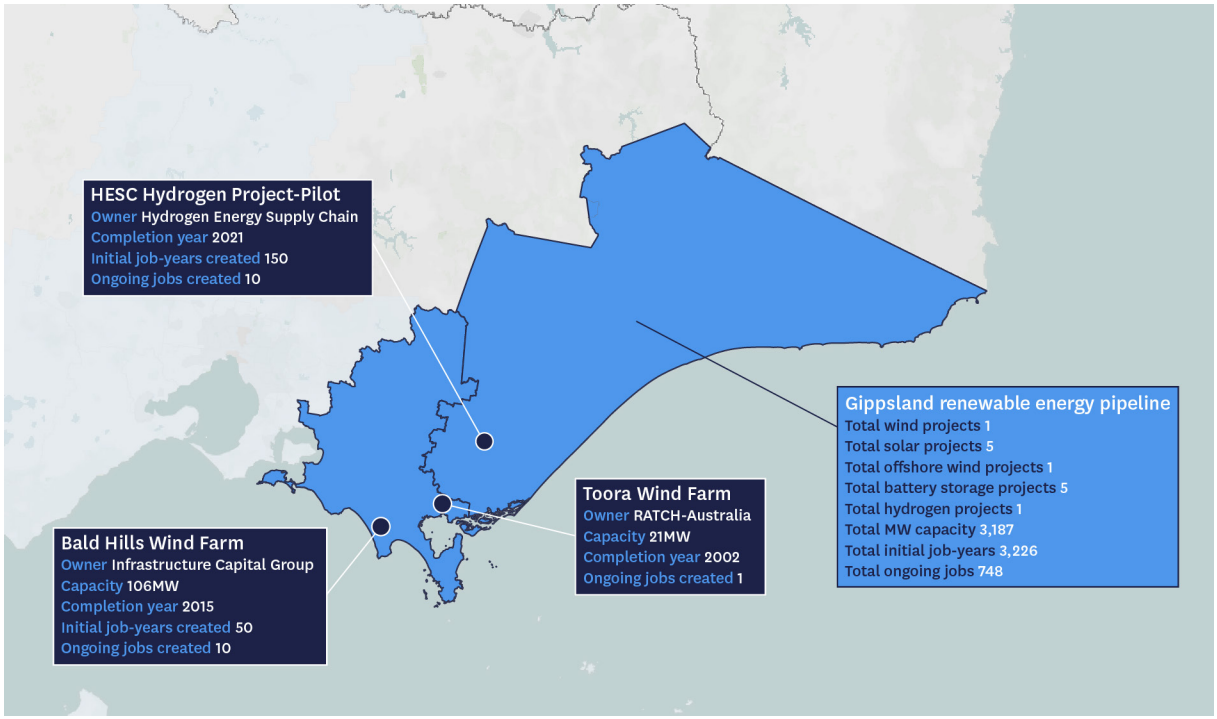


Figure 2 New green opportunities, Latrobe Valley, Victoria
Source Company websites, Blueprint Institute Analysis

Renewable electricity generation

Blueprint Institute's research projects that by 2030, 3,900 new jobs will be created for regional communities as a result of renewable installations across the Latrobe Valley. This is a deliberately conservative estimate, and includes only those projects that are registered with the regulator (AEMO), and have clear construction dates and funding routes. These jobs do not include rooftop solar installations, which the government projects will constitute up to a third of all grid-connected capacity nationwide by 2030—providing around 2,000 additional jobs throughout Victoria in 2030, with 60% of those based in Victoria's regions.

Renewable developments will account for:

- 160 jobs created in 2022,
- 810 jobs created in 2023,
- 660 jobs created in 2024,
- 630 jobs created in 2026,
- and a further 1,700 jobs in 2030,
- totalling approximately 3,900 total renewables jobs across the next seven years.

These projections include 740 new permanent positions in operations and maintenance for Latrobe Valley communities by 2030.

