Blueprint Institute

# Breaking new ground

## Challenges and opportunities of a changing energy landscape in regional Australia

## South-West Queensland

# Contents

# 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 energy 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 recent 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 workers and supporting communities 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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# Attribution

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# Executive summary

The emerging clean energy economy offers a window of opportunity for South-West Queensland. 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 South-West Queensland—including those which house our coal-fired generators—have long formed a cornerstone of our economy. They have brought power into our homes and businesses, foreign capital to our shores, and their industry has provided employment to thousands of Australians.

Across the country, a massive change is already underway. Coal-fired generators are facing increased competition, with many set to close—unviable in the face of ever-cheaper renewable energy. And the days of insatiable global demand for our thermal coal exports are also numbered. COP26 galvanised international support for decarbonisation and coal appears to be the first major target. With unanimous agreement to 'phase-down' coal-fired generation secured at Glasgow last October, even China and India are now setting net-zero targets.

Private players in international finance have thrown their full weight behind the energy transition. The Global Energy Alliance For People And Planet has pledged over A$14.8 billion to help developing countries reduce their fossil fuel consumption. Similarly, the Asian Development Bank and other large financial institutions such as Citibank and HSBC are developing private-public partnerships to accelerate the closure of coal-fired generators across Asia. This initiative would see these players buy out existing assets and attempt to shut down operations within 15 years.

Such a shift should be met with optimism—not trepidation—in South-West Queensland. That's because the region can prosper in the new energy economy. The only question is whether we have the courage and foresight to capitalise on these new opportunities.

Few nations 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 South-West Queensland.

Blueprint's modelling indicates that approximately 6,200 new jobs in renewable energy projects will be created in South-West Queensland. Of these, nearly 1,000 are permanent, long-term positions. These are new jobs and drawn only from projects that are registered with the regulator, have commenced construction or clear construction dates, and clear funding routes.

Massive wind and solar resources have already attracted the state's largest operational wind project, the 453MW Coopers Gap Wind Farm, as well as over 3,300MW committed or proposed in other projects. Workers from Tarong power station could help maintain the new Battery Energy Storage System nearby, while those at Kogan Creek could staff CS Energy's neighbouring renewable hydrogen demonstration plant. Meanwhile, thousands of new jobs in critical minerals mining around Mount Isa will require skills similar to those already possessed by former coal miners, leaving them well placed to meet growing labour demand.

But to secure enduring prosperity in South-West Queensland, we cannot rely on renewable projects alone—many of the jobs they create are short-term construction jobs, 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, auxiliary industries, as well as other emerging sectors—will be necessary to provide meaningful and stable employment to the area's regional communities. Thus, this report also outlines the opportunities that are available to the region beyond renewable energy generation.

Lasting economic prosperity in the new energy economy is attainable in South-West Queensland, 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 previous report—*From the ground up*. The report called for:

- funding for coal adaptation authorities to be established that empower communities;
- the establishment of a national coalfield and infrastructure renewal and repurpose strategy, in concert with state and local governments, to ensure that existing assets can be used to allow communities to pivot and adapt to new opportunities and;
- well-designed support for workers through job search and retraining services, income insurance, and where necessary early retirement packages.

Opportunities for a prosperous future for South-West Queensland are there for the taking. Rather than bear the economic cost of our changing electricity grid, regional Australia can lead us into a new era of prosperity. Our polling shows that voters in South-West Queensland are demanding their leaders step up to the plate. We hope that this research helps policymakers to move fast and embrace these opportunities with confidence.

