

# AT THE COALFACE:

*Work, Community and Climate Change*

December 2019

**percapita**  
FIGHTING INEQUALITY IN AUSTRALIA

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Table of Contents

ABOUT PER CAPITA ..... 3

EXECUTIVE SUMMARY ..... 4

THE MINING INDUSTRY IN CONTEXT ..... 5

THE ECONOMIC IMPACT OF INDUSTRIAL CHANGE ON MINING COMMUNITIES ..... 9

MACKAY..... 9

CENTRAL QUEENSLAND..... 12

THE HUNTER VALLEY ..... 15

CONCLUSION..... 17

APPENDIX I ..... 19

## About Per Capita

Per Capita is an independent public policy think tank, dedicated to fighting inequality in Australia. We work to build a new vision for Australia based on fairness, shared prosperity, community and social justice. Our research is rigorous, evidence-based and long-term in its outlook.

We consider the national challenges of the next decade rather than the next election cycle. We ask original questions and offer fresh solutions, drawing on new thinking in social science, economics and public policy.

## Shirley Jackson

Shirley Jackson is an Economist in Per Capita's Progressive Economics program. Shirley spent most of his working life in warehouses, retail shops, restaurants and being unemployed. He has been fortunate enough to have spent the last 10 years working as a union official.

His areas of interest and expertise are young workers, employment, labour market policy, industrial relations, and industry policy. Shirley undertook undergraduate and postgraduate studies in history, economics and political economy, and has an unfinished doctorate on young workers.

## Executive Summary

Recently, the national conversation surrounding climate change, and in particular the relationship between environmental policy, thermal coal and the workers who extract it, is bordering on a culture war.<sup>1</sup> The public discourse is being exasperated by media coverage that increasingly quotes politicians and other commentators out of context. Too often, contextually nuanced discussions about the need for a responsible approach to industrial change are being misrepresented as nothing more than politically opportunistic pro-coal sentiment.<sup>2</sup>

The structural changes in our energy sector will have ramifications not only for our economy and the health of the planet in coming decades; they will be felt intensely and personally by people in regional coal mining communities like Mackay, Central Queensland and the Hunter Valley. While there are some who would use their plight for political point scoring, these are real people who deserve better.

Whether due to automation, offshoring or obsolescence, regional workers have been at the coal face of the globalised economy since the 18<sup>th</sup> century. The current debate about climate change is apparently a line in the sand for coal mining communities: they are saying they refuse to bear the brunt of industrial upheaval again, or to see their jobs sacrificed, however important the goal.

We must understand what these regional communities value, what they fear and what they need before decisions are made that affect the lives of thousands of working families.

We estimate that, without managing industrial change effectively, over \$66million in weekly wages will be taken out of three coal communities in regional Australia, with devastating consequences for local economies. This equates to a total economic loss across just three regions of almost \$3.45 billion annually.

As Australia moves towards a post-carbon economy, we must enact industrial policies that will ensure that there are secure, reliable, well paid jobs for those workers who too often bear the brunt of industrial change and economic progress.

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<sup>1</sup> Or 'Coalture' War, if you will.

<sup>2</sup> Brown, G., (2019a) "'Miners don't want \$40k a year renewables jobs': Labor MP", *The Australian*, 7<sup>th</sup> December 2019. <https://www.theaustralian.com.au/nation/politics/miners-dont-want-40k-a-year-renewables-jobs-labor-mp/news-story/44eabf54d7b724721d3b88e24462abc0>; Brown, G., (2019b) Terri Butler warns Labor over pushing workers into renewables', *The Australian*, 8<sup>th</sup> December 2019. <https://www.theaustralian.com.au/nation/politics/terri-butler-warns-labor-over-pushing-workers-into-renewables/news-story/0fbb9c3e454d17b168852aa8122776d1>

## The Mining Industry in Context

The mining industry has been an important part of Australia's economy for generations. The significant role played by the mining and resources sector in our economy is often blamed for distorting our politics. These claims are not without validity, as the clout of the multinational corporations who extract and trade our natural resources is wielded as a weapon, in an attempt to force policy makers and politicians to acquiesce to the demands of the mining lobby<sup>3</sup>. However, while the mining sector makes an important contribution to our common wealth, it arguably receives favourable regulatory and tax concessions that outweigh its net benefit to the national economy.