Since they remain in the early stages of planning and financing, our projections also exclude two offshore wind farms profiled in the government's announcement—a 1,000MW project by Macquarie Group and a 1,500MW project by Flotation Energy—proposed for the Bass Strait and the waters off Ninety Mile beach respectively. While these projects are uncertain, they are massive in scale and, if completed, would boast a combined 2,500MW of planned generation capacity, far dwarfing the 1,000MW in solar and onshore wind power accounted for in our projections. Employment factors indicate that 2,500MW of offshore wind power can create up to 1,600 jobs in construction over one year and 300 permanent positions in operations and maintenance.

Star of the South is further along than the two aforementioned projects and is expected to be Australia's first offshore wind farm. As a result, it has been included in our projections with an anticipated completion date of 2030. The 2,200 MW project is anticipated to create 2,000 jobs and $10.4 billion in Gross value added statewide over its lifetime. The Gippsland region will enjoy many of these benefits, including 760 construction jobs, 200 ongoing positions and a direct economic boost worth $6.4 billion. While this promised offshore wind industry is yet to materialise, the sheer scale of its potential should bring hope to Latrobe's communities and haste to policymakers whose early support of these projects could make all the difference.

Figure 3 gives a granular breakdown of the timing of projected overall renewable employment. It illustrates our forecast that, unlike other coal-reliant regions—for example, South-West Queensland—on the current trajectory, renewable employment across the Latrobe Valley is expected to remain substantially below that of the coal industry over the seven-year time horizon. In particular, the lack of renewable employment projected between 2026 and 2030 highlights the inadequacy of current commitments. Significantly more investment must be made in job-creating renewable projects in the coming years in order to secure the economic future of the Latrobe Valley, even as coal declines.

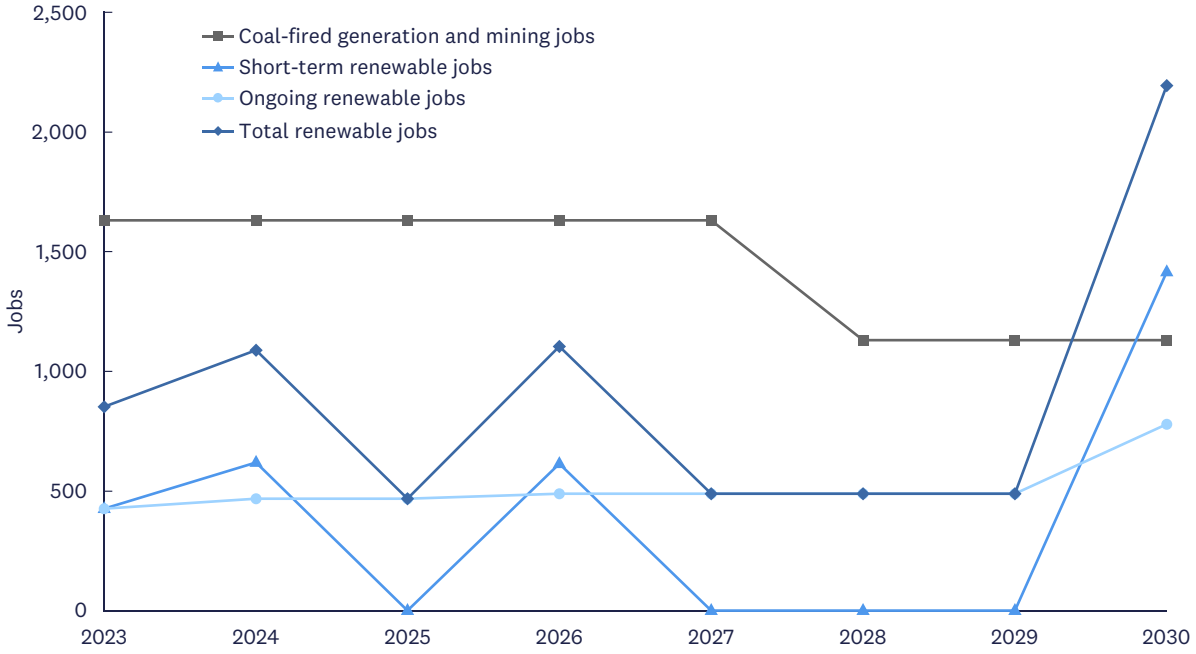


Figure 3 Timeline of employment projections for energy generation in the Latrobe Valley (2023–30)
Source Blueprint Institute Analysis