# South-West Queensland

## Maranoa & Groom

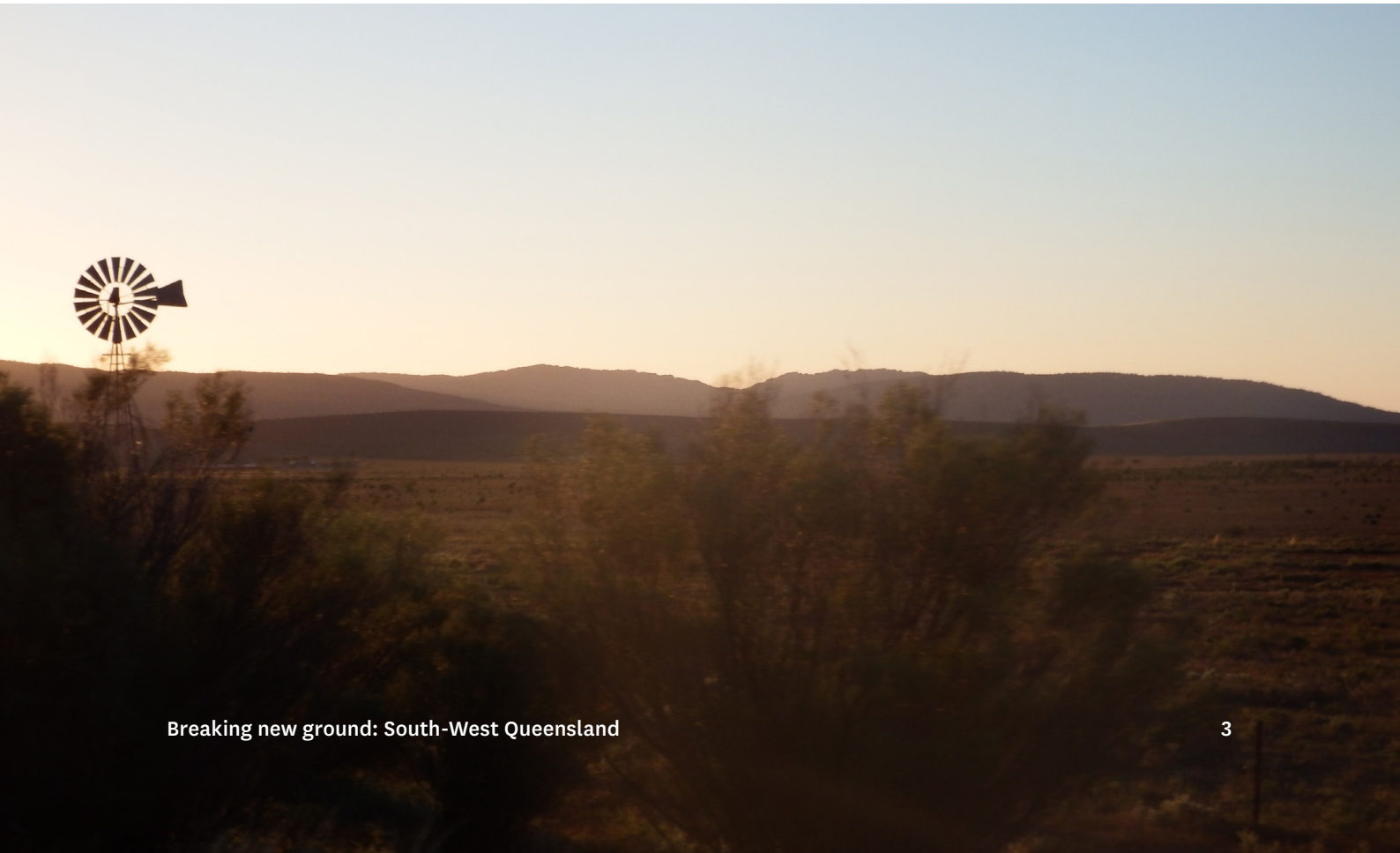
The electorates of Maranoa and Groom represent a large and diverse part of regional Queensland. Thousands of kilometres of farmland and national parks stretch from the foggy hills of the Toowoomba Range in the east, through the vibrant communities of Chinchilla, Roma, and Longreach, to the dusty Simpson desert on the South Australian border. For many decades, South-West Queensland has quietly prospered as a cornerstone of Australia's agriculture and resource industries.

Just as its rivers and basins supported early settlers, coal industries have flourished throughout the region. Collectively, local coal assets currently employ over 1,500 workers directly and create opportunities for many more through indirect economic activity. The shift to a clean energy economy may not seem easy for those local communities in the region that currently rely on coal, but it can succeed. South-West Queensland possesses all the necessary ingredients to benefit from the future that is already knocking at our door.

Even as the coal industry declines, dozens of projects, including successful growth across the tourism sector, are already in motion that could create a new era of shared prosperity in its place.

Renewable energy projects are sprouting up with great promise in South-West Queensland. Beyond these, development of the region's vast potential in critical minerals mining and clean industry can enable local job creation. Proposals range from the expansion of existing technologies on an unprecedented scale through the Southern QLD Renewable Energy Zone to bold, emerging projects, such as a renewable methane plant in Roma. It is no surprise that Maranoa and Groom's residents have noticed these promising opportunities and are demanding government support to take advantage.

In the coming pages we outline the challenges these communities face, the significant opportunities which can shape their future, and the perspectives of locals on the ground.