Between 2002 and 2012, the Reserve Bank of Australia (RBA) estimates that the price paid for Australia's extractive economy more than tripled, as investments in the sector grew from 2 to 8% of GDP.<sup>4</sup> There is little doubt that significant revenue was generated over the period of the mining boom. However, this growth in the commodity price caused significant damage to many other parts of the economy.

While prices in mining grew, the Australian dollar appreciated significantly. An increase in the value of our dollar had some benefits for the average consumer, as prices of imported goods like smartphones, electronics and fashion dropped. However, this appreciation of our currency hindered our agricultural and manufacturing sectors.<sup>5</sup>

While jobs in mining reached a peak of 2.3% of the Australian workforce in 2013-14, manufacturing and agriculture combined used to employ a quarter of the Australian workforce (see Figure 1). Since the start of the mining boom, this combined employment has fallen to just over 15% - still over seven times the employment rate of mining, but a significant drop.

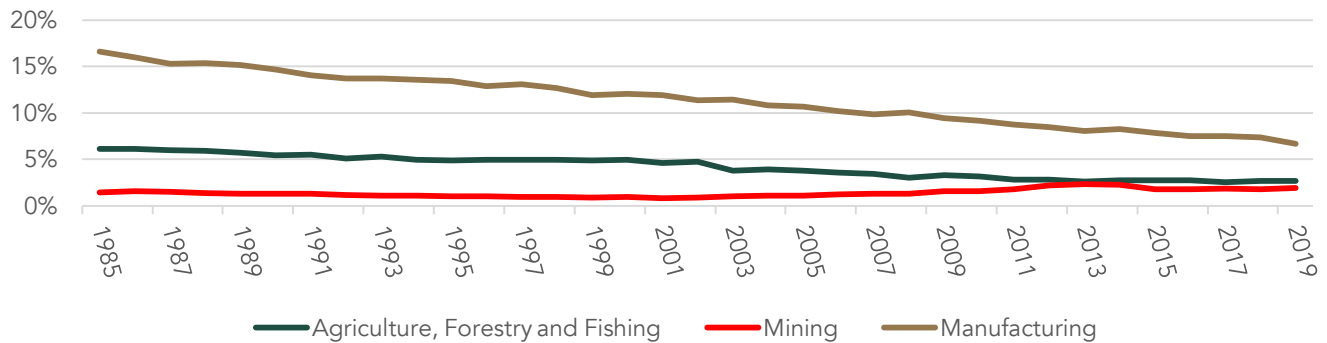
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<sup>3</sup> McCaulay, D., (2019), 'More than 20,000 extra mining workers needed by 2024: report', *The Age*, 17<sup>th</sup> September 2019. <https://www-theage-com-au.ezp.lib.unimelb.edu.au/politics/federal/more-than-20-000-extra-mining-workers-needed-by-2024-report-20190916-p52rql.html>

<sup>4</sup> Downes, P., Hanslow, K., and Tulip, P., (2014), *The Effect of the Mining Boom on the Australian Economy*, Reserve Bank of Australia: Canberra, P.17. <https://www.rba.gov.au/publications/rdp/2014/pdf/rdp2014-08.pdf>

<sup>5</sup> Ibid.

Figure 1  
Regional Employment by Primary Industry



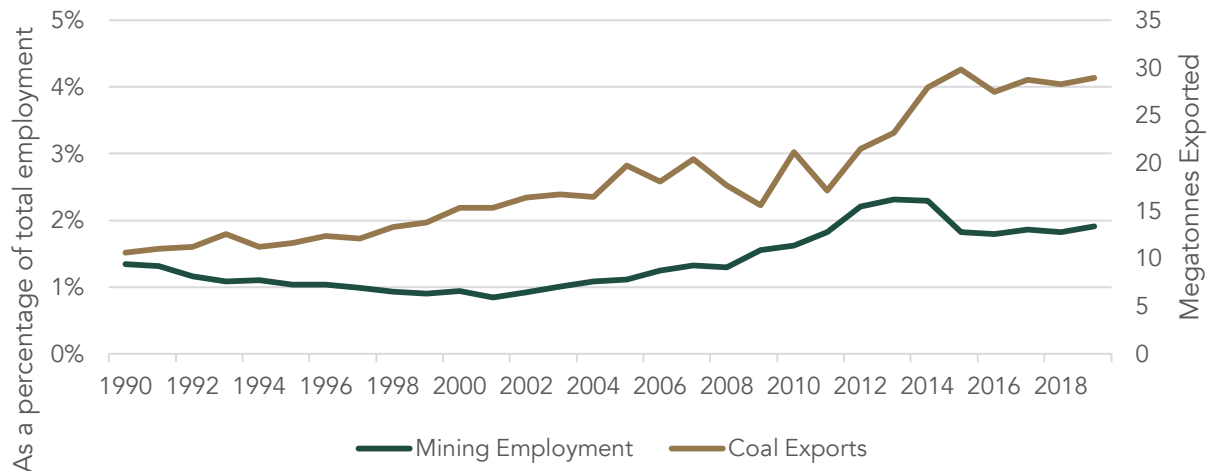
Source: ABS Catalogue 6291.0.55.001, Table 2, original.

