STRATEGEN

Just Transition

Navigating Australia's Energy Transformation

Prepared for the Australian Energy Council.

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Executive Summary

Australia is experiencing one of the world's fastest electricity system transformations. Although the nation's electricity generation has been more dependent on coal than many developed economies, by 2030, almost two thirds of the current operational fleet will be withdrawn. According to AEMO, by 2043, Australia's entire fleet of coal-fired generation will have retired.[1]

This is a once-in-a-century scale of change that has profound human and societal impacts on the workers and regional communities that have hosted large-scale generators to support Australia's economic development. It is instructive to learn from best practice transition examples, not on only how to mitigate the negative impacts, but also to maximise the wider opportunities that may not have otherwise emerged.

Based on a wide-ranging review of the global and Australian literature, this report aims to help address a gap identified during numerous interviews of diverse Australian stakeholders. While appreciative of the expanding body of studies and research on the topic of Just Transition, stakeholders identified the need for a report that distilled the most relevant insights for informing Australia's power station retirements, presenting them in a format supporting structured, holistic and timely action.

With this in focus, Part 1 of the report brings together relevant content on Australia's current state and plausible future Just Transition outcomes. This informs the key transition elements required to move from the former to the latter via engagement with the following three questions:

+ **Where are we now?** Australia's transition experience and emerging challenges
+ **Where are we going?** Targeting enhanced future outcomes for Australian workers and regions
+ **How do we get there?** Just Transition design, resourcing and implementation

In addressing how Australia might target enhanced future outcomes for impacted workers and regions, the first part of the report also considers two key future-focused objectives. Drawn from the global best practice literature, these statements of aspiration are:

+ **Objective 1:** Both regional empowerment and national alignment on Just Transition are achieved through layered, inclusive and collaborative governance, vision-setting and resourcing models.
+ **Objective 2:** The negative impacts of power station closures are mitigated and positive opportunities and benefits for regions, workers and industry are catalysed by implementing multi-year planning and preparation (via methodologies consistent with Objective 1).

1. 2022 Integrated System Plan, AEMO, July 2022

It is important to note that the above directional objectives are not proposed as 'perfect' – it is anticipated they will be improved upon, and customised to, individual transition requirements. They simply illustrate clear statements of future aspiration for Just Transition in Australia and are supported by the following example target outcomes for each objective and further illustrated by several success indicators provided in the report.

Potential Target Outcomes under Objectives 1 & 2

+ **Target 1.1:** Critical stakeholders collaboratively develop agreed models for Just Transition governance, vision-setting and resourcing that are layered, inclusive and collaborative.
+ **Target 1.2:** Australia becomes an exemplar of implementing an integrated, efficient and effective approach to Just Transition that is broadly transferable across other Australian industry sectors and national contexts.

+ **Target 2.1:** The most negative impacts of power station closures on regions, workers and industry are mitigated, supported by Australia's whole-of-society and whole-of-government approach to Just Transition.
+ **Target 2.2:** The potential opportunities arising from power station closures for regions, workers and industry are actively enhanced, supported by Australia's whole-of-society and whole-of-government approach to Just Transition.

International & Australian Experience

The progressive move away from traditional sources of power generation is occurring internationally and provides salient lessons that inform Australia's approach to Just Transition. Therefore, Part 2 of the report provides a wide range of global case studies from the European Union, Germany, Spain, the United Kingdom, the United States, Canada and New Zealand. The analysis identifies transferable lessons on what was successful and what was not, which have informed the body of the report.

These global case studies are then supplemented with a selection of Australian power station case studies that include Hazelwood, Liddell and Collie. Two additional case studies from the Lonsdale and Tonsley Park Mitsubishi plants and the Newcastle Steel Works are also included to provide a wider lens on the Australian experience of structural adjustment.

Ultimately what becomes clear from the global and Australian literature is that the topic of Just Transition is exceptionally wide-ranging, has many societal touchpoints and is supported by a substantial and growing body of literature. Rather than attempt to re-prosecute the content from dozens of excellent sources, this report seeks to distil in one location some of the most relevant, action-oriented content to inform the next phase of Just Transition as Australia progressively retires its coal-fired generation fleet.

Out of the assessment we have drawn key considerations from the Transition Case Studies reviewed in this report. These include:

High-Level Leadership

+ **Government engagement and resourcing** is an essential ingredient in advancing Just Transition, particularly when deployed in a manner that empowers regional communities and impacted workers and provides maximum autonomy to choose their own future.
+ Such investment is a powerful tool for promoting **economic growth and diversification** but should focus on catalysing long-term opportunities for the region and avoid short-term 'band aid' solutions.

Community Empowerment

+ **Structured financial support** must be directed to the impacted regions and workers in a manner that respects local differences and opportunities and empowerment.
+ Often, jobs being lost are **permanent, well-paying jobs**. Impacted workers will need to be actively supported in the transition to provide security and avoid their skills being lost to the wider economy.
+ Providing workers with access to **job retraining services** is crucial to ensure the positive impact of economic diversification policies on impacted workers.

Proactive, Comprehensive Planning

+ **Proactive and timely transition planning** in the years preceding the closure is absolutely necessary for success.
+ **Comprehensive, multi-stakeholder engagement** is required to limit the negative impacts on communities and impacted workers and maximise the positive opportunities.
+ Both **near-term and long-term solutions** are necessary and must work together. While economic diversification is not an immediate solution, it provides a key complement to measures like worker retraining support services.

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Part 1

Advancing Just Transition in Australia

1.1 | Introduction to Just Transition

1.1.1 | Overview

Context

Australia is currently experiencing one of the world's fastest electricity system transformations. Significant retirements of coal-fired thermal generation have already occurred. The Australian Energy Market Operator (AEMO) anticipates that up to 60% of the current operational fleet will be withdrawn by 2030, and all coal-fired generation retired by 2043.[2]

This profound transformation of Australia's electricity systems has direct human and societal impacts on the workers and regional communities that have operated and hosted the nation's electricity generation plants. These communities have played a critical role in the economic development of Australia which has historically relied on power generation from black and brown coal more than most developed nations.

Most existing power stations are in regions adjacent to major coal fields rather than near urban areas or ports. As a result, the social and economic impact of power station closures will be concentrated in regions that have traditionally been heavily reliant on the sector. Now facing the progressive retirement of its entire coal-fired generation fleet, it is valuable for Australia to incorporate the lessons learned from both the international and domestic power station closures – what was successful and what was not. Being incorporated within a proactive and strategic approach to structural adjustment will be essential to ensure just outcomes for those affected while capitalising on the opportunities created.

> Just Transition is a principle, a process and a practice. The principle of Just Transition is that a healthy economy and a sustainable environment can and should co-exist. The process for achieving this vision should be equitable: the costs and impacts of societal energy transition should be not be unfairly imposed on individual communities or workers. And the practice of Just Transition means that the people who are most affected by the transition—the frontline workers and impacted communities—are empowered in the crafting of policy solutions and change initiatives.
>
> —Just Transition Alliance (adapted)

Background

The concept of a Just Transition first emerged from labor unions and environmental justice groups who recognised the need to phase out carbon-intensive industrial processes while providing pathways for workers in those sectors to transition to other decent employment opportunities.

2. 2022 Integrated System Plan, AEMO, July 2022

Major international bodies, including the United Nations, have embraced Just Transition principles. At the COP21 Paris climate conference, Australia together with 194 countries committed to limit global warming to less than 2°C above pre-industrial levels. The need for a Just Transition was recognized as part of this historic agreement which requires parties to: "[take] into account the imperatives of a just transition of the workforce and the creation of decent work and quality jobs in accordance with nationally defined development priorities."[3]

As the largest contributor to Australia's emissions, decarbonization of the electricity sector, which has traditionally been largely powered by coal-fired generation, has been identified as a key focus for Australia to address climate change. Where approached in strategic and holistic manner, global experience has demonstrated that this transition can be done equitably, achieve positive outcomes for workers, revitalise regional communities and forge new areas of industrial growth and prosperity.

1.1.2 | Just Transition – Summary of international experience

Australia is not the first country to experience the impacts of the transition away from coal. One significant difference with Australia is that it still has a very profitable coal export industry, so the focus of this report is on the transition from coal-fired power plants and their associated mining activities. Coal-fired generators and related mining operations in many parts of the world are closing in the face of competition from cost-competitive renewable sources and driven by decarbonization goals. A range of examples from Germany, Spain, Canada, New Zealand, the United Kingdom, the European Union, and the United States are included in Part 2 of this report. Many of these are further along in their structural transition and their experiences can inform a successful approach to Just Transition in Australia.

Of the many global examples examined, the Just Transition initiatives most widely recognised as successful shared many similar characteristics. For example, they all commenced working on solutions early – typically several years before the closure occurred. Proactive engagement with all relevant stakeholders throughout was seen as foundational, often with an intensive focus on co-design models. Successful initiatives were also underpinned by substantial funding commitments arrangements through government, industry and related partnerships. Often this was within a whole-of-society, whole-of-government framing of strategic change, rather than it being seen primarily as the responsibility of one entity alone (e.g. the generation sector, federal or state government, etc). In other words, the most successful and strategic approaches to structural adjustment were designed around harnessing, engaging and empowering a dynamic 'ecosystem' of actors. Both the mitigation of negative impacts and the unlocking of positive opportunities were in view.

Germany and Canada often stand out as positive examples that embody many aspects of these characteristics. For example, in Germany the continental European tradition of 'social partnership' has provided a prominent place to forging multi-stakeholder agreements between industry and unions in socio-economic policy making relevant to Just Transition. As another example, the Canadian government established the Just Transition Task Force to provide general coordination with key stakeholders, including labor unions and regional communities. The Task Force recognised that a 'one-size-fits-all' approach would not work – the focus of its recommendations were locally developed and locally delivered solutions.[4] As a result, the federal government funded the establishment and operation of regional transition centres in the affected communities. Workers, governments, and community representatives have recognized this as a proven model for delivering consistent yet context-appropriate services and information, covering everything from re-employment opportunities and skills recognition, to educational and financial services, and healthcare.[5]

3. Paris Climate Agreement UNFCCC
4. Final Report by the Task Force on Just Transition for Canadian Coal Power Workers and Communities: section 7, Government of Canada, March 8, 2022
5. Canada: National Task Force on Just Transition for Coal Power Workers and Communities, World Resources Institute, April 1, 2021

At the other extreme, the least effective initiatives were reactionary, lacked timely forward planning and were not coordinated in a holistic manner. They failed to proactively and meaningfully engage with all relevant stakeholders, and typically did not receive adequate funding. For example, general uncertainty across the United Kingdom and the United States on changing priorities at a federal level made it difficult for these transitions to run smoothly. Within the US, progress is occurring on a state-by-state basis, but efforts are uncoordinated and often reactive, with federal guidance finally emerging after coal communities have already experienced the impacts of coal closures.[6] Additionally, while efforts in Spain, the UK, and the US have provided government funding to support the transitions, much of this capital investment only began after the impacts of coal retirement had already significantly impacted communities, and often did not go directly to the communities in need. In the UK, the cycle of underinvestment and high unemployment have left former coal regions economically underdeveloped and poorer than the rest of the country.[7] Due to a lack of comprehensive support, regional coal communities have failed to develop viable industry alternatives and most towns have suffered an exodus of skilled workers.

1.1.3 | Just Transition – Summary of Australia's experience

With the planned closure of coal-fired power stations, Australia's energy market is undergoing a transition that will have long-term implications on the communities that have hosted them for many decades. Global decarbonisation efforts and market forces have significantly impacted the bankability of fossil fuel projects in the eyes of investors, with the market shifting to focus on renewable energy investment. These changing market dynamics are driving an accelerated program of power station retirements with up to 60% of the current fleet withdrawn by 2030 and all coal-fired sources retired by 2043.[8]

Australia already has experience with significant structural adjustments in various industries such as manufacturing, clothing, textile and steel production sectors. Several coal-fired power station closures have already occurred or are currently in progress, including Port Augusta (SA), Hazelwood (Vic), Liddell (NSW), and Collie (WA). In the above context of an accelerating transformation of the power system, the outgoing Federal government signaled a plan to extend the formal Notice of Closure requirements from a 3.5-year to a 5-year notice period, providing an increased planning horizon for future closures.[9]

Unfortunately, while there have been exceptions and bright spots, Australia's historical approach to structural adjustment across various sectors is not recognised globally as an exemplar worthy of emulation. Transition planning has often been ad hoc, lacked timeliness and differed on a case-by-case basis. Many interventions have been reactive, sometimes initiated only months before – or even after – the closure of a sector or specific plant's operations. In recent years, the transition of individual power stations has largely involved State governments in close engagement with the generation sector and union representatives, with limited to no involvement from the Federal government. Encouragingly, Australia's generation sector is actively engaging with how it can be part of a far more holistic approach to structural adjustment that benefits impacted workers, communities, and the nation as a whole, and noteworthy transition case studies are now emerging.

6. Ben Cahill, Working toward a Just Transition for Coal Communities, Center for Strategic and International Studies, September 27, 2021
7. T. Barrett, From the Ground Up: A Blueprint for Economic Diversification in Regional Australia, Blueprint Institute, 2021
8. 2022 Integrated System Plan, Australian Energy Market Operator (AEMO)
9. Hon Angus Taylor, Proposed changes to rules for generator closures, Department of Industry, Science and Resources, April 7 2022

1.1.4 | Lessons Learned from the Transition Case Studies

The progressive move away from traditional sources of power generation is occurring internationally and provides salient lessons for informing Australia's approach to Just Transition. The various case studies reviewed have highlighted many key considerations, including:

High-Level Leadership

+ **Government engagement and resourcing** is an essential ingredient in advancing Just Transition, particularly when deployed in a manner that empowers regional communities and impacted workers and provides maximum autonomy to choose their own future.
+ Such investment is a powerful tool for promoting **economic growth and diversification** but should focus on catalysing long-term opportunities for the region and avoid short-term 'band aid' solutions.

Community Empowerment

+ **Structured financial support** must be directed to the impacted regions and workers in a manner that respects local differences and opportunities and empowerment.
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+ Providing workers with access to **job retraining services** is crucial to ensure the positive impact of economic diversification policies on impacted workers.

Proactive, Comprehensive Planning

+ **Proactive and timely transition planning** in the years preceding the closure is absolutely necessary for success.
+ **Comprehensive, multi-stakeholder engagement** is required to limit the negative impacts on communities and impacted workers and maximise the positive opportunities.
+ Both **near-term and long-term solutions** are necessary and must work together. While economic diversification is not an immediate solution, it provides a key complement to measures like worker retraining support services.