# The task at hand

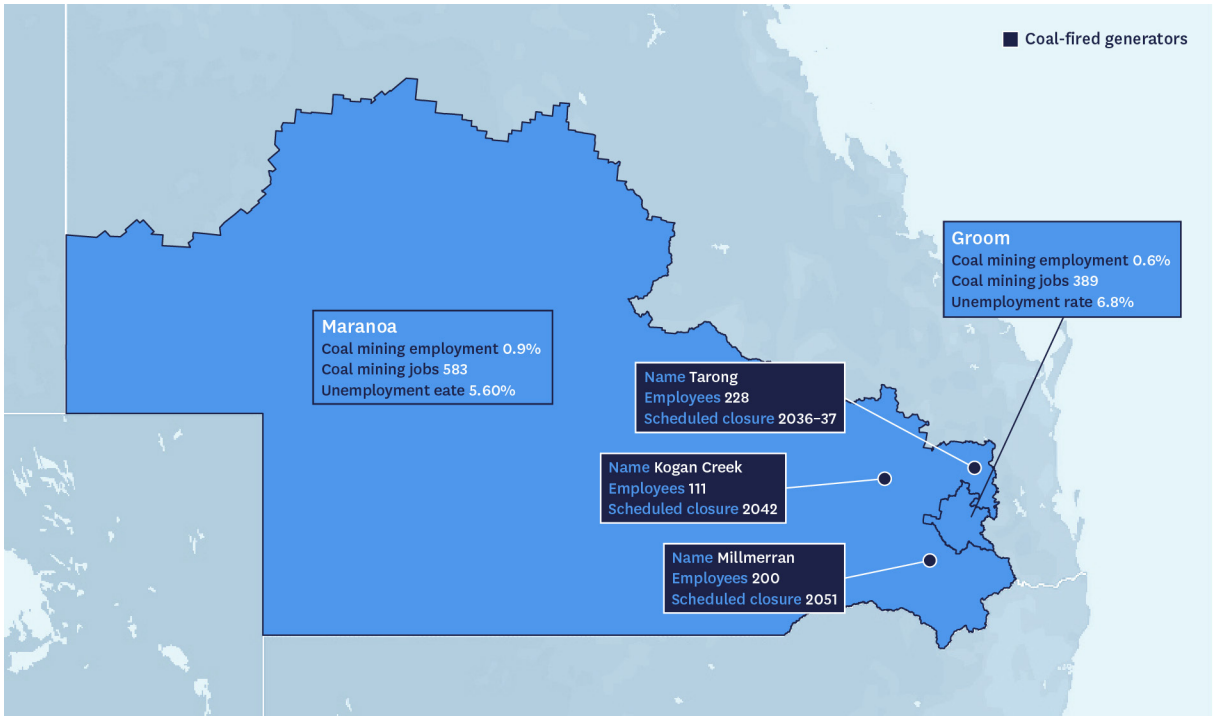



**Figure 1** South-West Queensland demographics and coal assets

**Source** Australian Bureau of Statistics, Australian Energy Market Operator, Company Websites, Blueprint Institute Analysis

The challenge facing some communities in South-West Queensland is significant.

In Tarong, a township of around 180 people, coal-related industries employ more than 15% of the local workforce. Indirectly, high wages from coal jobs have allowed a greater variety of local businesses to prosper—even those not directly linked to coal-fired generation or coal mining. The projected closure of the Tarong coal-fired generator in 2036-7—though closure may come earlier as cheaper renewable energy alternatives enter the grid—will necessitate a proactive and efficient workforce shift to minimise the impact on the community.

The Kogan Creek and Millmerran power stations elsewhere in the region are likely to close after Tarong. Having been constructed within the past two decades, their closures are not scheduled until 2042 and 2051 respectively. But most economists agree that such plants will close well ahead of these original dates, with Australia Energy Market Operator (AEMO), the regulator, now predicting that coal-fired generators will retire two to three times faster than anticipated and completely disappear from the grid by 2043, a decade earlier than previously thought. And sooner rather than later, the locals working there will also have to move into other jobs. The scheduled closure of these power stations provides us with, at most, a 15-year window to begin finding new sources of employment and economic prosperity.

Coal mines will eventually face the same fate too. Each operator of the three Brisbane Hinterland generators holds majority shares in the neighbouring thermal coal mines. These mines supply the power stations with all their thermal coal needs. In 2010, the only other coal mine operating in the region, Cameby Downs, began producing a low-ash thermal product for export from the Port of Brisbane, mainly to Asia and Chile. The mine has approval to extract 3.5Mt of thermal coal each year over a 75-year period to 2085, although international demand for its carbon-intensive product will likely fall before then.

South-West Queensland is currently unprepared to deal with the rapid coal phasedown which is underway. Although alternative industries like agriculture remain strong, they lack the growth

capacity to single-handedly absorb job losses from thermal coal in the coming decades. New jobs are slowly emerging in areas like renewable energy, but they need help to fully replace the employment, electricity supply, and prosperity currently supported by coal. While some skills will be transferable, other workers will need support through retraining or relocation.