The result is fewer workers with secure jobs in Australia. To make matters worse, those lost manufacturing and agricultural workers spent their wages back into their local economies, paid their taxes and contributed to the community in a positive way. Many companies in these sectors were Australian outfits with local head offices, investing in the local economy. In contrast, the global mining companies have spent decades sending profits offshore, avoiding their tax obligations and damaging the environment.<sup>6</sup>

Similarly, the relationship between growth in the mining sector and growth in mining employment is not strong. While coal exports in Australia have continued to rise since the turn of the century, growing by 137% from 11 megatons in 1990 to 29 megatons in 2019, mining employment has remained relatively stagnant (Figure 2). Over the same period, while employment in mining increased throughout the mining boom, it has remained relatively stagnant since 2015. Technological advancements have automated many jobs in the mining industry and allowed mining companies to increase profits without investing in significant job creation.

<sup>6</sup> Adams, V., (2012), 'Mining and the environment: the future of Australia's brand', *The Conversation*. <https://theconversation.com/mining-and-the-environment-the-future-of-australias-brand-8094>; Chenoweth, N., (2015), 'How BHP and Rio Tinto channelled billions through Singapore', *Australian Financial Review*. <https://www.afr.com/companies/professional-services/how-bhp-and-rio-tinto-channelled-billions-through-singapore-20150406-1mezkc>; Khadem, N., (2018), 'BHP may settle ATO's \$1b-plus tax claim', *ABC News*. <https://www.abc.net.au/news/2018-10-24/bhp-may-settle-on-its-1-billion-dollar-plus-tax-bill/10420346>.

Figure 2  
Coal Exports and Employment



Source: Department of Industry, Innovation and Science 'Resources and Energy Quarterly' and ABS Catalogue 6291.0.55.001, Table 2, original.

Furthermore, the cost of alternative sources of energy is rapidly becoming more affordable, reliable and sustainable. In 1977, the fixed cost for every watt of silicon photo-voltaic used in solar panels was US\$76; in 2019 it is 50 cents.<sup>7</sup>

The impact of cheaper renewable technologies has been analysed by renowned scholar and policy maker Jeremy Rifkin, who argues that:

*The impact on society of near-zero marginal cost solar and wind energy is all the more pronounced when we consider the enormous potential of these energy sources...if we could grab hold of one-tenth of one percent of the sun's energy that reaches Earth, it would give us six times the energy we now use across the global economy...if 20 percent of the world's available wind were harvested, it would generate seven times more electricity than we currently use to run the entire global economy.<sup>8</sup>*

These opportunities exist not only in renewable energy capture and generation, but in storage. While coal, gas and oil extraction are becoming less attractive investments, smaller scale mining will, for the foreseeable future, continue to play an important role in the renewable energy sector.

<sup>7</sup> Rifkin, J., (2019), *The Green New Deal: why fossil fuel civilization will collapse by 2028, and the bold economic plan to save life on earth*. St Martin's Press: New York, p.56

<sup>8</sup> Ibid.

For example, as home to some of the world's largest lithium reserves, Australia is well placed to become a major solar-power storage battery manufacturer. Rather than simply digging up the raw materials and shipping them overseas, we must invest in the creation of value-added industries along the supply chain. There are significant challenges in achieving this aim, not least developing the innovation and expertise in refinement, but we must grasp these opportunities if we are to prosper in the 21<sup>st</sup> century and beyond, and contribute our skills and ingenuity to tackling climate change.