Section 1.2 provides a more detailed review of Australia's transition experience and emerging challenges relevant to the closure of coal-fired power stations. This is then followed by a consideration of the future Just Transition outcomes that Australia might aspire to in Section 1.3 and the design, resourcing and implementation of the necessary transition pathways to achieve them in Section 1.4.

1.2 | Where are we now? Australia's transition experience and emerging challenges

1.2.1 | Regions, Communities and Workers Most Impacted by Power Station Closures

Over 50,000 Australians are directly employed in the wider coal sector, with a further 120,000 indirectly.[10] While the coal mining workers may be impacted over time due to global decarbonisation efforts, around 8000 direct and indirect workers at Australia's remaining 19 coal-fired power stations together with their host communities in Victoria, New South Wales, Queensland are most immediately impacted.

Power stations are typically located in regional areas adjacent to major coal fields, distant from major urban centres and with proportionally higher indigenous populations. Power stations are an integral part of these communities and are also major economic purchasers in the regional economy of engineering, maintenance, and service sectors. Generally, these areas already have higher unemployment rates than the major cities and limited alternative industries and employer options that involve comparable levels of complexity and remuneration. Together with lower levels of industrial diversification, the loss of a large number of jobs with a power station closure will typically have a greater regional impact than equivalent job losses in major cities.

Victoria

Victoria is currently home to the Loy Yang A and B and Yallourn power stations. The Loy Yang A power station is one of Victoria's newest coal-fired power stations and produces 2,210MW of electricity, about 30 per cent of the state's total. It was initially slated to close by 2048, but the expected closure has been brought forward with AGL targeting 2035.[11] Loy Yang B accounts for approximately 20% of Victoria's electricity requirement and has a technical life to 2047 or later.[12] Finally, Yallourn in Victoria's Latrobe Valley, will close four years earlier than scheduled in 2028, and be replaced, in part, by a grid-scale battery to help ensure a secure energy supply when the plant shuts down.[13] EnergyAustralia announced Yallourn's workforce would be supported through a multimillion-dollar support package to assist in planning, reskilling or retraining. This support is in addition to worker entitlements.[14]

In late October 2022 the Andrews Labor Government committed to a 95 per cent renewable target by 2035 and the ending of Victoria's reliance on coal if re-elected.

10. T. Barrett, From the Ground Up: A Blueprint for Economic Diversification in Regional Australia, Blueprint Institute, 2021
11. Review of Strategic Direction Outcomes & FY23 Guidance, AGL Energy ASX Release, 29 September 2022
12. Angela Macdonald-Smith and Mark Ludlow, Alinta concedes coal plant may shut 15 years early, Australian Financial Review, October 12, 2021; Loy Yang B Power Station website.
13. Josh Gordon, AGL rethink highlights Victoria's future coal challenge, The Age, May 30, 2022
14. EnergyAustralia Powers Ahead with Energy Transition, EnergyAustralia Media Release, 10 March 2021. This announcement provided 7 years notice of closure.

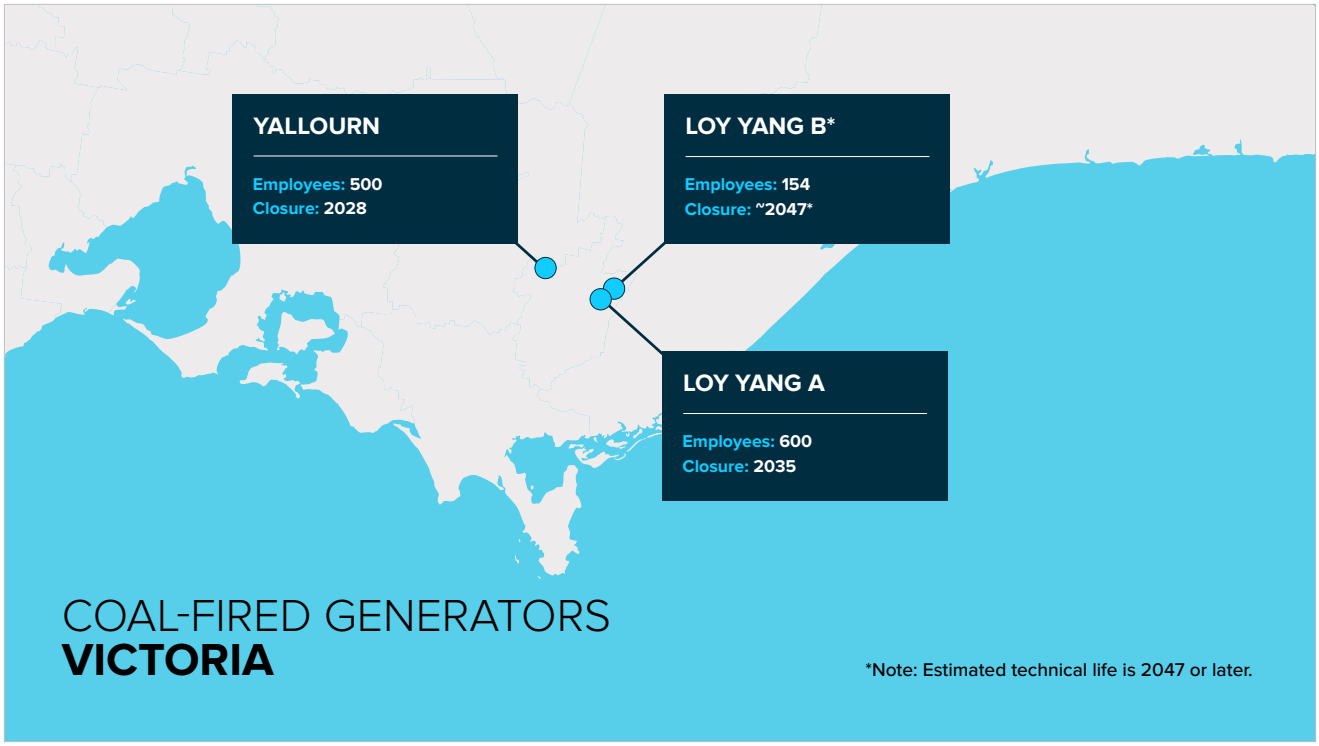


Figure 1: Coal-fired Generators in Victoria

Victoria experienced the impact of power station closures with the closure of Hazelwood power station in 2017 after 60 years of operation. The Hazelwood power station was a 1,600MW brown coal generator in Victoria's Latrobe Valley that directly employed 495 people and around 300 contractors.[15] Most of these workers were laid off following the station's accelerated closure in March 2017.[16] To assist with this transition, the Victorian government committed $22m in immediate assistance to the workforce, and then around a quarter of a billion dollars in longer term measures, including infrastructure investment in the region. Additionally, the federal government committed $43m worth of measures. The power station operators in the region participated in the Worker Transfer Scheme to help displaced workers transfer to neighbouring power stations, where possible, and agreed to offer redundancies to older workers nearing retirement. Finally, the Worker Transition Service provided targeted skill training to help workers find new employment, provided support, and career and financial advice.

New South Wales

The Bayswater, Eraring, Liddell, Mount Piper, and Vales Point power stations are located in New South Wales. The coal-fired power stations in NSW are slated for retirement prior to 2040; specifically Liddell will close in 2023,[17] Eraring will potentially close early in 2025,[18] Vales Point will close in 2029,[19] Bayswater will close between 2030-2033,[20] and Mount Piper will close by 2040.[21]

15. Australia's Latrobe Valley: Coordinating Private Companies to Redeploy Power Plant Workers, World Resources Institute, April 1, 2021
16. Ibid.
17. Samantha Hutchinson, NSW government knocked back Origin offer to sell Eraring power plant, Financial Review, June 15, 2022
18. Australian Government Response to Liddell Taskforce Report, Department of Climate Change, Energy, the Environment and Water
19. Nicola Riches, Eraring closure has no impact on future of Vales Point, Cost Community News, February 17, 2022
20. Matthew Kelly, AGL announces Bayswater Power Station Will Close Between 2030 and 2033, Hunter Valley News, February 14, 2022
21. Mt Piper to Close Five Years Sooner Than Announced Last Month, Nature Conservation Council, October 12, 2021

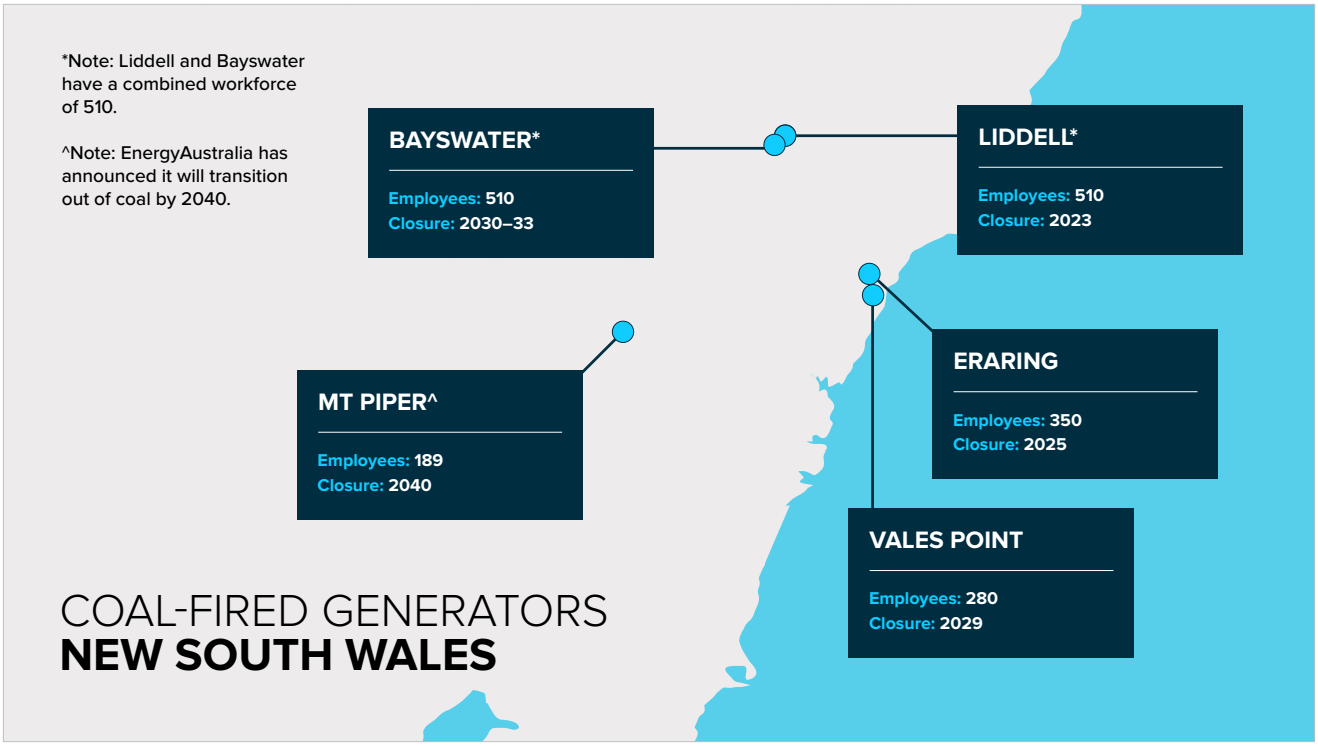


Figure 2: Coal-fired Generators in New South Wales

NSW's next scheduled closure is that of the Liddell Power Station. AGL, the power plant owner and operator, along with the NSW Government, have proactively planned for the closure of Liddell following its retirement announcement in 2015. In response to the closure notice, the Federal and NSW governments established the Liddell Taskforce in August 2019 to assess the impacts of AGL's announced closure on electricity prices, reliability and security, the regional economy and dependent industries.[22] Additionally, AGL has worked closely with stakeholders to identify opportunities for new energy investment, and future jobs at the Liddell site.[23] The long notice period for Liddell's closure, and a commitment to no forced redundancies as a result of Liddell's closure, has helped the local region prepare to transition to new industries, and the key involvement of AGL, the power plant operator, has provided workers with some certainty in terms of transition planning and job opportunities, notably from a project to repurpose the Liddell site into an integrated industrial energy hub.[24]

The potential early closure of Eraring Power Station in 2025 was announced in February 2022 and the plant's owner and operator Origin has begun transition planning. Origin has secured planning approval to develop a 700MW battery at Eraring and initiated an ongoing employee program that includes learning, career, and wellbeing support.

22. Australian Government Response to Liddell Taskforce Report, Department of Climate Change, Energy, the Environment and Water
23. Doug Jackson, Hunter Energy Transition Alliance Blueprint Report, Energy Resources Knowledge Hub, July 2016
24. AGL's Hunter Energy Hub takes shape with Liddell grid-scale battery, AGL, March 19, 2022

Western Australia

Western Australia's independent power system has four coal-fired power stations near Collie in the state's southwest - Muja, Bluewaters 1 and 2, and the Collie coal-fired power stations. Collie and Muja are owned and operated by state-owned Synergy, and the WA Government has announced the closure of these plants by 2030.[25]

To support the region's transition from coal, Synergy will oversee the investment of an estimated $3.8bn in new green power infrastructure around WA, including windfarms and new storage to ensure continued electric supply stability, affordability, and economic growth.[26] Synergy's contract with privately-owned Bluewaters Power Station expires in 2025 and will not be renewed, but future plans for Bluewaters have not yet been announced.[27]