The population in South-West Queensland has experienced limited growth over the past two decades, and over the year to June 2019, Maranoa was the only region in Queensland to see population decline. Without action, this trend could accelerate into the kind of mass exodus seen in Spain's former coal towns as unemployed coal workers are forced to move to urban centres for low-paying, insecure jobs in service industries.

Economic renewal could facilitate greater internal migration and stem the flow of young people to the cities—'keeping the brains in the bush'. South-West Queensland can capitalise on a broader trend of increasing net migration to Australia's regional areas, as lifestyles and the nature of work are re-evaluated following the pandemic. Economic diversification, and a skilled workforce to match, will help these communities retain and attract the people necessary to thrive in a new energy economy.

# The opportunities—what's on offer?

The market-imposed phasedown of coal-fired power generation represents an unprecedented shift in Australia's energy landscape—long dominated by fossil fuels. However, this shift also gives rise to a variety of new opportunities which can allow local communities, such as those in South-West Queensland, to prosper, and could spur nationwide economic growth.

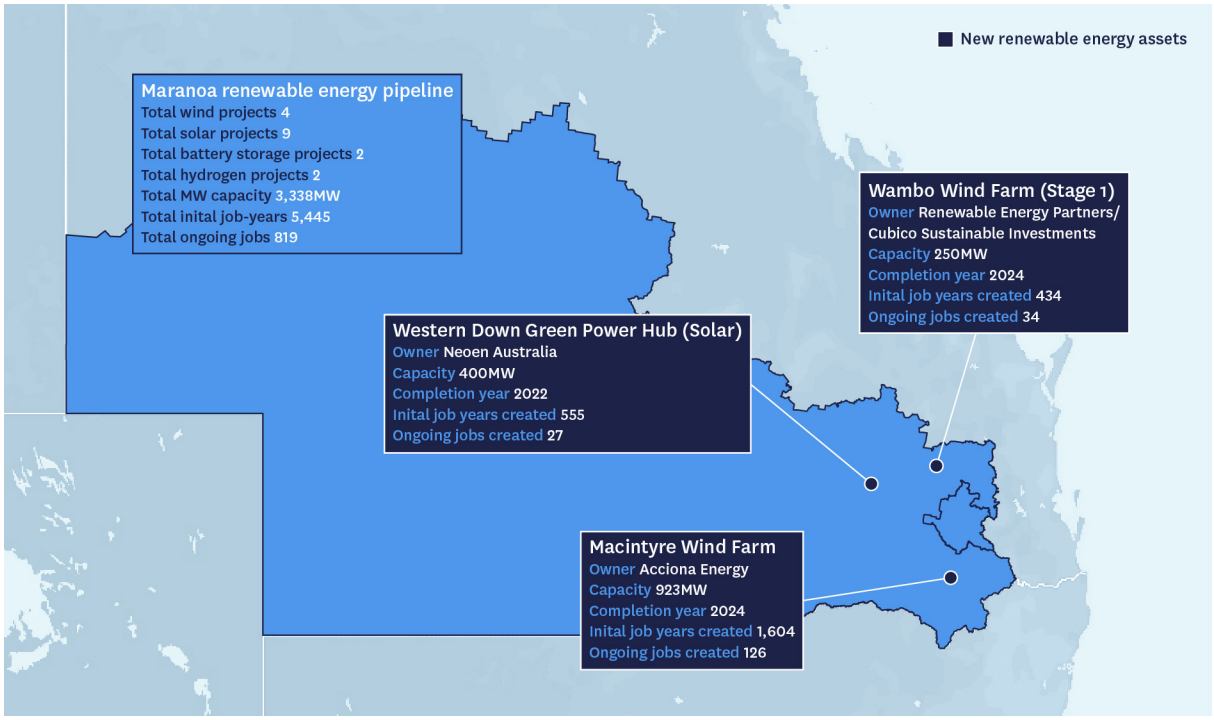



**Figure 2** South-West Queensland's new renewable energy assets—total pipeline and sample projects
**Source** Company Websites, Blueprint Institute Analysis

# Renewable electricity generation

Blueprint Institute projects that 6,200 new jobs will be created for regional communities as a result of forthcoming renewable installations across South-West Queensland. This is a deliberately conservative estimate, and includes only those projects registered with AEMO, the regulator, or state governments, with 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 approximately 2,000 additional jobs throughout Queensland in 2030, with 75% of those based in Queensland's regions.

Renewable developments will account for:

- 2,400 new jobs created in 2022,
- 550 new jobs created in 2023,
- 3,000 new created in 2024,
- and a further 240 jobs in 2025.