As alternative energy sources become more attractive, the world's reliance on fossil fuels will decline, and eventually collapse. Governments and businesses around the world are facing this challenge, and Australia has an opportunity to contribute to a new and clean global economy built on advanced energy technology.

However, we must first confront the challenges that this industrial shift will bring to communities that are dependent on coal and other fossil fuels.



## The Economic Impact of Industrial Change on Mining Communities

Coal communities are worried about their future, and this worry is a mobilising political force. In the May 2019 election, three out of the four electorates in which Labor's primary vote dropped by more than 10% were coal communities.<sup>9</sup> This is not because people in these communities love coal itself. What people in coal mining communities want is to have jobs in their hometowns around which they can build a secure life.

The CSIRO has found that, while Australians do believe mining creates employment and economic benefits, they know that those benefits are not being distributed fairly.<sup>10</sup> Most importantly, people in coal mining communities themselves report that they don't feel they're getting a fair share of those benefits.

However, if we look at the economic profiles of those three coal mining communities that mobilised so effectively against environmental and industrial change at the 2019 federal election,<sup>11</sup> we can begin to understand what the impact of mining's absence might be.

### Mackay

Mackay is a large regional town in Queensland, with just over 117,000 people residing in the Greater Mackay area, encompassing the federal electorate of Dawson, as well as neighbouring Kennedy and Capricornia.<sup>12</sup> The population is already in decline, contracting by almost 14% since 2012.<sup>13</sup> While traditionally known as the 'Sugar Capital', that industry, which helped the town to prosper throughout the 19<sup>th</sup> and 20<sup>th</sup> centuries, has been in decline since the 1990s.

The average amount of sugarcane that was harvested and refined in Mackay dropped from an average of 9 million tonnes in the 1990s to just 4.8 million in 2012.<sup>14</sup> Largely, this was due to a rapidly globalising

<sup>9</sup> The other electorate was Gorton, which has virtually no mining and experienced a large swing to an independent.

<sup>10</sup> Moffat, K., (2017), *Australian attitudes toward mining: Citizen Survey*, CSIRO, pp.7-10.

<sup>11</sup> Economic profiles have been generated by the author by analysing Census data at the Statistical Area 4 (SA4) level, and matching them to the electorates where Labor's primary vote fell by 10% or more.

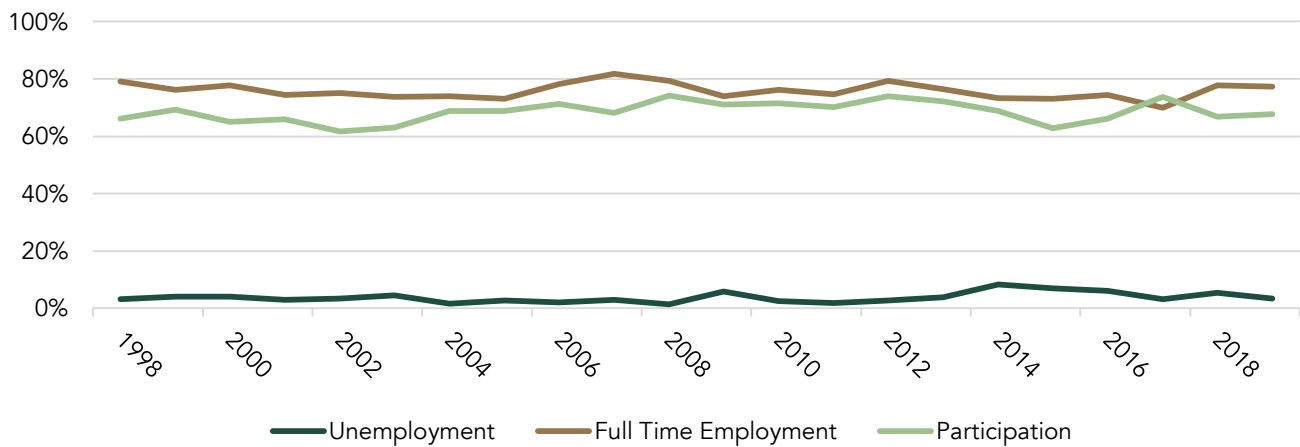
<sup>12</sup> The Mackay-Isaac-Whitsunday SA4 region.