The Gippsland region, already dotted with numerous planned or ongoing renewable energy projects, has the potential to serve as a model of successful adaptation to the clean energy future. Although solar power is more optimally produced in the sunnier portions of Northern Victoria, a modest number of solar farms are nonetheless springing up within Gippsland in the coming years. Most significantly, the government has set aside land in the region for a Gippsland Renewable Energy Zone which will contain a large-scale solar farm called Gippsland Renewable Energy Park. The $1.2-billion project is expected to cover 5,000 acres and generate up to 500MW of solar power after beginning a 12–18 month construction period in 2024.

The Latrobe Valley is blessed with the offshore wind resources necessary to productively absorb a large amount of renewable investment. The region has the capacity to rapidly develop into a renewable energy powerhouse, as the waters off the coast of Gippsland are endowed with particularly high wind speeds. It is no surprise that the state government's latest offshore wind announcement was the most ambitious in the country, targeting 13GW of capacity by 2050 with the first two gigawatts to come online by 2028. This could sponsor 3,000 permanent operational jobs—on top of the 3,100 local jobs which will be created during the manufacturing and construction phases over the next 15 years.

Multiple utility-scale batteries are also in the works to aid with the challenge of integrating a rising share of intermittent renewables with the existing electricity grid. These batteries will ensure the grid's reliability by storing excess energy generated by renewables during periods of ample supply and dispatching energy to the grid during periods of peak demand. Plans are underway to build the world's largest battery at Jeeralang Power Station. The battery is scheduled to begin operation at the end of 2026 and will continue to play a key role in Latrobe Valley's energy infrastructure long after the planned closure of nearby Yallourn Power Station in 2028.

Plans are moving ahead to build a 225MW waste-to-energy facility at Australian Paper's Maryvale Mill. Five hundred jobs are expected to be created during the $500-million facility's three-year construction period, culminating in a 2025 opening. The project will not only free up electricity grid capacity for use elsewhere, but will help divert waste from landfills in the Latrobe Valley.

The decommissioning of Hazelwood Power Station, located near the town of Morwell, has unlocked an opportunity to reimagine and redevelop the site for a low-carbon future. The existing infrastructure at Hazelwood, including its significant and now-unused transmission capacity, represents an ideal site for a recently announced, privately-funded 150MW utility-scale battery.

Yet even if the Latrobe Valley's offshore wind resources are developed, and batteries begin to take off, it is unrealistic to expect the renewable energy industry alone to mitigate the inevitable loss of well-paying, stable coal jobs. The Latrobe Valley will fare better with a considered policy that diversifies its economic base, and sets the region up for prosperity in the long run.

Let us not forget—renewable energy projects are only a fraction of the vast opportunities that are available across the Latrobe Valley.

Methodology—why we need to be clear when talking about jobs

Many industry groups, and even governments, posit that hundreds of thousands of jobs will be brought to regional Australia because of the growth in various economic opportunities. Energy providers have been prone to careless exaggeration, with Adani claiming in 2015 that its mines would create 10,000 jobs, before admitting later in court that the real number was only 1,463.

All claims of job creation, from governments and business alike, need to be taken with a grain of salt. That's why we have implemented a consistent and rigorous methodology that errs on the side of caution, and only counts those jobs that are highly likely to be created.

Even with the aforementioned distinction between short- and long-term jobs in mind, estimates of so-called employment factors (the number of jobs created per megawatt of installed power) vary widely.

Such estimates are necessarily imprecise and depend not only on the type of renewable technology employed, but also on factors such as site terrain, environmental impact, and local regulations. In order to be as realistic as possible, Blueprint has taken a conservative approach, drawing on the most credible research available. Our methodology is based on a comprehensive 2020 University of Technology Sydney (UTS) study that directly surveyed the Australian renewable industry to calculate employment factors. Given Australia's relatively high productivity and access to technology, these employment factors were lower than those found by IRENA and others in the broader international literature. In order to maintain reliability over time, UTS also employed cost data to project proportional declines in employment factors over time due to productivity advancement. Finally, the study broke down job types and their prevalence in regional areas to provide estimates of how many of these new jobs could be accessible to regional workers.