These initial job figures match the employment base of the local coal industry. They include 820 new permanent positions in operations and maintenance for South-West Queensland communities. Complemented by a rise in clean industry and infrastructure development jobs, these opportunities can set South-West Queensland up to thrive far beyond the limits of coal.

Significant financial commitments support these projections, including over $30 billion in investment which has been proposed as part of the Southern Queensland Renewable Energy Zone covering 12 regional Local Government Areas. A 2018 stocktake of the Darling Downs region found that 503 full-time construction jobs were created in new renewable infrastructure installations. Over 27% of households in the Darling Downs had installed rooftop solar at the time, and there were 16 large-scale projects either approved or under construction.

On top of the established solar market, South-West Queensland is already home to the state's largest operating wind project, the 453MW Coopers Gap Wind farm which can power 264,000 homes. The farm employed 200 people during its construction in 2018, with 15-20 permanent positions also created. Further job creation is available through the 72 additional wind projects that have now registered their interest with the Southern Queensland Renewable Energy Zone. Battery energy storage systems have begun at Wandoan South, Tarong Substation, and Western Downs Green Power Hub—with these three projects creating close to 100 construction jobs and 10 ongoing positions.

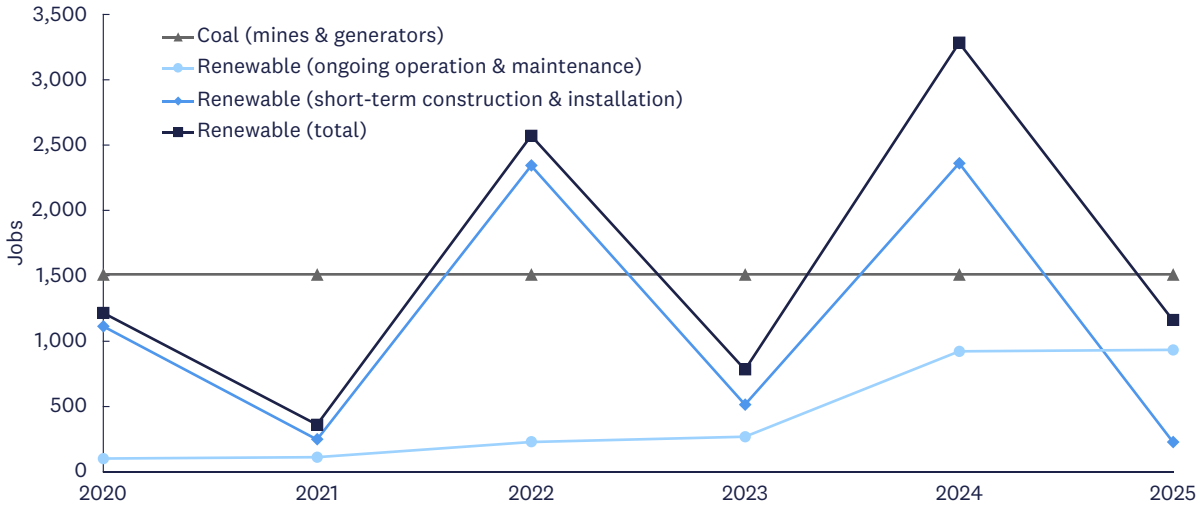



**Figure 3** Timeline of employment for energy generation in South-West Queensland (2020-25)
**Source** Blueprint Institute Analysis

Moreover, ongoing innovations, such as the deployment of a hydrogen energy storage system at Yarranlea solar farm, also form a proportion of our projected employment figures. And while the market for green hydrogen remains underdeveloped, the technology has enormous economic potential. In a clean energy future, hydrogen could make up to 15% of global energy demand (>$2 trillion), by providing clean medium- to high-heat fuels in areas where it is hard to 'electrify'—such as heavy industry, commercial transportation, fertilisers, heating, and aviation.

More significant is the over 3,300MW of onshore wind and solar power (equivalent to 23.3% of the entire state's current energy production capacity) currently in the pipeline across South-West Queensland. We expect that 5,000 job-years of construction employment and 320 ongoing operational positions will be available to regional workers. The number of regional manufacturing jobs would largely depend on local capacity, but according to analysis, 3,300MW of development could sustain up to 660 local manufacturing jobs.

All of this new employment generated by these renewable energy projects would add to the 17,810 (solar) and 3,240 (wind) full-time equivalent jobs already recognised by the ABS in its latest national data from 2019.

However, it would be disingenuous to assert that South-West Queensland has a bright future simply because the renewable energy industry can sustain a larger number of jobs than the coal industry.