<sup>13</sup> Wright, S., and Bagshaw, E., (2019), 'As cities grow, parts of regional Australia disappear and get angry', *The Sydney Morning Herald*. <https://www.smh.com.au/politics/federal/as-cities-grow-parts-of-regional-australia-disappear-and-get-angry-20190829-p52m26.html>.

<sup>14</sup> Frost, P., (2014), 'Are we still the sugar capital of Australia?', *The Daily Mercury*. <https://www.dailymercury.com.au/news/are-we-sugar-capital-of-australia/2143103/>.

market that saw local sugar mills in Mackay competing against companies from Asia and the Americas. However, the national mining boom saw an increase in local mining employment over the same period, which has seen overall employment and unemployment figures remain relatively constant (Figure 3).

Figure 3  
Employment in Mackay



Source: ABS Catalogue 6291.0.55.001 RM1 & RM3.

Unemployment in Mackay has fluctuated significantly over the past 20 years, although the GFC had a noticeable impact, with the rate rising from 2.6% in 2010 to 8.4% in 2014. The number of people participating in employment has remained relatively constant, increasing by approximately 12% between 2002 and 2008.

The percentage of the working population has similarly remained constant, with three out of every four workers maintaining full time work. However, this has been largely buoyed by the growth in mining employment, in the face of sugar’s decline in the area.

Figure 4

Mackay Industrial Breakdown

Industry	Employment	Average Wage
Mining	18.90%	\$2,625.20
Retail Trade	8.93%	\$687.60
Health, Social and Community Care	8.85%	\$1,034.60
Accommodation and Food Services	8.28%	\$524.10
Education and Training	6.88%	\$1,151.90
Transport, Postal and Warehousing	5.97%	\$1,401.00
Construction	5.86%	\$ 1,439.50
Manufacturing	5.39%	\$ 1,295.10
Agriculture, Fishing and Forestry	5.33%	\$945.00
Other Services	4.20%	\$915.60
Public Administration and Safety	4.04%	\$1,422.60
No Industry Listed	3.84%	N/A
Professional, Scientific and Technical Services	3.34%	\$1,559.80
Administrative and Support Services	3.16%	\$963.60
Wholesale Trade	2.93%	\$1,310.10
Rental, Hiring and Real Estate Services	1.08%	\$1,117.70
Electricity, Gas, Waste and Water Services	0.90%	\$1,830.70
Financial and Insurance Services	0.87%	\$1,659.40
Arts and Recreational Services	0.77%	\$808.20
Information, Media and Telecommunication	0.48%	\$1,622.20

Source ABS Catalogue 6306.0 and Census data.

In Mackay mining employs almost one in five people with an industry average wage of \$2,625.20 per week. Approximately 82% of the 15,169 workers employed in the industry are in “blue collar” jobs, working as technicians, tradespeople, machinery operators or labourers.

A significant section of the working age population, then, is dependent on the mining industry for direct employment. The end of mining in the greater Mackay area would have a measurable effect on the local economy and the overall viability of the town, unless a plan for secure new jobs is offered by government.

While it is hard to argue that workers who are receiving a wage that is almost double the rest of the workforce are doing it tough, the loss of those higher wages would have dramatic impacts on the local economy. For example, if all mining operations were to cease immediately, and all mining employees were absorbed by the construction industry without any job losses, the change in weekly wages would see an average drop of \$1,185.68 per person. In total, this would be \$17,985,833.30 less money circulating in the local economy every week.

If we apply the findings of the *Senate Inquiry into Future Jobs in Regional Areas*,<sup>15</sup> which found evidence that previous industry closures resulted in a third of affected workers finding full time secure work, a third moving into insecure work and a third left unemployed, the situation becomes more dire.

If the closure of mining followed a similar pattern, the drop in income across the local economy in Mackay would be just over \$29million.<sup>16</sup> This equates to a loss of over \$1.5billion annually in Mackay.

The second largest industry in Mackay is retail trade. A \$29million reduction in weekly income across the local economy would almost certainly have a devastating impact on the retail sector, forcing a further loss of jobs. The closure of mining would likely cause a domino effect, forcing a number of other contractions across a range of industries, and encouraging further population decline as these workers would be forced to seek employment elsewhere.