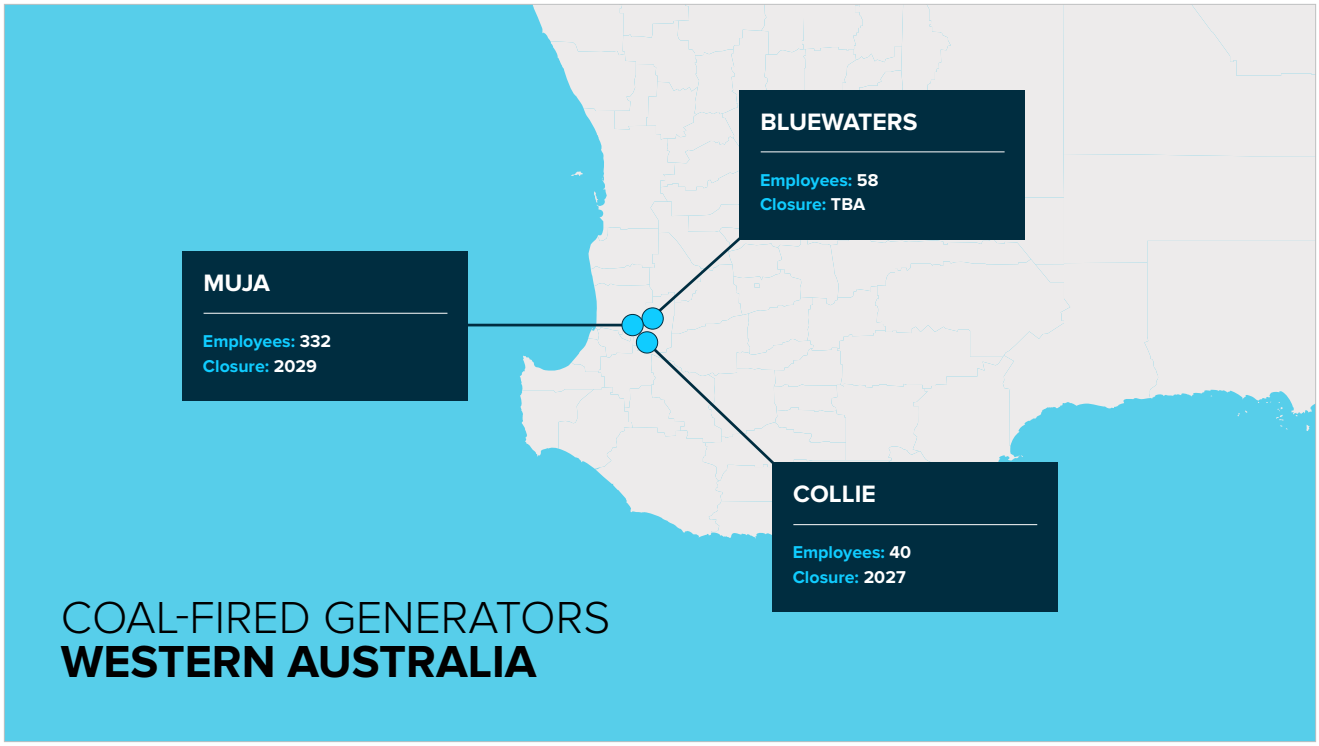


Figure 3: Coal-fired Generators in Western Australia

Queensland

Queensland is currently home to eight coal-fired power stations owned by the state. These are Gladstone, Stanwell, Callide B, Callide C, Kogan Creek, Millmerran, Tarong, and North Tarong. As one of the nation's younger fleets of thermal generation plant, the announced closure dates have previously ranged from 2028 to 2051.[28] In September this year the Queensland Government unveiled its Energy and Jobs Plan[29] which includes the objective of having all publicly-owned coal power stations operating as clean energy hubs by 2035. It also includes a proposal for a legislated Job Security Guarantee for energy workers.

25. Mark McGowan & Bill Johnston, State-owned coal power stations to be retired by 2030, Government of Western Australia, June 14, 2022
26. Mark McGowan & Bill Johnston, State-owned coal power stations to be retired by 2030, Government of Western Australia, June 14, 2022
27. Josh Zimmerman, Bluewaters Power Station: Synergy won't renew contract with Collie coal plant, The West Australian, June 20, 2022
28. Lucy Stone, Queensland has eight coal-fired power stations. What's their future?, ABC News Australia, June 11, 2022
29. Queensland Energy and Jobs Plan, September 2022

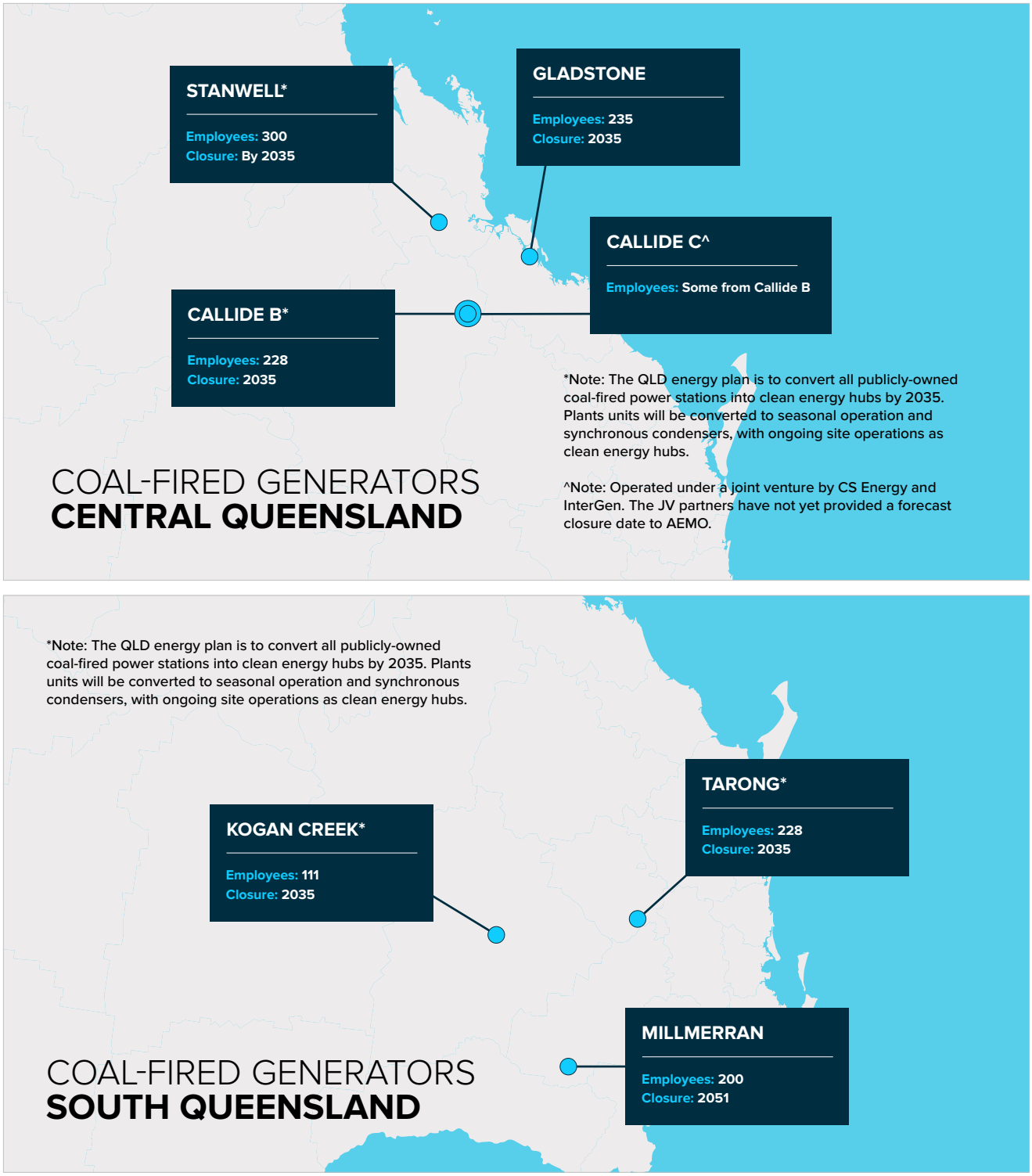


Figure 4: Coal-fired Generators in Central Queensland (top) and Southern Queensland (bottom)

Other States

Other states in Australia- South Australia, the Northern Territory, the Australian Capital Territory and Tasmania are all coal-free in their power generation.[30]

30. Electricity markets and the role of coal fired power stations, Parliament of Australia

1.2.2 | Current and Emerging Employment Opportunities for the Most Impacted Workers

Employment in the power generation sector has tended to involve skilled, high-paying, full time jobs. Power stations have mostly been located in regional areas, often adjacent to coal fields rather than near urban areas or ports. These areas typically have lower levels of industrial diversification, so long-term planning will be required to provide jobs of a similar calibre for displaced workers.

A range of emerging employment opportunities for impacted workers are outlined below.

Power station redeployment

In the near term, employment opportunities may be facilitated through collaboration between power station owners and operators enabling the redeployment of some displaced workers to different plants. However, considering the trajectory of the sector, this will only provide a short-medium term solution and so it will also be crucial for longer-term alternatives to be developed.

Site rehabilitation and redeployment

Importantly, a former power station or mine site is a valuable regional asset that may be leveraged through site rehabilitation and repurposing. Such projects may utilise the readily available expertise of power station owners and site workers to extend job opportunities in rehabilitating and repurposing the site for future productive use. While such initiatives may provide near-term job opportunities for displaced workers, and support the economic development of affected communities, it should be recognised that they are unlikely to provide long-term jobs and/or enough full-time jobs for all the impacted workers.

An interesting example of site rehabilitation is provided by Germany's formation of the RAG-Stiftung (RAG Foundation). The foundation finances ongoing mine management (e.g. securing shafts and tunnels, land rehabilitation and management of pit water and groundwater) and is responsible for returning the site to a condition in which it can support continued economic activity.[31] Additionally, in South Australia's Augusta Creek example, the Upper Spencer Gulf and Cutback Taskforce was established to manage rehabilitation, remediation and reuse for the Leigh Creek Mine to ensure support for future economic activity on the site to support the region in the future.[32]

Power system transformation opportunities

AEMO's 2022 Integrated System Plan[33] highlights the massive scale of transitioning Australia's power systems to be future-ready. In the National Electricity Market alone, this will involve the construction of more than 10,000km of new transmission which is required to connect geographically diverse new sources of renewable generation and energy storage.

Under AEMO's current Step Change scenario, Australia's power system transformation will also involve a nine-fold increase in the installation of utility-scale Variable Renewable Energy (VRE) resources. This will also require a trebling of the existing firming capacity from resources such as pumped hydro storage, gas-fired generation, behind the meter Virtual Power Plants and utility-scale energy storage connected to both the transmission and distribution networks.

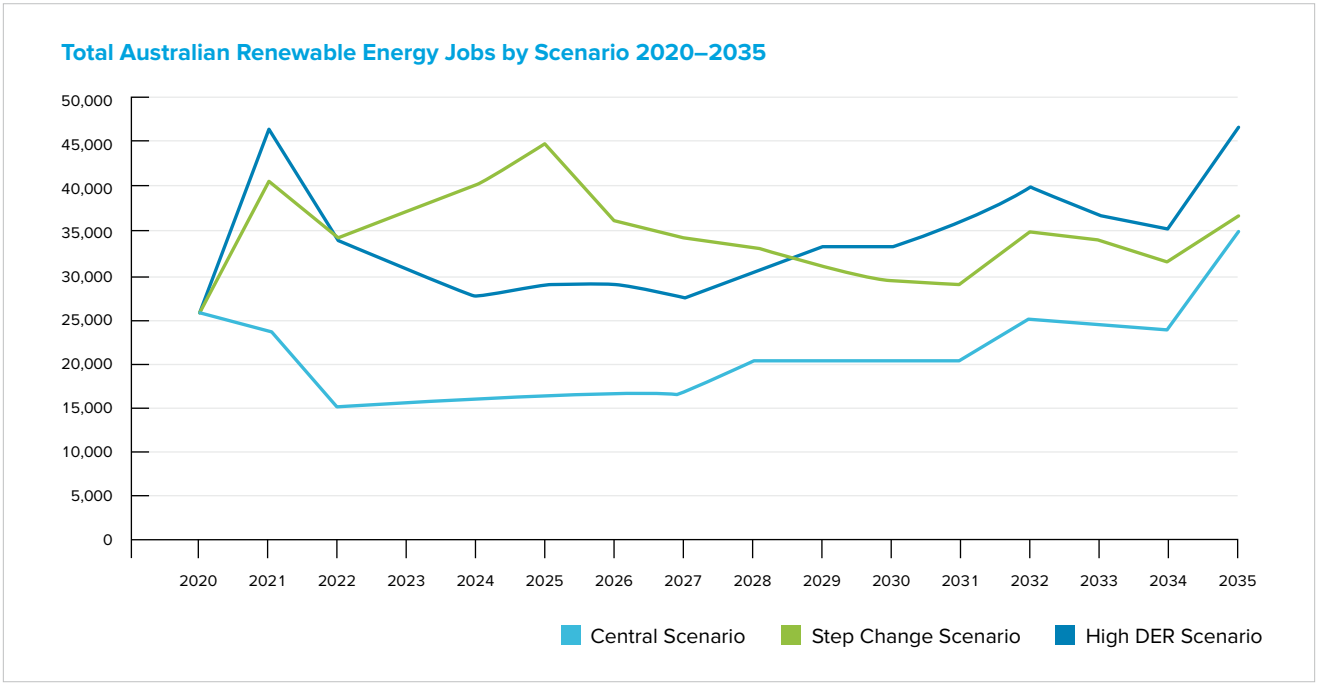
31. Christiane Beuermann, Environmental rehabilitation and repurposing, European Commission, 2020
32. Government of South Australia, Upper Spencer Gulf and Outback, Department of Infrastructure and Transport
33. 2022 Integrated System Plan, AEMO, July 2022

Clean energy sector opportunities

In 2020 the Clean Energy Council's Clean Energy at Work report mapped out a number of projections for renewable energy employment in Australia over the next decade based on three scenarios from AEMO's draft 2020 modelling.[34]

Under even the most conservative scenario (which was essentially a business as usual scenario with no new climate or energy policy), there are a minimum of 15,000 jobs in the Australian renewable energy sector, noting that the report only looked at wind, solar, hydro, and batteries industries, so approximately 1,500 bioenergy jobs and 1,800 associated professional jobs are not included. The more aggressive growth scenarios anticipated as many as 45,000 jobs related to renewable energy, while recognising that many of these are construction rather than ongoing operations jobs.

The graph below shows the number of Australian renewable energy jobs anticipated under each of these three scenarios.



Hydrogen sector opportunities

Additionally, the hydrogen sector is gaining momentum globally and in Australia. The Federal government is investing $1.4bn to advance the establishment of a hydrogen industry[35] and most State governments have developed hydrogen strategies and funding initiatives. In terms of employment potential, it is estimated that a 100MW renewable hydrogen production facility could contribute an estimated 100 to 150 jobs. A 1,000MW facility, which could be feasible by 2030, would catalyse significant renewable energy investment and contribute an estimated 1,000 to 1,200 jobs.[36]

34. Clean Energy Council, Clean Energy at Work, June 2022
35. Australian Government, Growing Australia's hydrogen industry, Department of Industry Science and Resources
36. Hon Guy Barnett, Tasmanian Renewable Hydrogen Action Plan, Ammonia Energy Association, 2020

As a state level example, the South Australian Government published a Hydrogen Jobs Plan mapping out the construction of a world-leading hydrogen power station, electrolyser and storage facility within the Whyalla City Council to lower electricity prices for business and industry and provide thousands of jobs.[37] Several other major projects have also been announced, such as the 6GW Moolawantana Renewable Hydrogen project with a dedicated hydrogen pipeline[38] and a 160MW development proposed by Infinite Blue Energy to produce zero emissions hydrogen in Western Australia.[39]

Off-shore wind sector opportunities

More jobs again would be created if off-shore wind deployment in Australia was to follow the dramatic global deployment. Off-shore wind projects, such as the Star of the South, are currently proposed or in development in Victoria, NSW, and Western Australia.[40] These projects are located in areas with good grid connections and often coincide with retiring fossil fuel assets.