It is unrealistic to expect the renewable energy industry alone to mitigate the inevitable loss of well-paying and stable coal jobs. By their nature, much like every other large infrastructure projects, wind and solar farms ongoing maintenance requires fewer people than the original build. Renewable investment may spark a large initial boom in employment, but it will not, by itself, result in a comparable number of high-income and secure industrial jobs and successful economic diversification. South-West Queensland requires considered policy that seizes the opportunity contained in the initial surge of investment in renewables, and channels it into lasting opportunities that produce jobs in diverse industries in the long term.

# 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 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.

| 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 |

**Table 1** Unadjusted employment factors for renewable energy assets
**Source** UTS

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.

While ongoing operations and maintenance positions in these renewable energy projects may appear limited on an individual basis, collectively they represent hundreds of long-term jobs across committed projects—not to mention thousands more in meaningful construction work for a year or two at a time.

But let us not forget—renewable energy projects are only a fraction of the vast opportunities available in South-West Queensland.

# Other opportunities

## Clean industries—finding greener pastures

Renewable hydrogen and methane projects have begun trials in the region. APA's Wallumbilla renewable methane demonstration project near Roma was granted $1.1m by the Australian Renewable Energy Agency as part of the National Hydrogen Strategy. The plant is set to produce up to 620 kilograms of hydrogen per year, which can then be converted into 74 gigajoules of methane for the fuelling of gas pipelines—a relatively new and unique experiment at industrial scale.

Meanwhile, CS Energy has committed to developing a renewable hydrogen demonstration plant in Kogan Creek, with construction set to begin in 2022. The plant will have an annual capacity of 50,000 kilograms and was given the green light after a successful feasibility study with Japanese industrial giant IHI Corporation. It will provide 10 new construction jobs and one to two operational positions right beside the existing Kogan Creek coal-fired power station. It will also create a skills register for workers to transfer from old industries to new.

Though the initial employment figures for these clean hydrogen feasibility projects are modest, the success of these early studies could lead to enormous economic benefits in Kogan Creek over the coming decades if the plants are scaled up. Currently planned to commence in 2024, the most promising project already announced is the Hydrogen Production Facility in Kumbarilla Renewable Energy Park. With 80MW of electrolysis, the facility is expected to create 144 short-term positions during immediate construction and hire up to 480 ongoing workers to operate and maintain the hydrogen production.

## Critical minerals mining

We are often led to believe that serious climate action will destroy our traditional mining industries. This is far from true.

In fact, in the emerging green economy, there are opportunities for Australia to establish itself as a leading supplier of critical minerals—a globally underdeveloped resource that serves as a key input for low-carbon technologies and other important growth areas like computer chips. The International Energy Agency predicts that mineral requirements for low-carbon technologies are likely to double by 2040, and could almost quadruple if the world manages to achieve its Paris Agreement goals.

Australia is already the world's largest lithium exporter, contributing 49% of the world's lithium in 2020. A key component in increasingly important battery technology, lithium is expected to reach a global market size of A$162 billion by 2030, growing at a compound annual growth rate of 12.3%. Australia's earnings from lithium exports are forecast to reach $3.8 billion by 2022-23. We are also the fourth-largest exporter of rare earth elements, used in wind turbines and motors for electric vehicles. Key trading partners like South Korea have expressed interest in our capacity to supply critical minerals so that they can diversify their supply chains away from China.

By 2040, between 5,400 and 9,450 (depending on policy action) new jobs in critical minerals mining are projected in Queensland, with the greatest concentration of known sites clustered around Mt Isa. While this would require South-West Queenslanders to relocate north, the close industry match could be a big advantage for those currently working in thermal coal mining. With a new $2 billion loan facility already committed by the Federal Government, opportunities in this sector will only continue to grow.

It's also important to note that Australia currently only has active operations in the early stage of the lithium value chain, namely the mining and refining process. These sectors account for a small proportion of the total revenue within the lithium trade. For instance, if Australia diversified into the production of battery cells and battery pack assembly, it would give us access into an industry worth over $2.3 trillion. This diversification would be a leap towards strengthening the economy and reducing our coal dependence. As highlighted in Accenture's Future Charge report, Australia's expansion into onshore materials processing and battery production could potentially generate over $7.4 billion in annual revenue and would lead to the creation of over 34,000 jobs by 2030.

## Broad diversification in the region

With Roma airport servicing the region, tourism could provide new and expanding opportunities, with wide-ranging activities for tourists—"from fishing and farm stays to bird-watching and bushwalking". A well-worn tourism trail already winds through South-West Queensland, from the dinosaur prints and Waltzing Matilda museum, to the Visit Sunshine Coast Hinterland accommodation at Winton, the Qantas Museum, and Stockman's Hall of Fame at Longreach. National parks, including the well-known Carnarvon Gorge, are a particular highlight. An off-grid ecotourism demonstration at Spicers Scenic Rim Trail is even aiming to combine tourism with renewable energy, replacing diesel generators at five eco-camps with low-pressure hydrogen. The project has received almost $1 million from the Queensland Government and could create jobs in construction and maintenance while also paving the way for similar future opportunities.