### Central Queensland

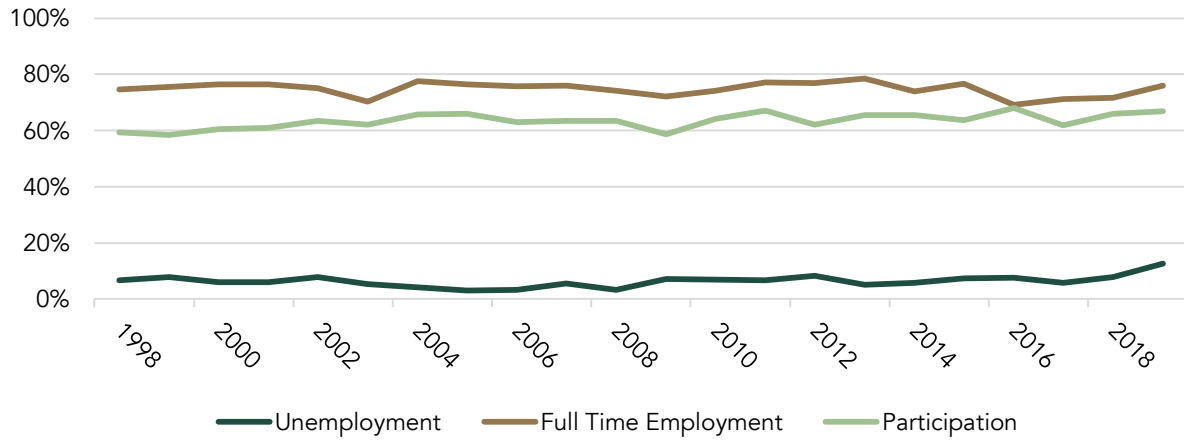
Central Queensland includes a number of population hubs, with regional centres such as Emerald, Rockhampton and Gladstone. Geographically, the area covers a significant portion of Queensland's coal fields and encompasses the federal electorates of Capricornia, Flynn and Maranoa. The region covers a total area of around 117,300 square kilometres, which is approximately 7 per cent of Queensland's land mass.

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<sup>15</sup> *Report of the Select Committee into Jobs for the Future in Regional Areas*, (2019), Australian Senate, p.35

<sup>16</sup> This calculation was based on a third of mining employees (5056 workers) finding employment in construction, a third in retail, and a third with no income.

Figure 5  
Employment in Central Queensland



Source: ABS Catalogue 6291.0.55.001 RM1 & RM3.

Unemployment is a pressing concern in Central Queensland, fluctuating between 6-8% across most of the previous decades. Unfortunately, since 2017 the unemployment rate has doubled to 12.6%. While full time employment accounts for three out of four jobs across the region, it is dampened by a consistently low participation rate.

Figure 6

Central Queensland Industrial Breakdown

Industry	Employment	Average Wage
Health, Social and Community Care	10.63%	\$1,034.60
Retail Trade	9.78%	\$687.60
Mining	9.12%	\$2,625.20
Education and Training	9.08%	\$1,151.90
Manufacturing	7.45%	\$1,295.10
Construction	7.27%	\$1,439.50
Accommodation and Food Services	6.98%	\$524.10
Transport, Postal and Warehousing	5.85%	\$1,401.00
Public Administration and Safety	5.58%	\$1,422.60
Administrative and Support Services	5.58%	\$963.60
Agriculture, Fishing and Forestry	4.97%	\$945.00
Professional, Scientific and Technical Services	4.04%	\$1,559.80
Other Services	4.03%	\$915.60
No Industry Listed	3.59%	N/A
Electricity, Gas, Waste and Water Services	2.70%	\$1,830.70
Wholesale Trade	2.41%	\$1,310.10
Rental, Hiring and Real Estate Services	1.52%	\$1,117.70
Financial and Insurance Services	1.16%	\$1,659.40
Arts and Recreational Services	0.74%	\$808.20
Information, Media and Telecommunication	0.54%	\$1,622.20

Source: ABS Catalogue 6306.0 and Census data.