Other opportunities

In addition to the above examples, a range of other opportunities that may be relevant for redeploying skilled power station workers may include:

+ **Sectoral decarbonization across industry sectors more broadly**
+ **Defence sector electro-mechanical roles**
+ **Innovative packaging solutions for waste reduction**
+ **New livestock feed to reduce methane emissions**
+ **Agriculture and transport decarbonization**

In summary, with the significant Notice of Closure lead times now required in Australia, there is significant opportunity for timely and proactive planning that includes comprehensive worker support and training opportunities together with wider regional engagement. Such initiatives are widely seen as critical ingredients in positioning skilled workers to successfully transition to adjacent emerging industries such as those outlined above.

37. Government of South Australia, Hydrogen Jobs Plan, Energy & Mining, June 15, 2022
38. Leigh Collins, New 6GW green hydrogen project in Australia eye ammonia export to Japan and Korea, Recharge News, November 19, 2021
39. Michael Mazengarb, Massive green hydrogen project signs network deal with Western Power, Renew Economy, November 20, 2020
40. Llewelyn Hughes & Thomas Longden, Offshore wind will come to Australian waters – as long ass we pave the way for this new industry, The Conversation, March 10, 2022

1.2.3 | Australia's Structural Adjustment Experience and Learning

General sectoral experience

Australia's historical approach to structural adjustment across various sectors is not globally recognised as providing a portfolio of best practice examples. A review of the literature and case studies from the manufacturing, forestry and textiles, clothing and footwear sectors suggests that Australia's previous responses to industry restructures and large firm closures have been largely unsuccessful. While bright spots exist, generally the transition efforts have had limited success in supporting both regional development and the transition of workers into secure and skilled employment. Transition planning has often been ad hoc and lacked timeliness. Interventions have often been reactive, sometimes initiated only months before – or even after – the closure of a sector or specific plant's operations.

These mixed outcomes are perhaps exemplified by the Newcastle Steel Works closure in 1999. This structural adjustment process was somewhat successful in supporting job creation and enabling diverse stakeholders to work together in ways that generated optimism. However, insufficient government and company funding and a lack of autonomy for bottom-up ownership and innovation undermined the potential for greater regional benefits and more sophisticated economic restructuring. Unfortunately, these deficiencies resulted in the jobs that were created being largely part-time, low-paid, and temporary positions together. In addition, many older skilled workers were forced into early retirement without adequate compensation and their expertise lost to the wider economy.

Power station closure experience

Australia has experienced the closure of seven coal-fired power stations since 2015.[41] A number of these transitions have been impacted by some of the wider dynamics described above. In recent years, the transition of individual power stations has largely involved State governments in close engagement with the generation sector and union representatives, with limited involvement of the Federal government.

The timeliness, resourcing and proactivity of transition initiatives is crucial to their success. Some more recent examples of power station closures provide encouraging evidence of the sector learning from the wider experience. For example, Synergy's coal-fired power stations Western Australia are being progressively retired in highly coordinated manner. Western Australia's Premier Mark McGowen has personally spearheaded the proactive and holistic approach to the transition of the Collie region and the application of Just Transition principles. This has included:

+ Development of the Just Transition Plan in collaboration with the Just Transition Working Group, comprising local industry, community, union and government stakeholders;
+ Provision of a $547.4 million funding package for the ongoing Just Transition of the Collie region; and,
+ Expansion of the Collie Jobs and Skills Centre and to support the local workforce.[42]

41. Barrett Downey, From the ground up: A Blueprint for economic diversification in regional Australia, Blueprint Institute, 2021
42. The Department of the Premier and Cabinet, Collies Just Transition Plan, Government of Western Australia December 2020

Another example is provided by the collaborative effort of AGL and the NSW Government to proactively plan for the closure of the Liddell power station. AGL is working closely with stakeholders to identify opportunities for new energy and complementary investment, and future jobs. AGL is repurposing the Liddell site into an integrated industrial energy hub to support regional economic diversification and job creation[43] In parallel, the Federal and NSW governments established the Liddell Taskforce in August 2019 to assess the impacts of AGL's announced closure of Liddell on electricity prices, reliability and security, the regional economy and dependent industries.[44]

While the above examples are encouraging, there is significant potential for a far more holistic approach to structural adjustment that benefits impacted workers, communities and the nation. The broad outlines of more whole-of-society and whole-of-government approaches to Just Transition that can be applied to both the power generation and other industry sectors are explored in Sections 1.3 and 1.4.

1.3 | Where are we going? Targeting enhanced future outcomes for Australian workers and regions

1.3.1 | Overview

Successful transitions in complex sectors are always dependent upon establishing and collaboratively deepening a shared, multi-stakeholder clarity on the answers to three apparently simple questions. These are:

1. **Where are we now?**
2. **Where are we going?**
3. **How do we get there?**

These questions provide the basic structure of Part 1 of this report and are considered in Sections 1.2, 1.3 and 1.4 respectively. As noted earlier, however, the aim is not to re-prosecute the many hundreds of pages of relevant content contained in the dozens of Australian and global reports. Rather, the aim is to distil in one location some of the most relevant content to the next phases of Australia's power station closures. This content has also been further illuminated by the many interviews conducted with diverse Australian stakeholders.

In addressing how Australia might target enhanced future outcomes for impacted workers and regions, this section is structured around two key future-focused objectives. Drawn from the global best practice literature, these statements of aspiration are:

+ **Objective 1:** Both regional empowerment and national alignment on Just Transition are achieved through layered, inclusive and collaborative governance, vision-setting and resourcing models.
+ **Objective 2:** The negative impacts of power station closures are mitigated and positive opportunities and benefits for regions, workers and industry are catalysed by implementing multi-year planning and preparation (via methodologies consistent with Objective 1).

It is important to note that the above directional objectives are not proposed as 'perfect' or final. Rather, they simply illustrate clear statements of future aspiration and are supported by example sub-targets and success indicators (below). It is expected that they will be improved upon and customised to individual transition requirements.

43. AGL's Hunter Energy Hub takes shape with Liddell grid-scale battery, March 19, 2022
44. Australian Government Response to Liddell Taskforce Report, Department of Climate Change, Energy, the Environment and Water

1.3.2 | Potential Target Outcomes[45]

OBJECTIVE 1: Both regional empowerment and national alignment on Just Transition are achieved through layered, inclusive and collaborative governance, vision-setting and resourcing models.

+ **Target 1.1:** Critical stakeholders collaboratively develop agreed models for Just Transition governance, vision-setting and resourcing that are layered, inclusive and collaborative.

  Success Indicator/s:

  – Governance, vision-setting and resourcing models are widely supported by Federal and State government, industry, union and regional community stakeholders.

  – Regional decision-making is empowered, State governments are fully engaged and Federal alignment is achieved.

  – Duplication of efforts and resourcing across Federal and State governments is minimised or avoided.

  – Significant Federal, State and industry resourcing is secured to fully implement Just Transition plans.

  – All stakeholders recognise Just Transition as a whole-of-society undertaking and implement agreed targets and measures within their area of responsibility.

+ **Target 1.2:** Australia becomes an exemplar of implementing an integrated, efficient and effective approach to Just Transition that is broadly transferable across other Australian industry sectors and national contexts.

  Success Indicator/s:

  – The integrated whole-of-society and whole-of-government approach successfully implemented nationally.

  – The potentially negative impacts of transition on regional communities, families, workers and industry have been largely mitigated and the positive benefits maximised.

  – The integrated approach to Just Transition ultimately delivers net positive economy-wide, regional and worker outcomes through skills retention, enhancement and redeployment and regional renewal.

OBJECTIVE 2: The negative impacts of power station closures are mitigated and positive opportunities and benefits for regions, workers and industry are catalysed by implementing multi-year planning and preparation (via methodologies consistent with Objective 1).

+ **Target 2.1:** The most negative impacts of power station closures on regions, workers and industry are mitigated, supported by Australia's whole-of-society and whole-of-government approach to Just Transition.

  Success Indicator/s:

  – The full required Notice of Closure period is employed for the integrated planning of and preparation for Just Transition in terms of mitigating negative impacts.

  – A high level of transparent communication provided and maintained to workers and communities on the future of individual power stations.

  – Workers are fully engaged in a timely and ongoing manner and feel that procedural justice applied at all points.

  – Impacted workers are actively supported with career and financial advice and wellbeing support, and all Federal and State services are used and fully leveraged.

  – Collaborative relationships are maintained between business, unions, regional and government stakeholders throughout the closure process.

  – Social cohesion and community spirit is maintained throughout the change process.

45. This section was informed by S. Weller, A. Beer, J. Porter and W. Veitc, Identifying Measures of Success for a Global Best-Practice Thermal Coal Mine & Thermal Coal-Fired Power Station Closure - Overview Report, UniSA, 2020.

+ **Target 2.2:** The potential opportunities arising from power station closures for regions, workers and industry are actively enhanced, supported by Australia's whole-of-society and whole-of-government approach to Just Transition.

  Success Indicator/s:

  – The full required Notice of Closure period is employed for the integrated planning of and preparation for Just Transition in terms of maximising the positive opportunities.

  – Informed by individual career advice, impacted workers are supported in accessing a range of education and training services.

  – Displaced workers secure alternative jobs of a similar quality following plant closure, either in similar areas and/or adjacent or new areas with the benefit of education and training support.

  – Affected firms in the supply-chain are assisted to reorient their activities.

  – The physical sites of closed power stations are successfully repurposed.

  – Widespread regional community support secured for the shared future vision.

  – Existing regional and economy-wide skills shortages are mitigated with the redeployment of skilled workers to adjacent or new areas.

1.4 | How do we get there? Just Transition design, resourcing and implementation

1.4.1 | Overview

As noted above, Section 3 provides two future-focused objectives drawn from the global best practice literature that illustrate some key characteristics of targeting enhanced outcomes for Australian workers and regions experiencing profound transition.

Informed by a deepening sense of best practice aspirations, the following section explores a range of critical elements for the practical pursuit of Just Transition. These are:

+ **Leadership & Vision-setting**
+ **Just Transition Architecture: Federal, State & Regional**
+ **Shared Guiding Principles**
+ **Collaborative Culture & Decision-making**
+ **Funding for Multi-year Transition**
+ **Supporting the Transition of Impacted Workers & Communities**

Once again, rather than re-prosecute the content contained in dozens of reports, the aim is to distil some of the most relevant content to the next phases of Australia's power station closures in one location.

1.4.2 | Leadership & Vision-setting

There is overwhelming recognition by diverse stakeholders and researchers of the need for proactive leadership, vision-setting and resourcing for Just Transition if it is to deliver holistic benefits to workers, families, regions, industry and the nation as a whole.

For example, across a large sample of geographically, sectorally and politically diverse stakeholders, The Next Economy research found a surprisingly high level of consensus with regards to five key themes that emerged on the dimensions of the leadership required. These were:

+ **A Nation-building Opportunity.** The expansion of renewable energy and decarbonisation of Australia's economy offers an historic opportunity to create a wide range of new industries and jobs in renewable energy generation, storage and transmission; critical minerals mining and processing; renewable energy component manufacturing; batteries; biofuels; and food and fibre processing. These industries are well suited to regional areas. We need more open and inclusive ways to bring people together so that they can move beyond politics to understand the range of economic opportunities on offer.
+ **Holistic Approach Required.** It is not enough to just focus on attracting investment to develop new renewable energy powered industries. Additional planning, regulation and investment is needed to manage the eventual decline of fossil fuel use which is impacting both the domestic energy sector as well as the international demand for Australian thermal and metallurgical coal exports.
+ **Federal Leadership Critical.** The historic lack of policy certainty at a national level made it difficult for investment to flow and for new industries to develop. Industry leaders have previously called for the Federal Government to develop the national targets, policy settings and regulations to de-risk investment and ensure development outcomes are positive and lasting.
+ **Regional Diversity Empowered.** Managing the decarbonisation of the entire economy (not just the energy sector) necessitates a more proactive, iterative, regionally led and inclusive approach to planning and coordination, one that is led by independent and well-resourced transition authorities with the power to coordinate change across all levels of government and across different sectors.
+ **Innovative Financial Mechanisms.** While there is an abundance of investment opportunities across regional Australia and plenty of international finance available to invest in efforts to decarbonise the economy, we need more creative, diverse and responsive financial mechanisms to meet the needs of regional communities in a meaningful and timely way.

The same research found that industry and investor representatives were often the loudest advocates for greater Federal leadership. They typically argued that well targeted policy settings, objectives, regulations and incentives must be in place to:

+ Send the right signals to the market that the government is supportive of efforts to decarbonise the economy to de-risk investment in new industries.
+ Align and standardise systems and regulations across different states, especially given the electricity market operates nationally.
+ Ensure that the right infrastructure is developed in an efficient manner.
+ Develop new supply chains and market demand.
+ Protect the long-term viability of nascent industries by ensuring new industries are developed in a way that maximises economic, social and environmental outcomes and that all companies are held to the same ESG requirements.

Relevant to informing the focus of leadership and vision-setting, in their international comparative review of national and regional Just Transition initiatives, Krawchenko and Gordon[46] found the following seven thematic policy areas to be essential:

1. **Governance mechanisms:** Measures to manage, coordinate, plan and dedicate specific resources towards transition;
2. **Climate and sustainability planning:** Ensuring preparedness for the effects of climate change and realizing new opportunities in a green economy;
3. **Workforce development:** Supporting employed and displaced workers with the skills, training and information required to find and keep jobs;
4. **Economic development:** Creating new economic opportunities to replace traditional industries or update existing ones;
5. **Regional and rural development:** Ensuring all regions have the assets and capabilities to be successful and supporting places negatively impacted by industrial transitions;
6. **Innovation and research:** Ensuring readiness for an evolving global economy and advancing technology to ensure industries and regions are modern, efficient and functional; and,
7. **Social Supports:** Ensuring access to basic financial and social supports during periods of economic change.