On average, we conclude that 2.3 job-years of temporary construction and installation labour are needed to install one megawatt of utility solar capacity in Australia. Each megawatt of utility solar is also projected to require 4.4 job-years of manufacturing (only 0.092 of which are currently serviced by domestic Australian manufacturing) and create 0.11 permanent positions in operations and maintenance. The corresponding numbers for wind power are as follows: 2.8 job-years per megawatt in construction and installation; 1.7 job-years per megawatt in total manufacturing (including 0.377 job-years in Australian manufacturing); and 0.22 ongoing jobs per megawatt in operations and maintenance.

In the case of utility-scale battery technology, while UTS did provide employment factors, they resulted in employment figures that were five to six times greater than those reported by the respective renewable energy firms. In instances where there were no sensible employment factors, we have relied on company reported numbers. Company projections have also been used for hydrogen-related jobs where, due to the relative infancy of the technology in Australia, reliable employment factors were unavailable. These company projections have been cross-checked with relevant international employment figures for other hydrogen projects to ensure that outlandish claims have been discarded.

Unfortunately, UTS did not provide offshore wind employment factors. Here we deferred to the most conservative international estimates calculated by the OECD, which were also used as the lower bound estimate in Blue Economy Cooperative Research Centre's leading paper on Offshore Wind Energy in Australia. The paper quoted a projected 0.96 job-years per megawatt in construction and installation, 7.8 job-years in total manufacturing (including 0.78 job-years in domestic Australian manufacturing) and 0.18 jobs per megawatt in ongoing operations and maintenance positions.

Renewable technology	Construction & installation (job-years/MW)	Domestic manufacturing (job-years/MW)	Operations & maintenance (ongoing jobs/MW)
Solar	2.3	0.092	0.11
Wind	2.8	0.377	0.22
Offshore Wind	0.96	0.78	0.18

Table 1 Unadjusted employment factors for renewable energy assets
Source UTS, Blue Economy Cooperative Research Centre

As technology improves and the cost of solar and wind power declines over time, so too will the number of jobs created by a given installation. Part of this effect is driven by what economists describe as "learning-by-doing," where productivity increases as workers gain experience with the tasks involved in the construction and installation of wind turbines and solar panels. Improvements in equipment —for instance, over the past two decades, the average rating of a wind turbine has increased from 0.5MW to 3MW per turbine—have also led to a decline in the number of jobs created per MW of capacity installed. To account for this, we followed UTS' methodology in discounting a renewable technology's employment factors each year on a proportional basis in line with its reduction in cost. For example, since solar power is projected to decline in cost by 5.7% per year from 2020-2025, we discounted its employment factor by the same rate.

The second adjustment we made was to ensure we were only capturing regional jobs. Projections indicate that regional workers would be able to access 67% of the immediate construction jobs in wind, 69% of solar construction jobs, 73% of ongoing operational jobs in wind, and 55% of ongoing solar positions. But as industries continue to develop, the potential for even more of these jobs to be housed regionally may continue to grow. By sponsoring programs to retrain and upskill workers, governments can equip local workforces to increase the local share of jobs.

All of this means that a new 100MW solar farm which takes one year to construct in 2022 would be expected to involve approximately 140 regional construction workers and up to eight manufacturing positions for one year. In addition, around five permanent jobs would be created for locals to operate and maintain the solar farm.

As noted, Blueprint has only considered projects that are recorded in official government sources or in the AEMO's latest database, and can be cross-referenced with other records to ensure their ongoing viability. AEMO's records are particularly reliable given they are the basis for important market decisions and to accurately model the future of the grid. Our triangulation with multiple sources also addresses instances in which some projects proposed five or more years ago are abandoned without updating AEMO.

Other opportunities

Clean industries—finding greener pastures

As coal declines and renewable electricity struggles to deliver a comparable level of employment, it is critical that the Latrobe Valley explore novel industries to uncover new sources of economic growth. The region's opportunities extend far beyond renewable generation—it is also primed to harness the international growth of clean industry, especially magnesium and hydrogen.