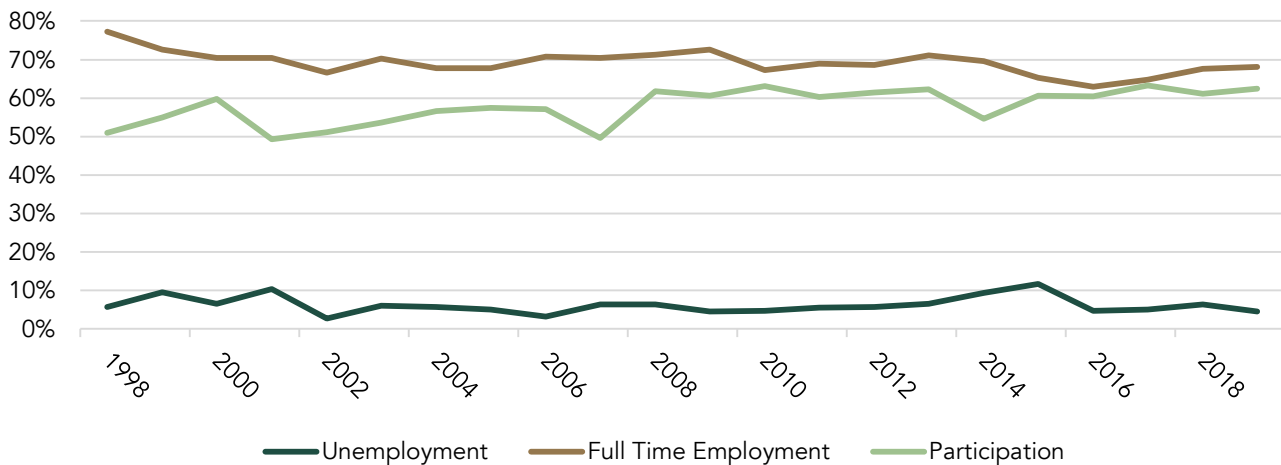
Mining is the third largest employer in Central Queensland, employing one in 11 workers across the region, at the industry average of \$2,625.20 a week. However, the impact of any industrial changes will still be significant. If all 8,803 mining workers were offered employment in construction, lost weekly wages would amount to approximately \$10,431,555 for the whole community (based on a \$1,185.68 loss per worker).

If the second scenario based on the impact on workers in previous industry closures was applied, the local economy would lose almost \$17million in weekly income. This equate to an annual loss of \$877million.

## The Hunter Valley

The Hunter Valley in northern New South Wales is the oldest coal mining community in Australia, dating back to the first mining operation at Coal River in the early 1800s.<sup>17</sup> Encompassing the Hunter and Shortland federal electorates, the region has long been considered Labor’s heartland. Yet at the last election, both federal electorates saw primary vote swings away from the ALP of more than 10%. The local economy is one of the biggest in regional Australia, and with 40 coal mines across the area,<sup>18</sup> any changes in the mining industry have a significant impact on the region.

Figure 7  
Employment in the Hunter Valley



Source: ABS Catalogue 6291.0.55.001 RM1 & RM3.

Workers across the Hunter, where peaks in the unemployment rate can go above 10%, fare considerably worse in the labour market than their northern counterparts.

While the participation rate has been lifted by the mining boom, it is still considerably low compared to urban centres. Most concerningly, full time employment has fallen almost every year between 1998 and 2016.

<sup>17</sup> 'Coal and Shale Miners', (2019), ANU. <http://archives.anu.edu.au/exhibitions/forgotten-trades-selected-records-early-australian-trades/coal-and-shale-miners>.

<sup>18</sup> Miskelly, G., (2019), 'Concerns for the future of Hunter Valley coal mining, despite it driving the local economy', ABC News. [www.abc.net.au/news/2019-03-05/hunter-coal-industry-future-could-learn-from-kentucky/10867348](http://www.abc.net.au/news/2019-03-05/hunter-coal-industry-future-could-learn-from-kentucky/10867348).

Figure 8

Hunter Valley Industrial Breakdown

Industry	Employment	Average Wage
Mining	10.64%	\$2,625.20
Retail Trade	10.32%	\$687.60
Health, Social and Community Care	10.24%	\$1,034.60
Accommodation and Food Services	8.87%	\$524.10
Construction	7.34%	\$1,439.50
Manufacturing	7.24%	\$1,295.10
Education and Training	7.17%	\$1,151.90
Other Services	4.47%	\$915.60
Professional, Scientific and Technical Services	3.74%	\$1,559.80
No Industry Listed	3.68%	N/A
Transport, Postal and Warehousing	3.60%	\$1,401.00
Agriculture, Fishing and Forestry	3.50%	\$945.00
Public Administration and Safety	3.30%	\$ 1,422.60
Administrative and Support Services	3.30%	\$963.60
Wholesale Trade	1.87%	\$1,310.10
Electricity, Gas, Waste and Water Services	1.66%	\$1,830.70
Rental, Hiring and Real Estate Services	1.53%	\$1,117.70
Financial and Insurance Services	1.20%	\$1,659.40
Arts and Recreational Services	1.02%	\$808.20
Information, Media and Telecommunication	0.43%	\$1,622.20

Source: ABS Catalogue 6306.0 and Census data.