1.4.3 | Just Transition Architecture: Federal, State & Regional

One of the significant challenges of Just Transition, especially in a federated political structure is the need for a multi-level government approach. For example, Krawchenko and Gordon[47] particularly highlight some the impacts arising where this is not applied. In particular, their research highlighted that:

+ Infrastructure strategies, Industry 4.0 strategies, and workforce development plans commonly lacked coordination mechanisms and tend to display an urban bias.
+ Such a multi-faceted issue such as pursuing Just Transition outcomes requires integration across multiple policy areas.
+ Many of the economic development strategies examined were poorly integrated with workforce development planning (i.e., skills and training).

The ALP's current party platform, which is not government policy but has been supported at the party's most recent conference, recognises that Australia's energy transformation is causing substantial industry restructuring and impacting many energy industry workers and their communities.[48] While the Federal Labor Government has not adopted the resolution, the views expressed may be influential over time. The platform sets out the following:

+ Recognition of the need to implement a new model of industry restructuring that is people-focused and ensures that the costs of change are not borne solely by workers and host communities.
+ A commitment to establish a statutory authority charged with mitigating the adverse impacts of coal power station closures on regional workforces and communities as a priority.

46. This section was informed by S. Weller, A. Beer, J. Porter and W. Veitc, Identifying Measures of Success for a Global Best-Practice Thermal Coal Mine & Thermal Coal-Fired Power Station Closure - Overview Report, UniSA, 2020.
47. Ibid.
48. ALP National Platform - As adopted at the 2021 Special Platform Conference, ALP, 2021.

+ The statutory authority will, as a minimum, have the power to implement job transfer schemes for workers in coal power stations and associated mines allowing for voluntary redundancy and redeployment opportunities to be shared across sites and the capacity to develop and implement economic development programs for impacted regions.
+ Finally, the authority's governance structure shall include major stakeholders including unions and industry and will work cooperatively and on a complementary basis with federal, state and local government bodies, charged with energy, climate and structural adjustment responsibilities.

Transition Authorities

Researchers and stakeholders have argued of the need for proactive leadership by governments and pointed to a role for the Federal government. For example, The Next Economy[49] research highlights that:

+ National transition authorities have proven crucial in helping regions to manage the impacts of a changing energy sector in Germany, Canada and Spain, with new initiatives more recently developed in the United Kingdom and United States. These bodies are responsible for setting national plans and targets and for channelling resources and support to the regions most impacted by change.
+ In the absence of a national plan and transition authority in Australia, some state governments have established regional transition authorities in areas impacted by the closure of coal fired electricity plans and coalmines. The Latrobe Valley Authority, which was established after the announcement of the closure of the Hazelwood Power Station in Victoria is the most well-known example. Similar approaches to transition planning have also been adopted by the Western Australian government with the formation of the Collie Delivery Unit and the newly established Hunter Expert Panel which will oversee the distribution of the Royalties for Rejuvenation program in the Hunter Valley.

The Next Economy argues a national transition authority working in concert with state governments could bolster efforts at a regional level. While noting that there would need to be clear areas of responsibility with other levels of government if this was to occur, The Next Economy notes that a national transition authority has the potential to ensure:

+ Highly technical decision making (eg: decisions about energy infrastructure such as managing the electricity grid) are managed by experts at a state or national level, but with direct input and feedback from regional staff to tailor solutions to the needs of each region.
+ Key organisational processes are not unnecessarily duplicated in each region by providing centralised administration support, research capacity and technical expertise.
+ The ability to move resources and staff between regions when specific expertise is required to respond to changing needs (eg: power station closure).
+ Easier access to Federal and State government departments and key agencies than regional authorities might otherwise have.
+ A more efficient and consistent flow of information and resources to aid decision making at all levels.
+ Increased cooperation between regions for investor attention and resources is managed well by building on each region's comparative strengths.

49. D. A. Cahill, What Regions Need - on the Path to Net Zero Emissions, The Next Economy, 2022.

The ACTU Just Transition Policy Paper[50] and its Secure Jobs for a Safer Climate paper advocate for creating a new independent statutory authority that would sit within the Environment and Energy portfolio and be responsible for navigating and managing Australia's transition to a clean energy economy. The key roles envisaged include:

+ Involvement in an orderly transition plan and closure of Australia's coal-fired power stations, which ensures a Just Transition for working people, their families and communities.
+ Overseeing an industry-wide multi-employer pooling and redeployment scheme which provides retrenched workers with the opportunity to transfer to roles with renewable or low emission generators as well as remaining fossil fuel generators.
+ Administering and developing a labour adjustment package that supports workers transition into new decent and secure jobs. The main labour market policies should include:
  - **Job placement and information services;**
  - **Retraining with an option for this to be undertaken whilst still employed;**
  - **Financial and personal support; and**
  - **Travel subsidies and relocation assistance.**

In addition, the Ruhr or Appalachia report published by the CFMEU[51] argued that, based on the international evidence, there is a need for the Federal government to establish a tripartite Energy Transition Authority (ETA). It proposed the ETA would require the powers, funding and longer-term stability to research, plan, coordinate and communicate a Just Transition program over the next few decades. It would also need to be constituted in a way that its work brings in governments at state and local levels as well as employers and unions, and its processes should also invite the contributions of local community groups, NGOs and other relevant parties.

It is worth noting that jurisdictions such as Western Australia and Queensland, where the State governments have a major role as owners of existing plant, can be expected to want to be the clear leaders of Just Transition plans in those states as demonstrated by WA's Collie Just Transition Plan.

Regional Transition Authorities

The strong recognition of the need for government leadership and resourcing of Just Transition is equally matched by the widespread demand for regional empowerment and diversity. Any authority would need to collaboratively advance the development of a wider regional narrative that is understood and owned by key stakeholders and the broader community. The Next Economy research[52] highlighted the complementary and interoperable role of regional transition authorities as follows:

+ At a regional level, the main role of a transition authority is to work with affected communities and key stakeholders to strengthen and diversify regional economies as fossil fuels are phased out and renewable energy expands. While the scope of responsibilities for regional transition authorities across Australia and the world varies, a review of the literature and interviews with transition experts suggests that they fulfil three main functions. These include the following:
  - Facilitate long-term regional planning and coordination to reduce the negative impacts associated with the phase out of fossil fuels and to facilitate new economic opportunities.

50. Sharing the Challenges and Opportunities of a Clean Energy Economy, A Just Transition for coal-fired electricity sector workers and communities, ACTU, 2020
51. Peter Sheldon, The Ruhr or Appalachia? Deciding the future of Australia's coal power workers and communities, Industrial Relations Research Centre,UNSW Business School, 2018-10.
52. D. A. Cahill, What Regions Need - on the Path to Net Zero Emissions, The Next Economy, 2022.

- Ensure that all stakeholders can meaningfully participate in decision making processes and in the design of new plans and programs to decarbonise the economy, and that they remain informed and able to participate as change unfolds over time.
- Be across all aspects of the energy transition to enable the flow of information and resources to enable effective, timely and regionally appropriate investment and action. This includes working with the relevant agencies and groups to facilitate.

Similarly, research by the Blueprint Institute[53] also reiterated the critical of a strong regional focus noting the following:

+ Any policy proposal with a hope of galvanising local support must be owned and determined locally. Australia's regions are a complex adaptive system, and each area is unique in its economy, geography, and demographics.
+ To account for regional differences, coal adaptation authorities should be established in communities within regions which currently rely on coal mining or coal-fired generators to fuel their local economies. These authorities would be staffed primarily by respected locals and tasked with studying issues relating to the energy shift while continuously engaging with communities and developing and iterating strategies to respond appropriately. They would maintain distinct statutory independence while working with existing governments and agencies where appropriate.
+ The knowledge, networks, credibility, and capacity of local leadership is essential to drive meaningful adaptation. Local governments with ongoing administrative responsibilities require support and are complemented by institutions tasked with aiding structural adjustment. Without additional support, they cannot be expected to drive the extensive public and private collaboration necessary to facilitate legitimate diversification.

The same report also asserted that the existing local agencies such as the 52 Regional Development Australia (RDA) committees and 56 Natural Resource Management Organisations nationwide are not fit-for-purpose and are insufficiently resourced to have a serious impact on Just Transition.

Finally, research by the Hunter Jobs Alliance[54] highlighted that a specific strategy which lays out actions and seeks community input into the setting of goals is required to respond to the challenge of regional structural adjustment. Key roles envisaged for the regional transition authority in concert with State and Federal initiatives would include:

+ **Regional structural change planning**
  - Developing a Regional Structural Change Plan
  - Community Participation and Engagement
+ **Job creation and investment attraction**
  - Distribute and/or Advise on Royalties for Rejuvenation Fund
  - Jobs Fund
  - Investment Attraction Service
+ **Worker & Labour Market Support**
  - Worker Support Service
  - Regional Guideline for Restructuring Employers
  - Regional Workforce Planning

53. T. Barrett, L. Downey, K. Green, J. Grice, H. Guinness, A. Hawcroft, J. Steinert and N. Twibill, From the Ground Up - Blueprint Economic Diversification in Regional Australia, Blueprint Institute, 2021.
54. A 'Hunter Valley Authority' Discussion Paper, Hunter Jobs Alliance, 2021

1.4.4 | Shared Guiding Principles

In recognition of the multi-stakeholder nature of pursuing Just Transition, the need for an explicit set of shared guiding principles is highlighted in much of the literature and was reiterated in many stakeholder interviews.

The various sets of principles reviewed share many commonalities in terms of content and reflect the reality that Just Transition requires a collaborative culture and decision-making processes (refer also Section 1.4.5 below). For example, the ACTU Just Transition Policy Paper[55] sets out the following key principles as essential to underpin a Just Transition:

+ Equitable sharing of responsibilities and fair distribution of the costs across society;
+ Institutionalised formal consultations with relevant stakeholders including trade unions, employers and communities, at national, regional and sectoral levels;
+ The promotion of clean job opportunities and the greening of existing jobs and industries through public and private investment in low carbon development strategies and technologies in all nations;
+ Formal education, training, retraining, and life-long learning for working people, their families, and their communities;
+ Organised economic and employment diversification policies within sectors and communities at risk;
+ Social protection measures (active labour market policies, access to health services, social insurances, among others); and
+ Respect for, and protection, of human and labour rights.

Western Australia's Collie Just Transition Plan[56] similarly contains numerous principles transferable to other locations, including:

+ Encourage sound investments in low emission and job-rich sectors and technologies that attract and maintain local employment opportunities.
+ Respect the rights of those affected by transition to be treated with justice and dignity.
+ Ensure all consultation and negotiations are honest, open and transparent and work towards achieving consensus on goals, timelines and pathways.
+ Recognise that "we're all in this together", and thus share the challenges and opportunities transition brings. The objective is to see that no-one is left behind.
+ Strive to ensure that all those affected by transition are given comprehensive information, opportunity and choice to retrain, reskill/upskill or take an alternative pathway within a reasonable timeframe.
+ Organise local, long-term economic diversification plans that support worthwhile occupations and foster continuous improvement in local living standards for current and future generations.
+ Provide policy, social support and linkages to community and government services for the benefit of all those affected by transition.

55. Sharing the Challenges and Opportunities of a Clean Energy Economy, A Just Transition for coal-fired electricity sector workers and communities, ACTU, 2020
56. Collie Just Transition Plan, The Department of the Premier and Cabinet, 2020

The UniSA Best Practice Mine & Power Station Closure study[57] found that successful closures share:

+ **A focus on place.** In localities undergoing transformation, individuals and enterprises have a sense of belonging and inclusion.
+ **A focus on governance.** Local decision making is critical to achieving the aspirations of a successful closure.
+ **A unified vision for the future.** A clear vision and a set of goals, targets and strategies for turning the vision into reality.
+ **Engagement with local institutions.** Dialogue between local institutions that builds trust and creates a 'democratic dividend' to advance the closure process.
+ **An emphasis on facilitating assistance for affected individuals.** Targeting assistance on those individuals and groups for whom the closure process will be most challenging.
+ **A focus on the local capture of value.** It is not enough to attract new enterprises, long-term sustainability requires the local capture of value, so that the wealth 'sticks' in the region.
+ **Consider transformation over multiple time frames.** A view of transformation that is attentive to the relations among short, medium and long term responses and outcomes.
+ **Acknowledge the emotional element of closure processes.** Communities need to have the opportunity to give voice to their feelings and perspectives on the closure process.

1.4.5 | Collaborative Culture & Decision-making

The pursuit of Just Transition is a fundamentally human and societal undertaking. In addition to the need for guiding principles developed by the diverse stakeholders, there is a need to ground the entire undertaking in a culture of collaboration and shared decision making.

For example, The Next Economy[58] research highlighted that a robust pursuit of Just Transition requires participatory, inclusive and equitable planning and coordination. It found this should include meaningful and ongoing engagement of and representation from:

+ All levels of government, industry and civil society groups emphasising the importance of planning approaches that ensure meaningful, timely, ongoing and equitable participation of all stakeholders in processes; and,
+ Diverse groups such as unions and environment groups, as well as many working in local government and a wider array of stakeholders such as young people, First Nations and linguistically and culturally diverse groups.

Similarly, the 'The Ruhr or Appalachia?' report published by the CFMEU[59] highlighted the critical role of fostering a culture of participatory and inclusive multi-stakeholder engagement. In particular, the report:

+ Calls for a focus on both top-down and bottom-up approaches, and for an equal prioritisation of labour demand and supply questions.
+ Notes that success requires economic and industrial relations cultures that are conducive to developing a shared vision of Just Transition for individual workers and their communities.
+ Highlights the crucial role of tripartite engagement, socially-acceptable outcomes, community participation and corporate social responsibility.

57. S. Weller, A. Beer, J. Porter and W. Veitc, Identifying Measures of Success for a Global Best-Practice Thermal Coal Mine & Thermal Coal-Fired Power Station Closure - Overview Report, UniSA, 2020
58. D. A. Cahill, What Regions Need - on the Path to Net Zero Emissions, The Next Economy , 2022.
59. Peter Sheldon, The Ruhr or Appalachia? Deciding the future of Australia's coal power workers and communities, Industrial Relations Research Centre, UNSW Business School, 2018-10.

The same report highlighted the continental European tradition of “social partnership”. This collaborative construct provides a prominent role to unions and the forging of multi-stakeholder agreements in socio-economic policy making. It has played an important role in countries like Germany and the Netherlands in supporting successful structural adjustment and Just Transition. So too, was their use of broad stakeholder consultation and engagement. Regarding decision-making and consultative approaches, the same report argues:

+ The success of a comprehensive Just Transition policy requires economic development, especially sustainable development. As this will probably require significant private investment, it is imperative that potential investors can feel confident that development policy will continue in a stable direction for quite some time. Achieving this stability requires significant political and social consensus on key aspects of Just Transition policy.
+ The processes through which specific strengths, weakness and interests are identified, the way policy is constructed, specified and implemented, and the way political consensus is reached, are therefore all critical questions.
+ The evidence from our study suggests that best practice utilises both top-down and bottom-up policy development processes. Sometimes they work in tandem but at other times, one may predominate given different stages of policy development and implementation.