Magnesium is a vital component in products as diverse as cars, power tools, and computers. Australia currently imports all 8,000 tonnes of its annual magnesium consumption. A local firm—Latrobe Magnesium—has ambitions to thrive in the emerging green economy by overhauling its production process. Latrobe Magnesium will convert a waste byproduct of coal-fired generators—fly ash—to magnesium. This novel manufacturing method will not only help clean up the huge quantities of waste fly ash produced over the many years of coal power generation, but will also emit 50% less carbon dioxide compared to traditional methods. The $50-million plant will employ about 75 workers during its construction in 2022 and, once operational, will create more than 50 permanent positions.

The race to net zero has generated intense global demand for carbon-free fuels. To capture this demand, the Federal government has teamed with the Victorian government and invested a total of $100 million to create a pilot Hydrogen Energy Supply Chain in the Latrobe Valley. The project uses locally mined coal to produce hydrogen gas, before liquifying it for export to Japan. Already, 400 jobs have been created during the project's pilot phase. A further 8,000 jobs, along with $11 billion for the local economy, are expected in the 2030s—contingent on the pilot's commercial success.

Broad diversification in the region

In addition to renewable energy and clean industries, the Latrobe Valley is set to benefit from an array of varied projects as part of the government's effort to unlock growth and jumpstart diversification of the region's economy.

Hazelwood's former operator has proposed a comprehensive plan to revitalise the site with new commercial, recreational, and agricultural opportunities. Though the plan will require much investment and will undoubtedly encounter obstacles, it sets forth a positive, replicable, and economically vibrant vision of the site's future. Given the planned closure of Yallourn in 2028, and speculation that both Loy Yang A and B could shut down well ahead of their official end dates of 2045 and 2046 respectively, Hazelwood's rehabilitation will serve as an important model for communities.

Local, state, and federal governments have belatedly responded to the painful effects of Hazelwood's sudden closure with a concerted effort to support Latrobe Valley residents as they stage a managed shift away from the coal industry. Two hundred and sixty-six million in funds have been allocated as part of a transition package to compensate for the eventual closure of coal plants, invest in local economic opportunities, and diversify the Valley's economy.

A key component of this model is the Latrobe Valley Authority. On top of consulting with stakeholders from the local community, industry, and government to smooth the shift to clean energy, the Authority provides immediate support to affected workers through the worker transition service and more broadly via the Latrobe Valley Economic Facilitation Fund. This two-pronged approach of broad economic development and support for displaced workers is critical in order to minimise potential disruption as the region moves away from coal.

Fortunately, the Latrobe Valley possesses many of the prerequisites necessary for high-quality, productive, and rapid economic growth. In particular, the Valley has a well-educated and skilled workforce, excellent road, rail, and air infrastructure links, and access to a nearby major market in Melbourne.

The Victorian government, Latrobe City Council, and several local educational institutions have partnered to deploy these assets in service of regional development by establishing a dedicated

district to boost local innovation and economic growth: HiTech Precinct Gippsland. The precinct opened at the end of 2020 and houses the $17-million Morwell Innovation Centre. It hosts a start-up incubator and co-working spaces to support local entrepreneurs, and currently supports around 100 permanent jobs, with the potential to generate many more by catalysing new economic opportunities.

These opportunities, combined with the outlined renewable and clean energy projects, are key to setting up the Latrobe Valley to prosper into the future, driven by innovation, diverse industry, and economic growth.

Recommendations

It is crucial that policy settings, determined by federal, state, and local governments, reflect the reality that current efforts will be inadequate to counterbalance the eventual loss of employment and economic activity associated with the decline of coal. In order for the Latrobe Valley to thrive in the clean energy future, the government must empower local communities and businesses to leverage all available opportunities to grow beyond the limits of coal.

In order to achieve these goals, we recommend that the Federal Government:

- examine the infrastructure renewal at Hazelwood power station and the possibility of replicating this process for other retired coal power stations.
- adopt the Latrobe Valley Authority's structure as a model for other regions. The Authority formed much of the initial inspiration for the coal adaptation authorities we propose.