The Inland Rail project in South-West Queensland is also full steam ahead, and with it the potential for massive economic benefits. Beyond more efficient transportation of goods from the region, the project is set to influence the development of storage facilities and hubs for food, produce, and mining. During the construction phase, Toowoomba and the surrounding regions are set to benefit most, with works in the area constituting approximately half of the total project value. Twelve thousand construction jobs are predicted for the Queensland section of the project, alongside an increase in Gross Regional Product of $3 billion over 50 years. Two thousand of these jobs are expected to be accessible to Toowoomba locals over a five-year period.

Two major transport hubs, the InterlinkSQ Freight terminal and the Toowoomba Transport terminal, rely on successful completion of the Inland Rail. Together, they are set to provide over 4,000 direct and indirect jobs within the region once fully operational. As South-West Queensland is abundant in agriculture and mining resources, the benefits of improving freight efficiency cannot be understated.

Also abuzz with projects is the Wagner Corporation's Wellcamp business park. Integrated within the park is the country's newest airport. Having been operational since 2014, the airport has been dubbed Australia's cleanest, saving 6,600 tonnes in $CO^2$ emissions. But the vision for the area extends far beyond flights. The Wagner Corporation also plans to introduce a purpose-built greenhouse facility, tyre recycling centre, plastics reprocessing plant, a pilot training facility, and a dairy farm—all involving further employment prospects. For instance, the greenhouse project named "Asterion", plans to export 500 tonnes of medical marijuana worldwide and is estimated to create almost 1,000 positions to fuel its ambitions.

Ahead of the Brisbane 2032 Summer Olympics, the Wagner corporation has announced the construction of the Wellcamp entertainment precinct. Advertised as a motorsport and performing arts centre, the precinct is expected to cultivate over 130 jobs during construction and a further 2,500 jobs when hosting events.

Generating up to 4,000 more local jobs, the Toowoomba Hospital Redevelopment Project will support existing health services while meeting increasing demand driven by a growing and ageing population.

All of these opportunities provide routes to future prosperity for South-West Queensland. We must ensure that these opportunities, combined with the outlined renewable and clean energy projects, are capitalised upon. They, along with other opportunities not outlined here, offer the key to setting South-West Queensland up 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 government, 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. If South-West Queensland is to thrive in the clean energy future, government must empower local communities and businesses to leverage all available opportunities to grow beyond the limits of coal. Moreover, policy settings must also enable new opportunities, above and beyond those outlined above to be created and capitalised on.

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

- provide $20 million in funding to help establish coal adaptation authorities in both Groom and Maranoa. Coal adaptation authorities will be staffed primarily by representatives from the local community and tasked with analysing the shift to clean energy and its implications for regional residents. These authorities will continuously engage with their communities in order to develop and iterate strategies to respond appropriately to local concerns. They will maintain statutory independence while working with existing governments and agencies where appropriate. These authorities will also be responsible for conducting a thorough fact-finding mission, studying local industry and demographics to ensure that any recommendations are data driven.
- offer 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 South-West Queensland, this would mean developing renewal strategies for the Tarong, Kogan Creek, and Millmerran coal-fired generators well ahead of their anticipated closures, as well as for the transmission infrastructure that feeds them.

And that the Queensland Government, working together with local governments:

- provide five percent of its collected coal royalties to coal adaptation authorities. In 2019-20 this would have amounted to $175 million. A similar, but smaller scheme, is evident in the NSW Royalties for Rejuvenation program introduced in April 2021. Such a plan ensures that the royalties collected by the state is approximately proportional to the number of coal workers located there. These revenues would be collected by the state and held in a specific Queensland coal adaptation fund, located within the Queensland's Department of Regional Development, Manufacturing and Water.
- support coal adaptation authorities to ensure that they can deliver their mission. This would include providing resources and support to enable the authorities to complete thorough fact-finding missions, and establish employment hubs to reduce hiring costs for firms and job seeking costs for workers in the impacted regions.
- continue to support and investigate the possibility of renewable energy zones, among other new manufacturing and industrial precincts, to further encourage investment into the South-West Queensland region.

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 South-West Queensland has revealed the balanced attitudes held by many in the community. Former Millmerran power station engineer Mark* recounts his experiences at the coal-fired generator and in the local community. According to Mark, the generator currently employs around 100 locals, with close to 100 more working in the supplying mine; collectively they are the "highest paid in the community by far." These wages, along with Intergen's Community Benefits Fund of $2 million, are a financial pillar that supports the communities of Millmerran and Pittsworth. Mark believes that the community no longer remembers a time before the generator existed, making it hard for them to imagine a future without it.