1.4.6 | Funding for Multi-year Transition

The comprehensive pursuit of Just Transition, not only to mitigate negative impacts but also to capitalise on the positive opportunities for the nation, is a multi-stakeholder and multi-year undertaking that involves:

+ Regional empowerment and national alignment that is achieved through layered, inclusive and collaborative governance, vision-setting and resourcing models; and,
+ Mitigating the negative impacts of power station closures and enhancing the potential opportunities for regions, workers and industry.

As The Next Economy[60] report notes, funding the transformation of the economy from one dependent on fossil fuels to one powered by renewable energy is an expensive exercise, particularly if the goal is to ensure that the regions most impacted by change benefit over the long term. In other words, moving beyond mitigating the impact of a problem to realising the significant opportunity for the nation will require significant strategic investments.

Federal Government Position

The policy position of the Albanese Federal Government is set out in Powering Australia.[61] With reference to energy sector transformation, the Government’s $15 billion National Reconstruction Fund[62], the policy includes the following insights:

+ Up to $3 billion from the National Reconstruction Fund will help kickstart innovation in new industries, revitalise manufacturing, and secure Australia’s energy future.
+ Investment is to be directed to regions undergoing rapid change, enabling them to capitalise on the nation’s natural resources.

60. D. A. Cahill, What Regions Need - on the Path to Net Zero Emissions, The Next Economy , 2022.
61. Powering Australia, ALP, 2021.
62. https://www.industry.gov.au/news/national-reconstruction-fund-diversifying-and-transforming-australias-industry-and-economy

+ Funding will support commercial opportunities arising from;
  - **Wind turbine component manufacturing;**
  - **Battery and solar panel supply chain and manufacturing;**
  - **New livestock feed to reduce methane emissions;**
  - **Modernising steel and aluminium manufacturing;**
  - **Hydrogen electrolysers;**
  - **Bioenergy and biomass;**
  - **Innovative packaging solutions for waste reduction.**

National & State Funding Examples

The Next Economy report highlighted the following examples of significant investments in a holistic approach to Just Transition:

+ Germany has been the most proactive in funding the energy transition, allocating $3.2 billion in 2020 and 2021 to strengthen regional research institutions, transport links and infrastructure, foster tourism and improve health, education and digital services across the region. This is only a fraction of the $64 billion that state and federal governments have committed to support economic diversification efforts in coal regions across Germany.
+ The European Union has also established a Just Transition Fund to support European countries to develop and implement transition plans to the tune of $27.7 billion. This is only a fraction of the $1.6 trillion committed to supporting decarbonisation efforts across Europe as part of the EU's Green New Deal.
+ In the Canadian Province of Alberta, the government allocated $195 million from the province's carbon levy to create a Coal Workforce Transition Fund and Coal Community Transition Fund to support workers and regions negatively impacted by the phase out of coal-fired electricity generation. These funds were used to cover income support, career advice, labour market studies and economic diversification projects. The Canadian Federal Government provided an additional $30 million to support transition programs for workers in Alberta's resource sector.

The same report provides the following historical Australian comparisons:

+ The Victorian State Government committed $335 million in initial funding to support the Latrobe Valley in the wake of the Hazelwood Power Station closure. This included $20 million to establish the Latrobe Valley Authority; $22 million for redeployment and retraining; $20 million for a Worker Transfer Scheme; $174 million for a Community Infrastructure & Investment Fund; $7.8 million to upgrade public housing; $5 million for energy efficiency upgrades for low-income households; $17 million for a Hi-Tech Precinct. An additional $345 million was allocated to upgrade the Gippsland Rail Line.
+ The Western Australian government committed $100 million to support the Collie region across two funds – $20 million designed to facilitate economic diversification through the Collie Futures Fund and $80 million allocated to the Industry Attraction and Development Fund.
+ The New South Wales government allocated $25 million per year through the Royalties for Rejuvenation program to be administered by an 'Expert Panel' in the Hunter, with additional panels announced for Lithgow, Wollongong and North-West New South Wales.

Regional Funding Estimates

Finally, The Next Economy[63] report notes that the range of estimates for supporting Australia's regions to pursue Just Transition vary considerably. It provides the following examples:

+ The Blueprint Institute proposes funding (each) regional transition authorities to the tune of $20 million to cover initial staffing, operations and initiatives, with ongoing access to 5% of coal royalties to support initiatives on the ground.
+ A contrasting figure of $5 billion is advocated in a recent report commissioned by the Business Council of Australia, WWF, Australian Council of Trade Unions and Australian Conservation Foundation, however this figure includes costs associated with not only the disruption caused by the decline of fossil fuels, but also to support the development of new industries.

1.4.7 | Supporting the Transition of Impacted Workers & Communities

While there is no single and universally agreed 'exemplar' of Just Transition internationally or in Australia, the various sets of guiding principles express the ethos of and aspirations for how both workers and regions will experience Just Transition (refer examples provided in section 1.4.4).

Given its complex, multi-faceted and multi-stakeholder character, three key dimensions of Just Transition include:

+ Planning and preparations must commence in earnest several years before the closure occurs;
+ Workers feel they experience procedural justice, which leaves them with the understanding that everything that could reasonably be done to assist has been done; and,
+ Effective structural adjustment is not only about mitigating the negative impacts on workers and regions but will proactively unlock new opportunities that may not otherwise arise.

Following is a synopsis of the key roles and functions that power station owners and transition authorities can play in supporting workers and regional communities.

Power Station Owners

While recognising that power station closures are occurring in a wider context of global and national societal and economic drivers, the plant owners have an important role in the pursuit of a Just Transition for workers impacted by a given closure.

For example, plant owners will have a key role in the early planning, preparation, and support of a holistic multi-stakeholder and multi-agency approach to Just Transition for each site. The ACTU Just Transition Policy Paper[64] emphasises that early planning is needed to successfully transition workers and their communities into decent and secure employment. It highlights the following:

+ Domestic and international research has consistently shown that early planning involving a variety of stakeholders delivers better outcomes for working people.
+ The timing of any policy response to transition Australia's economy will be crucial to its effectiveness as more isolated regional economies that are reliant on one or two industries are particularly susceptible to the long-term impacts of large-scale retrenchments.
+ Workers who only begin to search for jobs in a labour market at the time of plant closure will find it to be flooded with job seekers that possess similar skills and experiences. In regional areas, small and relatively isolated local labour markets amplified that disadvantage.

63. D. A. Cahill, What Regions Need - on the Path to Net Zero Emissions, The Next Economy , 2022.
64. Sharing the Challenges and Opportunities of a Clean Energy Economy, A Just Transition for coal-fired electricity sector workers and communities, ACTU, 2020

Plant owners play key roles in the several years preceding a power station closure through such areas as:

+ Providing clear communication to workers and regional communities on the future of the plant and timely updates as new information comes to hand;
+ Engaging proactively and collaboratively with unions and workers;
+ Engaging with regional authorities, community and relevant indigenous representatives;
+ Working with all relevant transition authorities and government agencies to align, leverage and simplify worker access to all existing Federal, State and regional services;
+ Providing workers with career and financial advice and wellbeing support; and,
+ Supporting workers with access to a range of education and training services. Ideally these could be aligned with personal aspirations and regional opportunities in the years prior to the plant closure.

Transition Authorities

More broadly, the Blueprint Institute[65] report highlights the key role of regional transition authorities working alongside power plant owners and potential new private sector employers and investors to model projected timelines for redundancies and to provide transitional services. While recognising the need for regional diversity, the report anticipates activities across the following four areas:

+ Short-term transitional income insurance for the first six months which provides impacted workers the economic freedom to find high-quality job matches in the period following the plant closure;
+ Expanded financial incentives for part-time or full-time certification and upskilling through existing external providers;
+ Incentivise employment expansion through carefully targeted wage subsidies to firms that hire displaced workers; and,
+ Last-resort, early retirement packages for workers aged over 60, supported by power station owners.

As noted earlier, the Hunter Jobs Alliance research[66] highlighted the following key roles that would ideally be played by regional transition authority in concert with State and Federal initiatives:

+ **Regional structural change planning**
  - Developing a Regional Structural Change Plan
  - Community Participation and Engagement
+ **Job creation and investment attraction**
  - Distribute and/or Advise on Royalties for Rejuvenation Fund
  - Jobs Fund
  - Investment Attraction Service
+ **Worker & Labour Market Support**
  - Worker Support Service
  - Regional Guideline for Restructuring Employers
  - Regional Workforce Planning

65. T. Barrett, L. Downey, K. Green, J. Grice, H. Guinness, A. Hawcroft, J. Steinert and N. Twibill, From the Ground Up - Blueprint Economic Diversification in Regional Australia, Blueprint Institute , 2021.
66. A 'Hunter Valley Authority' Discussion Paper, Hunter Jobs Alliance, 2021

More generally, additional functions of transition authorities suggested by various stakeholders for supporting workers and regions include:

+ **Meaningfully engaging the wider regional community including relevant indigenous representatives;**[67]
+ **Identifying regional and economy-wide skills shortages that can be mitigated with the redeployment of impacted skilled workers to adjacent or new areas;**
+ **Supporting affected firms in the supply-chain to reorient their activities and potentially redeploy impacted workers;**
+ **Redeploying impacted workers in the repurposing of closed power station sites to generate sustainable employment;**
+ **Variations on:**
  - Pooling of impacted power station workforce with assets remaining privately owned; or,
  - Nationalisation of closing power station assets in a manner that supports a structured transition, power system and workforce pooling and redeployment.

67. For example, the First Nations Clean Energy Network is a nonprofit entity that collaborates with industry, investors, unions, academics, legal and technical experts to enhance the role of indigenous communities in supporting Australia's energy transition.

1.5 | Summary of Potential Functions: Governments, Industry, Unions and Communities

Entity	Roles & Functions
Commonwealth Government	+ Actively work with states and regional transition authorities to achieve greater coordination and national alignment while empowering regional autonomy + Develop and communicate clear policy directions, objectives and layered roles and responsibilities to minimise duplication and/or misalignment + Flow down relevant funding to State Governments and Regional Transition Authorities
State Governments	+ Actively work with the Commonwealth and the relevant state's Regional Transition Authorities to ensure clear definition of roles and responsibilities to avoid duplication + Identify the range of State Government services and agencies that may be leveraged to support Just Transition initiatives at a regional and individual power station level + Supplement Commonwealth funding to expand regional and industry development opportunities
Regional Transition Authorities / Local Governments	+ In consultation with Commonwealth and State Governments, take responsibility for regional transition planning based on wide-ranging community and industry participation + Provide strategic coordination of regional job creation, new industry development and investment attraction efforts + Provide support services to impacted workers including the strategic coordination of training services, labour market support
Power Station Owners	+ Provide clear communication to workers and regional communities on the future of the plant and timely updates as new information comes to hand + Engage proactively and collaboratively with unions and workers to co-design a holistic and human-centred approach to Just Transition + Work with all relevant transition authorities and government agencies to align, leverage and simplify worker access to all existing Federal, State and regional services + Engage with the wider community, including relevant indigenous representatives, to ensure Just Transition plans are aligned with regional needs and opportunities + Provide workers with high quality career and financial advice, wellbeing support and customised training options
Trade Unions	+ Engage proactively and collaboratively with power station owners and regional authorities to co-design a holistic and human-centred approach to Just Transition + Support the design and implementation of high-quality career and financial advice, wellbeing support and customised training options + Advocate for communities directly impacted for coal closures

Part 2

Global & Australian Transition Case Studies

2.1 | Global Transition Case Studies

The progressive move away from traditional sources of power generation is occurring internationally and provides salient lessons for informing Australia's approach to Just Transition.

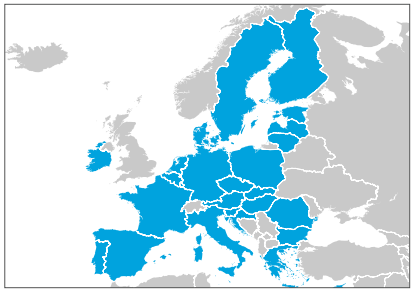
Following are international case studies that outline the experience of seven different nations or regions including:

+ **European Union**
+ **Germany**
+ **Spain**
+ **United Kingdom**
+ **United States**
+ **Canada**
+ **New Zealand**

Case studies have been outlined in a manner to identify the most relevant insights for Australia.

Country / Region

European Union



Context

The European Union has launched a variety of diversification policies to support the regions, communities, and workers of its member states that will be disproportionately affected by the future energy transformation. The EU Just Transition program, which is to be implemented across 2021-27, aims to retrain workers and mobilise at least $242 billion in private and public investment.

Synopsis of Key Actions

+ A $65 billion fund will support the economic diversification of all territories of the EU
+ A $2.9 billion InvestEU fund will support private-sector projects in energy and transport, decarbonisation, economic diversification, and social infrastructure
+ A $27.7 billion Just Transition Fund will support European countries develop and implement transition plans
+ The European Investment Bank will lend up to $16 billion to regions that need to adapt to a low-carbon world
+ The EU launched the Just Transition Platform to help Member States develop their territory's Just Transition Plans and access funding

Key Roles Played in Just Transition / Structural Adjustment

Federal Government	+ Providing support primarily via funding + Launched a Just Transition Platform to help Member States develop their territory's Just Transition Plans and access funding
Local Government	+ EU member states must provide a detailed map of regions they deem eligible for funding + The responsibility is on the member states' governments to develop and implement Just Transition plans with the support of EU funding + Match funding is also expected from member states
Generation Sector	+ Limited involvement
Trade Unions	+ Limited involvement

Strengths & Successes

Alignment / Coordination	+ Tailored financial and practical support will help to generate the necessary investments within member states
Aggregated Funding	+ Combined $242 billion in private and public investment over 2021-2027

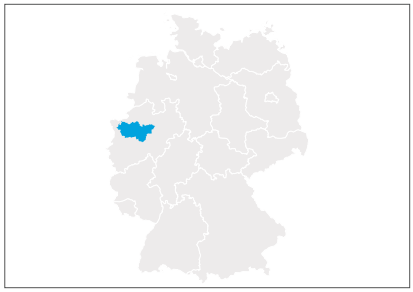
Weaknesses & Challenges	
Alignment / Coordination	+ Lack of coordination and collaboration within the EU member states – Lessons learned from existing member states' just transition initiatives are not being leveraged
Critical Role Gaps	+ Many EU member states are already in the midst of their transition – the EU guidance may not be proactive enough for all regions
Community Outcomes	+ Top-down approach without a focus on community or workforce engagement
Relevance & Applicability to Australia	
Key Insight 1	+ Government investment is a strong tool to promote economic growth and diversification but must not be a short-term band aid for the problem. Funding should be provided with the intent to encourage a sustainable infrastructure of private and public investment to continue the transition.
Key Insight 2	+ Sweeping, top-down solutions have not been historically successful. Community empowerment and buy-in is necessary to develop flexible, specialized strategies from the ground up.
Key Insight 3	+ At the government level, leaders must coordinate efforts to ensure their approach is aligned with the needs of communities and workforces that are directly impacted by this transition

Sources

+ T. Barrett, From the Ground Up: A Blueprint for economic diversification in regional Australia, 2021
+ European Commission Press Release, Commission proposes a public loan facility to support green investments together with the European Investment Bank, May 28, 2020
+ European Commission Press Release, Green Deal: Coal and other carbon-intensive regions and the Commission launch the European Just Transition Platform, June 26, 2020
+ European Commission Press Release, Commission proposes a public loan facility to support green investments together with the European Investment Bank, May 28, 2020
+ European Social Fund, A New Stronger European Social Fund Plus
+ European Commission, European Regional Development Fund
+ European Commission, Financing the green transition: The European Green Deal Investment Plan and Just Transition Mechanism

Country / Region

Germany, Ruhr Region



Context

Germany's Ruhr region was Europe's largest industrial hub, depending on coal mining, coal-fired generation, and coal-reliant heavy industries like steel since the 1950's. However, thousands of coal mining jobs in Germany disappeared in the next fifty years to follow, with Germany officially announcing an agreement to phase out all coal mining in the Ruhr within the next 12 years.