But more must be done. In order to strengthen and accelerate diversification efforts in Latrobe, we recommend that the Federal Government:

- consider providing financial and administrative support to coal mine and generator operators to develop renewal strategies for their infrastructure. In order to support innovative rehabilitation plans, the federal government would match private investment, from the operator or otherwise, up to a value of $100 million per asset. Such a figure is in line with existing government support for energy infrastructure investments, though in this case the benefits for local communities would be far greater. In Latrobe this would mean supporting the renewal strategies already underway for Hazelwood and preparing in advance for similar projects at Yallourn and Loy Yang A and B.

And working together with the local Latrobe Valley City Council, the Victorian government should:

- provide the existing Latrobe Valley Authority with an additional revenue stream to expand its operations, drawn from five percent of Victorian state coal royalties. In 2019–20 this would have amounted to $3.9 million. A similar scheme is evident in the New South Wales Royalties for Rejuvenation program introduced in April 2021.

These recommendations are outlined in greater detail in Blueprint's From the ground up: A Blueprint for economic diversification in regional Australia.

Local perspectives

Interview insights

Interviewing locals on the ground in the Latrobe Valley has revealed the mix of attitudes held by the community.

Peter*

Peter is an ex-Hazelwood employee who worked at the plant as a boiler cleaner for seven years before its closure in 2017. For his entire life, he has lived within the Latrobe region, and has seen first-hand the varied effects of coal on the local community.

For many in Latrobe, coal work was "the sought-after job," according to Peter. Its high pay attracted a lot of young people straight from school, and many of the smaller contractors in the region depend on the coal power stations for business. Many families are reliant on coal income, even those not directly employed. Many within the community, including his family, see coal as an asset to the region, although he believes they only value it for the financial stability it brings. But being on the ground, watching the dust coming out of the stacks, provides a very different perspective.

Peter watched the panic as the Hazelwood closure was brought forward from 2027 to 2017 with just a few months notice. At the time, some of his colleagues had just bought houses and settled into the community with the expectation of a high and stable income. Transitioning to another job is not easy. Peter notes that "in the power industry, half those blokes know nothing else." Most of the alternatives, too, would require a massive drop in income. Moving towns also has its challenges. Peter believes that the roots you send out to the community ground you there—whether it is your kids' school, sporting teams, or the friendships you've built. With more time to prepare for a closure, some of these stresses could be better managed.

Joe*

Joe describes his occupation as being a 'Homer Simpson'—a unit controller at the Latrobe power stations. As a member of the community advisory board for the offshore wind project Star of the South, he holds a more optimistic opinion of the future of renewables in Latrobe. He has accepted the reality of a declining coal industry, stating "the power stations are closing down whether we like it or not," and admitting that "no one is building a new coal power station." He fully recognises the impact to the community, and sees that people are fearful and concerned about the future of the Valley.

For Joe, Star of the South can provide some answers. Although still only in its infancy, the project has the potential to provide similar amounts of power to Yallourn. He notes that the offshore wind farm is "the first major energy project that is looking to replace what we're losing in Latrobe Valley." With enough support and funding, offshore wind farms might just get enough air to maintain the region's position as an energy powerhouse.

*Names have been changed to preserve anonymity.

Blueprint's *Voices from the regions* poll

Joe's insights are reflected by hundreds of others in the broader community: Latrobe Valley residents clearly recognise the challenges before them, but they also see that with these challenges come opportunities. In Blueprint Institute's poll—*Voices from the regions*—69% of respondents in Gippsland aligned with the view that with proper government support, there are industries and jobs that can thrive in their region other than coal. Only 24% thought that coal mining was the only viable industry that could provide a majority of high-paying jobs in the area.