As it stands, he believes that limited alternative opportunities, particularly within the industrial sector, mean that the generator closure could spell a decline for Millmerran.

To thrive in a decarbonised Australia, new and existing industries need the support to grow, and workers need the training to match an evolving workscape. Even the plant itself, he says, can be reused as an industrial park, or perhaps as a synchronous condenser to support system security in a transforming energy grid. There's no question that locals know change is already on the horizon. As workers lose confidence in the long-term viability of coal, the generator is finding it increasingly difficult to hire new, and particularly young, workers. If alternative industries can provide the job security that workers need, the Millmerran region will continue to prosper well into the future. And with another 30 years until the generator is expected to close, time is on our side. But the sooner we act, the stronger our position.

*Names have been changed to preserve anonymity.

## Blueprint's *Voices from the regions* poll

Mark's insights are also reflected by hundreds of others in the broader community—South-West Queensland residents clearly recognise the challenges before them, but they also see that with these challenges come opportunities. In Blueprint Institute's latest poll—*Voices from the regions*—73% of respondents in Maranoa aligned with the view that with proper government support, there are industries and jobs that can thrive in their region other than coal. Only 18% thought that coal mining was the only viable industry that could provide a majority of high-paying jobs in the area.

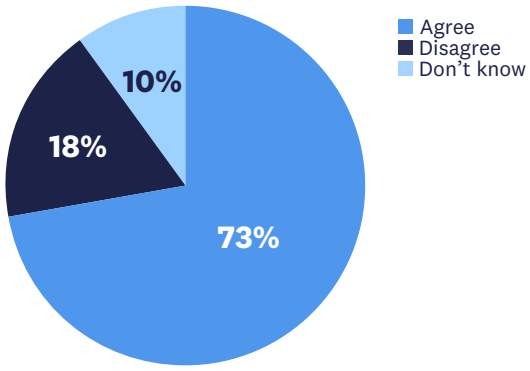



**Figure 4** Maranoa residents' response to the statement: "With proper government support there are industries and jobs that can thrive in this area other than coal".

**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 percent of respondents believed that building more renewable energy facilities would create new jobs in the area. This included 52% of those who disagreed that human activity is the main cause of climate change, showing that even the majority of those who doubt the science find the economic case compelling.

Sixty-three percent of Maranoa residents polled support reducing subsidies for coal and gas companies and using the savings to invest in large-scale renewable energy. Among coal-working households, this number jumped even higher to 71%. 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 they want the government to continue their legacy in energy generation—prioritising the renewable opportunities of the future, even if it means sacrificing current subsidies to their own jobs.

On the industrial front, 80% in Maranoa support investing in new clean industries such as green hydrogen, with support again increasing to 84% among coal households. This optimism far exceeds the support for new gas-fired (57%) or nuclear (45%) power stations.

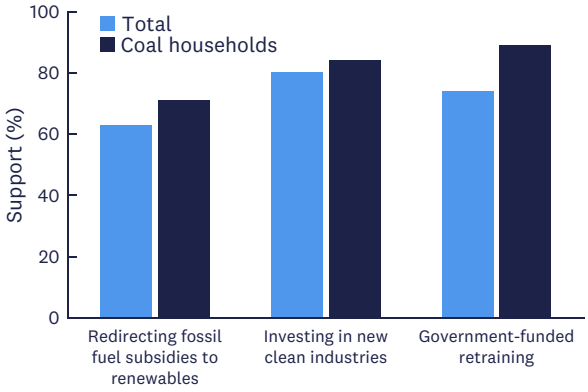



**Figure 5** Maranoa residents' support for different policies relating to the energy shift

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

On top of this economic renewal, communities know that workers need individual support. While certainly related, many of the jobs offered by the new energy economy will not involve identical skills to those practiced in the coal industry. That's why 74% of respondents and 89% of coal households support coal workers receiving government-funded training if they are made redundant.

South-West Queensland communities are open to change, so long as they are not left behind. Fortunately for policymakers at all levels, communities have been abundantly clear about the types of policy they desire.

# Conclusion

There's 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 themselves and regional communities housing coal-fired generators, and act now to position them to benefit from a changing economic landscape.

Australia's regions have been the cornerstone of our agricultural, energy, and resource sectors for many decades. As hosts to many of the country's biggest industries, prosperity for these regions means prosperity for all Australians.

South-West Queensland can adapt smoothly to a new energy economy—provided that coal workers and emerging industries both receive proper support. In our previous 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 the promising opportunities, South-West Queensland can thrive well into the future.

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