Synopsis of Key Actions

+ Proactive in funding the energy transition through federal and state funds
+ Focus on early planning with a long-term horizon
+ Cooperative approach between government, industry and unions helped ensure workers and communities were effectively supported
+ Drove diversification of the region via government projects to create a comparative advantage in alternate industries such as energy supplies and waste disposal
+ Effective labour market policy measures have been implemented, including agencies specializing in employment promotion and retraining
+ Support systems including financial support, access to retraining and early retirement schemes enabled workers to take up new employment opportunities in remaining mines and similar industries

Key Roles Played in Just Transition / Structural Adjustment

Federal Government	+ Created a dedicated new body, the Commission on Growth, Structural Change and Employment to come up with specific plans and new economic prospects for regions where coal used to be a mainstay + Passed the Coal Power Generation Termination Act stating that all coal-fired stations and lignite mines will be phased out by 2038 at the latest
Local Government	+ Provided funding to promote economic diversification
Generation Sector	+ Limited involvement
Trade Unions	+ Contributed to shifting the end of coal production to ensure that no miners were laid off + Participated as stakeholders in Commission on Growth, Structural Change and Employment negotiations and in the definition of the Coal Exit Laws especially in defining conditions and compensation schemes for workers

Strengths & Successes	
Alignment / Coordination	+ Germany is generally considered as one of the most highly referenced international cases of a successful just transition + In 2018, the federal government created the Commission on Growth, Structural Change & Employment, to develop plans and new economic prospects for coal regions + The RAG-Stiftung (RAG Foundation) was created to ensure socially acceptable & orderly transition. It focused on: – Providing qualification training to employees, information about new job opportunities; and, – Financing ongoing mine management (e.g. securing shafts and tunnels, land rehabilitation and management of pit water and groundwater) and financing educational, scientific and cultural projects in the Ruhr and Saar regions
Aggregated Funding	+ Combined $64B through state and federal funds to promote economic diversification in areas where coalfired generators and coal mines are set to close
Worker Options & Empowerment	+ Offered labour market support through: – adjustment allowance of up to $64K per head to enable retraining – financial incentives for power station operators to pay the early retirement of its workers
Employment Outcomes	+ During the phaseout of hard coal, none of the employees of hard coal producer companies became unemployed. Instead, they either entered early retirement or moved to a different occupation.
Weaknesses & Challenges	
Government Guidance	+ A challenge for the development of structural policy was to identify the right system of governance to guide the transition, especially within Germany's federal context – Decision making and planning shifted to a more regional level, taking into account local contexts which enhanced public support for the transition by increasing bottom-up participation of local stakeholders
Employment Outcomes	+ Replacing old mining jobs with comparable jobs has been difficult given that collectively bargained contracts gave miners many benefits, high payments, and early retirement options
Relevance & Applicability to Australia	
Key Insight 1	+ The increasingly proactive role of the public sector in regional economic policy has been important to attract new businesses and promote economic growth. The implemented policies helped to create new economic opportunities and jobs in many of the locations where they have been deployed.
Key Insight 2	+ Policies to support coal regions have been particularly successful when tailored to the local realities and needs. Active participation of local stakeholders in the design and implementation of these policies is important not only from a procedural justice perspective but also to create more locally coherent and effective interventions.

Key Insight 3	+ The German social security system, the labor system, and the system of regional fiscal equalization are critical components in Germany's efforts to assist workers and communities affected by the decline in coal production. Given the relatively strong support that the German social security net provides to coal workers, most of the transition policies serve as a complement to these baseline policies.

Sources

+ T. Barrett, From the Ground Up: A Blueprint for economic diversification in regional Australia, 2021
+ Bela Galgoczi, The long and winding road from black to green, European Trade Union Institute, 2014
+ Germany's "Coal Commission": Guiding an Inclusive Coal Phase-Out, April 1 2021
+ Federal Ministry for Economic Affairs and Energy, Commission on Growth, Structural Change and Employment, January 2019

Country / Region

Spain

Context

Spain's coal industry has been steadily declining for the past three decades. By 2017, the Spanish coal industry's workforce had shrunk to just three percent of its 1990 peak. Just transition efforts for Spain's coal industry are mainly reactive, addressing the fallout of previous mine closures and the future of coal communities, rather than proactively transitioning a significant active workforce.

Synopsis of Key Actions

+ In October 2018, the Spanish government and unions struck a deal, commonly referred to as the Plan Del Carbón, for 250 million euros ($283.65 million) to be invested in mining regions over the next decade
+ In February 2019, Spain adopted the Strategic Framework for Energy and Climate, looking to take a more proactive, comprehensive approach to the energy transition
+ The Just Transition Strategy, which will be updated every five years, aims to "ensure that people and regions make the most of the opportunities offered by this transition"
+ The Just Transition Strategy also contains an Urgent Action Plan for Coal-mining Regions and Power Plant Closures, which mainly reiterates the 2018 Plan Del Carbón for uncompetitive coal mines, coal-fired power plants and nuclear power plants that will close between 2019 and 2023
+ A Just Transition Institute was also established to support the development of Just Transition Agreements, with representatives of different levels of government and non-governmental stakeholders

Key Roles Played in Just Transition / Structural Adjustment

Federal Government	+ Implementing the Just Transition Strategy to "ensure that people and regions make the most of the opportunities offered by this transition + Investing 250 million euros ($283.65 million) to be invested in mining regions over the next decade + Adopted the Strategic Framework for Energy and Climate, looking to take a more proactive, comprehensive approach to the energy transition
Local Government	+ Limited involvement
Generation Sector	+ Required via a joint agreement with trade unions and employer representatives to explain in writing how they plan to support staff when requesting a closure + Plans have varied from redirecting former employees to generator dismantling work to reemploying workers to construct wind farms

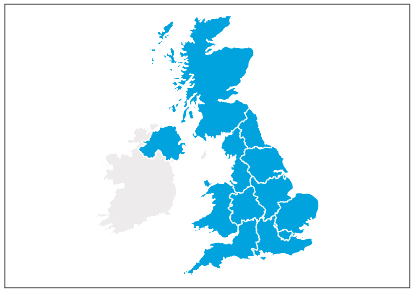
Trade Unions	+ Integral in the development of initiatives to address the impacts of coal plant closures including: – Plan Del Carbón – Necessity of generator support plans for workers upon planned closure
Strengths & Successes	
Aggregated Funding	+ 250 million euros ($283.65 million) to be invested in mining regions over the next decade + European Commission provided a 2.13 billion euro ($2.36 billion) aid package in 2016
Industry Involvement	+ The Government requested that generators to come up with specific solutions to keep workers employed + Joint agreement with trade unions and employer representatives requiring generators requesting closure to explain in writing how they planned to support staff
Weaknesses & Challenges	
Alignment / Coordination	+ Recognized the need for a more coordinated framework by the time most jobs were already gone and communities were economically impacted
Worker Experience	+ Lack of career options, transition services, and workforce support as coal plants retired. These services were implemented retroactively rather than proactively.
Employment Outcomes	+ Closure of 26 coal mines in 2016-2018 affected 1,677 workers directly. A further 2,277 workers lost their jobs when the Spanish Government shut down all but four of Spain's 15 coal-fired generators in 2018
Community Outcomes	+ Regional economies failed to develop viable industry alternatives to coal and most mining towns in Spain suffered an exodus of skilled workers
Relevance & Applicability to Australia	
Key Insight 1	+ A proactive and comprehensive framework to is required to address this significant structural change; Spain's lose bundle of early policies led to a loss of skilled workers and local economic impacts in coal communities.
Key Insight 2	+ To successfully transition the coal workforce and develop economic activity in coal regions, policies are required beyond the provision of early retirement and severance payments. Industry investment and transition projects such as mine restoration projects, renewable energy projects, and the dismantling of generators can provide valuable short-term activity.

Sources

+ T. Barrett, From the ground up: A Blueprint for economic diversification in regional Australia, Blueprint Institute, 2021
+ Spain's National Strategy to Transition Coal-Dependent Communities, World Resources Institute, December 23, 2021
+ Pablo del Rio, Coal Transition in Spain, CSIC, 2017
+ The Just Transition Strategy within the Strategic Energy and Climate Framework, Ministeria Para La Transicion Ecologica, February 2019
+ Just Transition for Spanish thermal power plant workers, Industriall Global Union, April 24 2020

Country / Region

United Kingdom



Context

At its peak in 1920, the coal industry of the United Kingdom employed close to 1.2 million workers across England, Scotland, and Wales. Between 1984 and 1997, 141 mines closed, eliminating 170,000 jobs as the government pursued a policy of withdrawing public support to unprofitable heavy industries, in particular steel and coal, by privatizing them and closing unprofitable sites. Areas that were once burgeoning coal powerhouses filled with well-paid jobs, now represent some of the UK's most disadvantaged communities.

Synopsis of Key Actions

+ Much of the capital investment and business support only began in the 1990s after the impacts of coal retirement had already significantly impacted communities. This ingrained a cycle of underinvestment and high unemployment which have left former coal regions economically underdeveloped and poorer than the rest of the United Kingdom.
+ The main tool for supporting workers, aside from the welfare state, was the British Coal Enterprise (BCE), a subsidiary of the state-owned British Coal Company
+ The BCE did not provide workers with comprehensive options and only managed to replace about 1 in 14 jobs lost in the coalfields
+ The Coalfields Enterprise Fund (CEF, 2004–2014) and later the Coalfields Growth Fund (2009–2014) were created to support the growth of businesses and encourage entrepreneurship in coal regions
+ The Regional Growth Fund (RGF), formally outlined in the 2010 report "Local Growth: Realising Every Place's Potential," was a main component of the shift toward localism

Key Roles Played in Just Transition / Structural Adjustment

Federal Government	+ Supported a variety of policies and programs with funding including the National Coalfields Program, the Coalfields Regeneration Trust, the Single Regeneration Budget, and the EU Cohesion Policy
Local Government	+ Limited involvement
Generation Sector	+ Limited involvement
Trade Unions	+ Served as key stakeholders on the Just Transition Commission

Strengths & Successes

Aggregated Funding	+ Since the mid 1990's, government funding for major coal transition policy initiatives has amounted to about 1.5 billion euros + The Welsh Development Agency has been credited with enticing over $7.6 billion in private investment into the country from numerous multinational companies including Ford, Toyota, Anglesey Aluminum, and Admiral Insurance PLC. Its venture capital division also drove entrepreneurship in the region, spending $88 million of its own money to attract over $400 million in private investment and create over 11,000 jobs.

Weaknesses & Challenges	
Alignment / Coordination	+ Shifting government priorities has led to a disjointed and uncoordinated approach to community transition policies + The transition policies directed at the coalfields came very late—about 15 years after pit closures + A lack of a joint strategy and coordinated approach led to significant disconnects between development plans, funding offerings, and workers' training programs + With the exception of the EU Cohesion Policy, many policies did not prescribe evaluation, so data on program implementation successes and challenges is largely unavailable
Inadequate Funding	+ Much of the capital investment and business support only began in the 1990s, when issues such as the exodus of young, skilled workers from coal communities had already occurred + As part of the European Union, however, the government (prior to January 1, 2021) was restricted from supporting industry with "state aid" that could give the United Kingdom an unfair economic advantage, with the exception of designated areas of underdevelopment
Worker Experience	+ The majority of government policies were focused on industry privatization and accelerating the closure of uncompetitive mines, but they showed little support or consideration for workers + The main tool for supporting workers, aside from the welfare state, was the British Coal Enterprise (BCE), a subsidiary of the state-owned British Coal Company and which failed to meet the needs of ex-miners + About 60 percent of workers received no retraining or help with job search and applications. Among workers who received career advice and retraining opportunities, most reported a negative experience
Employment Outcomes	+ The employment rate in coalfield areas is currently more than two percentage points behind the national average, and five percentage points behind the rate in the wealthy Southeast of England
Relevance & Applicability to Australia	
Key Insight 1	+ Reliance on welfare policies (early retirement, unemployment, and disability payments) does not give workers the tools they need to develop new economic activity. Coal workers possess valuable skills and experience that can and should be leveraged in other industries.
Key Insight 2	+ To promote local growth, programs need to define targeted objectives, have a long horizon, combine bottom-up and top-down planning, and be cohesive with other policies. One-off programs (a common policy design in the United Kingdom) are hard to coordinate with and to evaluate.

Key Insight 3	+ Building pre- and post-evaluation plans into policies is crucial for informing policy design. Having clear targets and metrics, as well as reporting responsibilities and accessible records, allows policies to be evaluated and funding to be directed to the greatest-value projects.