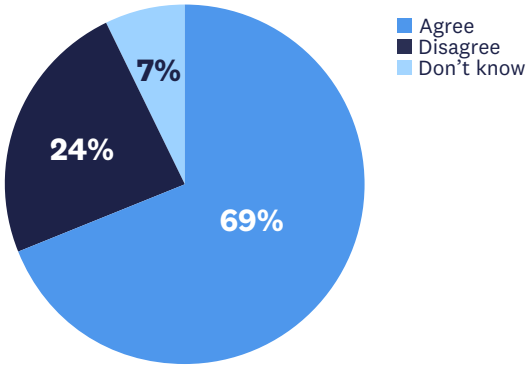


Figure 4 Gippsland residents' response to the statement: "with proper government support there are industries and jobs that can thrive in this area other than coal".

Source Blueprint Institute's *Voices from the regions* poll, conducted by YouGov

In terms of the government support communities favoured, two themes emerged. Firstly, they want strong government investment to kick-start new industries and attract further private capital. Seventy-seven percent of respondents believed that building more renewable energy facilities would create new jobs in the area. This included 63% of those who disagreed that human activity is the main cause of climate change, showing that even those who doubt the science find the economic case compelling.

Seventy-three percent of Gippsland residents polled support reducing subsidies for coal and gas companies and using the savings to invest in large-scale renewable energy. After excluding those who "Didn't know", the 47% of coal-working households who supported the policy still exceeded those who opposed. It is hard to imagine a more ringing endorsement for forward-looking investments. Even those working in coal see the writing on the wall, and almost half want the government to continue their legacy in energy generation by prioritising the renewable opportunities of the future, even if it means sacrificing current subsidies to their own jobs.

On the industrial front, 84% in Gippsland support investing in new clean industries such as green hydrogen, with support almost as high among coal households at 80%. This optimism far exceeds the support for new gas-fired (62%) or nuclear (48%) power stations.

On top of this economic renewal, communities know that workers need individual support. While certainly related, many of the jobs offered by the clean energy economy will not involve identical skills to those in the coal industry. That is why 83% of respondents and 86% of coal households support coal workers receiving government-funded training if they are made redundant.

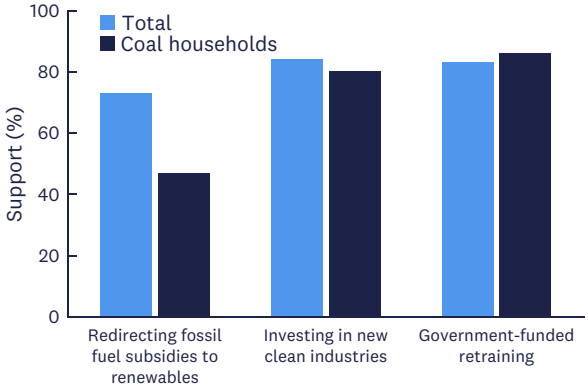


Figure 5 Gippsland residents' support for different policies relating to the energy transition

Source Blueprint Institute's *Voices from the regions* poll, conducted by YouGov

Gippsland's residents are open to change, so long as they are not left behind. Fortunately for policymakers at all levels, these communities have been abundantly clear about the types of policy they desire.

Conclusion

There is no denying that our coal industries are now in their twilight, living on borrowed time. The migration of capital from carbon-intensive economic activity to low-carbon alternatives like renewable energy has sounded the death knell of coal's long-standing cost advantage. International financiers and our leading trade partners are all pursuing ambitious climate agendas, threatening the longevity of even our export markets.

Rather than burying our heads in the sand, governments must be honest with traditional coal-producing regions and communities, and position them to benefit from a changing economic landscape. Australia's regions have been the cornerstone of our agricultural and resource sectors for many decades. As hosts to many of the country's biggest industries, their prosperity means prosperity for all Australians.

The Latrobe Valley can adapt smoothly to a clean energy economy. It is already beginning to do so. Wind and solar farms are in development all across the region, offshore wind and clean industries hold great promise, and efforts to diversify its economic base are underway.

The Latrobe Valley, however, needs more support. Our projections show that, at the current pace, these opportunities will not develop in time to offset the social and economic effects of coal's decline. The good news is that there is still time to act.

In our report, From the ground up, we outline how governments can best empower communities, renew economies, and support workers. With well-funded local leadership to unite stakeholders and proactively embrace promising opportunities, the Latrobe Valley can thrive well into the future.

Breaking new ground: Latrobe Valley, Victoria