While the Hunter has a more diverse industrial profile than the Queensland coal fields, mining is still the largest employer in the region. If coal mining were shut down tomorrow and all 10,646 mining workers found employment in the construction industry, the local economy would lose \$12,615,510 in weekly income based on a \$1,185.68 loss per worker).

In the second scenario, where the workforce is fragmented into thirds, this figure would be more than \$20million per week, or \$1.6billion a year. This would increase the unemployment rate to almost 12%, and send shockwaves through the local economy.



## Conclusion

Australia stands on the verge of a new economy. We must collectively decide if we want to support regional Australians and invest in new industries or leave them dependent upon a mining lobby that has described paying them a living wage as an act of coercion<sup>19</sup>.

However, we need to recognise and confront the realities that coal communities face. If there is no plan for employment and wage replacement in these regional areas, then there is no future for those communities.

Our analysis has found that if we don't have a concrete industrial policy agenda that includes localised plans for affected coal communities, the impacts of mine closures could cost the three areas analysed in this report as much as \$66,323,643 per week – or almost \$3.45 billion a year.

The effects of this loss would be devastating on local economies, constricting consumption, shrinking industries and forcing workers into greater competition for an even smaller number of local jobs. Worse still, it would force many families to leave the areas in which they have lived for generations.

There is no doubt that the era of fossil fuel dependence is coming to an end, and the imperative for Australia to invest in renewable energy technology for domestic consumption, as well as export, is urgent.

No government decision or policy can prevent the eventual end of demand for thermal coal. The market is already in decline, and will collapse completely once the cost and capacity of renewables can meet our global energy needs. However, it is regional communities that will bear the brunt of this massive structural change to our economy.

To pretend to workers in regional coal communities that their jobs will survive this industrial revolution, or that a national government acting in isolation can hold back the tide of change, is both irresponsible and cruel.

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<sup>19</sup> <https://www.theage.com.au/politics/federal/more-than-20-000-extra-mining-workers-needed-by-2024-report-20190916-p52rql.html>

Yet to insist that the industrial activity that has provided work, and the income to support families, for generations in these regional centres must cease tomorrow, regardless of the consequences, is equally cruel, and arrogant.

For two centuries, coal miners have done the hard, dirty and demanding work of digging out the material that has fuelled the greatest advancement of civilisation in history. Every time someone in a capital city turns on a light, opens their fridge, or powers up their smart phone, they are using the energy sourced and provided by workers at the coal face of our economy.

To tell those people now that, due to the failure of our leaders to plan in advance for the inevitable industrial revolution that is needed to save the planet, their livelihoods must be sacrificed without compensation or care for their futures and those of their communities, is unconscionable.

Our government must invest in the social and capital infrastructure to underpin new, reliable, well-paid jobs for displaced workers. It must design appropriate industry policies to guide economic development, fund skills and training opportunities for workers of all ages, and incentivise investment by the private sector in emerging industries that can underpin the ongoing economic health of regional communities.

Only with this kind of commitment from government can we ensure that the costs of structural change, as well as the benefits, are distributed fairly.

## APPENDIX I

### Methodology

To calculate the wage losses, 2016 Census data was used to capture the total number of workers in each occupation, in each industry, and the average wage for the industry was drawn from ABS Catalogue 6306.0. In the first scenario, where all workers find employment in construction, the average wage for construction was subtracted from the average wage for mining, then multiplied by the number of people employed in mining in the case study area to create the estimated lost wages.

In the second scenario, the same process was applied to each third. For the third who found secure work in construction, the same formula was used and multiplied by a third of the total of mining employees. For the third who found insecure work, the average wage for retail was subtracted from the average wage for mining, then multiplied by a third of the total mining employees. For those who don't find work, the average wage for mining was multiplied by a third of the total mining employees, then all three numbers were added together to create the total estimate.

To arrive at the total loss figure, the maximum estimated losses were added together from the three case study areas.