Sources

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+ James Rising, Regional Just Transitions in the UK: Insights from 40 Years of Policy Experience, Resources for the Future and the EDF, December 2021
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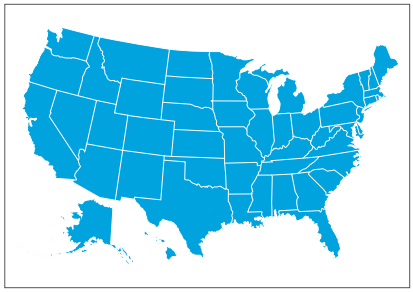
+ Travers Merrill and Lucy Kitson, The End of Coal Mining in South Wales: Lessons learned from industrial transformation, IISD and GSI, May 2017
+ Christina Beatty, Steve Fothergill and Tony Gore, The State of the Coalfields 2019, Centre for Regional Economic and Social Research Sheffield Hallam University, July 2019

Country / Region

United States of America



Context

Since 2011, the number of job losses in the coal mining sector has accelerated, falling by more than half, part of a sharp downturn that began in the mid-1980s. Additionally, many coal-fired power plants have been slated for retirement by 2035 to align with President Biden's goal to decarbonize the electricity sector by 2035, and new policies to promote clean power will only accelerate this trend. This transformation will have clear impacts on fossil fuel workers and coal communities. US coal communities have experienced economic decline for years, but just transition efforts have only recently been initiated.

Synopsis of Key Actions

+ Early policy in the 1960s to 1990s was focused on prolonging the life of coal industries
+ The Appalachian Regional Commission (ARC), first established in 1965 has helped workers in coal communities
+ The Partnerships for Opportunity and Workforce and Economic Revitalization (POWER) Initiative within ARC focuses on addressing worker dislocations along the coal supply chain and creating economic diversity
+ President Biden's executive order on climate established an Interagency Working Group (IWG) on Coal and Power Plant Communities and Economic Revitalization
+ President Biden's "Build Back Better" legislation aims to channel investment toward fossil fuel communities to create jobs and seed new industries

Key Roles Played in Just Transition / Structural Adjustment

Federal Government	+ Established several initiatives and working groups to support coal communities + The Appalachian Regional Commission (ARC), first established in 1965, is a multi-state initiative that is supported by federal funds, has been a program that has helped workers in coal communities + The Partnerships for Opportunity and Workforce and Economic Revitalization (POWER) Initiative within ARC focuses on addressing worker dislocations along the coal supply chain and creating economic diversity + Interagency Working Group (IWG) on Coal and Power Plant Communities and Economic Revitalization to report on mechanisms to support and revitalize the economies of coal and power plant communities + Provided legislative guidance via the Build Back Better legislation and climate targets to prioritize the transition to clean energy + Multiple avenues for funding available for clean energy development and disadvantaged communities
State Government	+ Ultimately responsible for implementation of policy and transition plans + Some states such as California, Colorado, and New Mexico have passed just transition legislation, but most have not made any efforts to date

Generation Sector	+ Limited involvement
Trade Unions	+ Unions and environmental groups struck an agreement with utility PG&E to support workers and the local community as it planned to decommission its Diablo Canyon nuclear plants + California now is looking to create similar programs for its oil sector amid a structural shift taking place
Community Organizations	+ Independently encouraging just transition initiatives with limited or no government involvement + The Just Transition Fund is collaborating with community leaders and organizations to help them manage the federal and state funding and grants process and to offer technical assistance with transition planning
Strengths & Successes	
Aggregated Funding	+ $38 billion in potentially available federal funding for coal communities including finance for infrastructure, site remediation, and local community development + The POWER Initiative was to funnel over $328 million into nearly 300 projects covering more than 350 coal communities across 13 states and helped leverage over $1.1 billion in private investment
Community Engagement	+ The Interagency Working Group has been conducting outreach to spread awareness of federal funding opportunities for coal communities
Weaknesses & Challenges	
Alignment / Coordination	+ Even though President Biden has already made this topic a priority through his executive orders and infrastructure agenda early in his presidency, he has yet to establish a robust, long-term just transition plan + Expected changes from future administrations has led to uncertainty + Progress is occurring on a state-by-state basis. There is little to no coordination and collaboration between states
Funding Access	+ Compressed timelines and complicated application processes make it challenging for small organizations and traditionally underrepresented groups to access federal and state funding
Critical Role Gaps	+ State and local initiatives do not fully compensate for the need for leadership and coordination at the federal level
Worker Experience	+ Many layoffs and coal retirements have already occurred without any transition plan or workforce support
Community Outcomes	+ Top-down approach without a focus on community or workforce engagement

Relevance & Applicability to Australia	
Key Insight 1	+ Proactive initiative must be taken before mines or generators are closed and the workforce is laid off
Key Insight 2	+ While the coal transition is unique for every location, there are several key components that are needed for any just transition – strong government leadership, diverse local representation to ensure the transition plan is equitably designed by and for the community, accessible job training with connections to high-quality jobs, and sufficient funding to make the transition plan possible
Key Insight 3	+ An approachable funding and grant process should be developed to provide avenues for small organizations and traditionally underrepresented groups to access funds

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+ Molly Chamberlin, Nicole Dunn, Success Factors, Challenges and Early Impacts of the POWER initiative, An implementation evaluation, Appalachian Regional Commission, October 2019
+ Colorado Just Transition Advisory Committee, Draft Colorado Just Transition Plan, Colorado Department of Labor and Employment, August 1, 2020
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Country / Region

Canada

Context

In December 2018, the government of Canada announced plans to phase out coal-fired electricity by 2030. As part of this commitment, the government launched the Task Force on Just Transition for Canadian Coal Power Workers and Communities Just Transition to bring together stakeholders to develop recommendations for a just transition plan for impacted workers and communities.

Synopsis of Key Actions

+ The government created the Just Transition Task Force that travelled to Canadian coal communities and met with people involved in the closure of the coal sector to develop just transition policy recommendations
+ Initiatives have prioritized community input and collaborative transition planning
+ The Just Transition Task Force recognized the need for customized solutions by province due to unique local contexts and utility structures

Key Roles Played in Just Transition / Structural Adjustment

Federal Government	+ Established the Just Transition Task Force to provide general coordination and recommendations + Ensured coordination with key stakeholders including labour and community organizations + Provided funding for economic diversification in coal communities
Local Government	+ The Alberta Narratives Project provides a compelling example of what can be achieved through community-based initiatives for bridge-building + Workers participated in “Narrative Workshops” to voice their concerns around the energy transition
Generation Sector	+ Involvement needs will vary by province - different provinces have different utility structures (fully privatized versus state owned)
Trade Unions	+ The Canadian Labour Congress called on the government to create a Just Transition Task Force

Strengths & Successes

Alignment / Coordination	+ The federal government has established the Just Transition Task Force to provide general coordination and recommendations
Aggregated Funding	+ The government’s 2019 federal budget included $150 million for economic diversification in coal communities
Worker Options & Empowerment	+ Just Transition Task Force community interviews gave workers and their families the opportunity to express concerns and hopes for a just transition

Community Outcomes	+ The Task Force recognized that a 'one-size-fits-all' approach would not work – the core of the Task Force recommendations are locally driven and locally delivered solutions + The federal government funded the establishment and operation of locally driven transition centers in affected communities + Workers, governments, and community representatives have recognized these centers as a proven model from past experience to deliver consistent yet context-appropriate and flexible services and information, covering everything from re-employment opportunities and skills recognition, to educational and financial services, and healthcare
Weaknesses & Challenges	
Alignment / Coordination	+ Canada's federal model and division of jurisdictional power between governments was named as a significant obstacle, as it enables provinces to oppose federal initiatives + More scaled-up action and concrete just transition policies and investments are needed by the government beyond its initial efforts
Long-Term Funding	+ Resources have been allocated in the 2019 budget to provide critical funds to begin implementing the recommendations of the Just Transition Task Force, but additional consistent funds will be needed to continue the transition
Worker Experience	+ Workers and community members expressed their dissatisfaction with how the Government decided and announced the phase-out in the first place, pointing to limited or no consultation about the impacts for both provincial power grids and for the coal mine and electricity-generation workforces
Relevance & Applicability to Australia	
Key Insight 1	+ Overarching federal coordination is necessary to provide certainty for workers and align initiatives across local contexts, even if regional differences necessitate customized approaches
Key Insight 2	+ Solutions locally designed and implemented can deliver context-appropriate and flexible services for affected communities
Key Insight 3	+ Local support and buy-in from impacted communities and workers is crucial to maintain an empowered workforce that can continue to contribute to local economic development
Sources	
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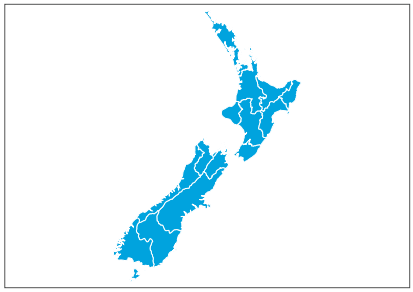
Country / Region

Taranaki, New Zealand



Context

The New Zealand government stopped issuing new permits for offshore oil and gas exploration in 2018. This policy has significantly impacted communities in the Taranaki region, which has supported oil and gas exploration off the west coast of the North Island of New Zealand for several decades.

Synopsis of Key Actions

+ Stopped issuing permits for offshore oil and gas exploration in 2018
+ Set up the Just Transitions Unit in of the Ministry of Business, Innovation and Employment, to foster a transition towards a low emissions economy that is "fair, equitable and inclusive" in 2018
+ Facilitated a consultation process led by Taranaki unions, investors, councils, and indigenous groups to discuss local opportunities across other sectors
+ Developed the Taranaki 2050 Roadmap which was launched at a National Just Transition Summit hosted in the region in May 2019

Key Roles Played in Just Transition / Structural Adjustment

Federal Government	+ Set up the Just Transitions Unit in of the Ministry of Business, Innovation and Employment. The unit operates by creating partnerships in communities undergoing a major transition – currently the Taranaki region.
Local Government	+ Participated the Taranaki Transition Lead Group, established by the Just Transition Unit, along with Māori, local workers, and education and community organizations + Helped to facilitate 29 workshops around the region + Contributed to the Taranaki 2050 Roadmap
Generation Sector	+ Limited involvement
Trade Unions	+ Limited involvement

Strengths & Successes

Alignment / Coordination	+ Proactively addressing the impacts of coal closures + Focus on community-level coordination and engagement with local community members, workers, and organizations to develop a forward-looking roadmap + Dozens of workshops held to develop a cohesive plan for just transition implementation
Aggregated Funding	+ The Government has directly supported the process with over $1.6million in funding and staff in the Taranaki region + Includes providing funding to Venture Taranaki to employ local staff and facilitators to deliver this work for the region

Community Outcomes	+ Community consultation process has been a key focus of this effort with pointed engagement with representatives drawn from central government, local government, Māori, business, the workforce, education and community organizations + Community groups have led the development of a transition roadmap and implementation plan via the Taranaki Transition Lead Group
Weaknesses & Challenges	
Implementation	+ Roadmap implementation is still in process so the ultimate impact of this work on the workforce and communities is unknown
Alignment / Coordination	+ Government has taken a segmented approach first focusing on the Taranaki region rather than the entire country + It will be important to implement lessons learned from this process to help transition other regional economies
Relevance & Applicability to Australia	
Key Insight 1	+ The direct involvement of people most affected by coal closures is crucial to the transition being just. A local partnership approach in the Taranaki region led to the development of a community-based framework and implementation plan.
Key Insight 2	+ Initiative must be taken proactively as in the Taranaki region to mitigate the impacts of coal closures on communities and workers
Key Insight 3	+ The New Zealand approach has effectively balanced top-down and bottom-up approaches to develop a flexible, specialized strategy for the Taranaki region with local buy-in
Sources	
+ Ministry of Business, Innovation, and Employment: Hikina Whakatutuki, Just Transitions for Taranaki + Liz Smith, Sandar Duckworth, Research into partnership approaches for transition planning: Learning from the Taranaki 2050 Roadmap process, Litmus, February 24, 2021 + New Zealand – The Just Transitions Unit, Wellbeing Economy Alliance	

2.2 | Australian Transition Case Studies

Coal has played a key role in the economic development of Australia and the nation has historically relied on power generation from black and brown coal more than most developed nations.

Unsurprisingly, most existing power stations are in regions adjacent to major coal fields rather than near urban areas or ports. As a result of this configuration, the social and economic impact of power station closures will be concentrated in regions heavily reliant on that industry.

Now facing the progressive retirement of its coal-fired power stations, it is important to incorporate lessons learned to date from Australia's power station closures and wider structural adjustment initiatives. As such, this section explores lessons learned from the following examples:

Power station closures:

+ **Hazelwood, Latrobe Valley, Vic (Engie)**
+ **Liddell, Hunter Valley, NSW (AGL)**
+ **Collie, WA (Synergy)**

Wider structural adjustments

+ **Lonsdale and Tinley Park, SA (Mitsubishi plant)**
+ **Newcastle Steel Works, NSW (Newcastle Steel)**

Note that this compilation of case studies is not meant to be comprehensive, rather, it aims to explore the most impactful plant closures in Australia to date and extract key learnings that may be used to inform successful Just Transition strategies.

Region / State

Latrobe Valley, Vic

Context

The Hazelwood Power Station was a 1,600MW brown coal generator in Victoria's Latrobe Valley owned and operated by ENGIE. The plant directly employed 495 staff and approximately 300 contractors. Most of these workers were laid when the station reached the end of its operational life and closed in March 2017.

Synopsis of Key Actions

+ While lacking an extended process of engagement and transition planning before the closure, Federal and State governments committed significant transition funding following the announcement
+ Worker Transfer scheme helped workers transfer to neighbouring power stations and offered incentives for some to retire early
+ Worker Transition Service provided targeted skill training to help workers find new employment, provided emotional support, and career and financial advice
+ The launch of the Latrobe Valley Authority created more than 2,500 jobs and generated $99m in private investment

Key Roles Played in Just Transition / Structural Adjustment

Federal Government	+ Committed $43m of transition funding support
State / Local Governments	+ Committed $22m in immediate assistance to the workforce, and then around a quarter of a billion dollars in longer term measures, including infrastructure investment in the region + Developed Gippsland's "Smart Specialisation" strategy which consulted over 3,000 individuals and organizations identify sectors with potential for innovation and development + Established the Latrobe Valley Authority to support the region in transition with sustainable economic growth
Generation Sector	+ Participated in the Worker Transfer Scheme to help displaced workers transfer to neighbouring power stations, where possible + Agreed to offer redundancies to older workers nearing retirement
Trade Unions	+ Limited involvement

Strengths & Successes

Alignment / Coordination	+ Collaboration between private companies and government to jointly manage employment impacts of a closure

Aggregated Funding	+ The Federal government provided $43m of funding support – Only $3m was for immediate assistance to the affected workers for financial counselling, assistance with résumé writing, and advice on job seeking + The State government provided $22m in immediate assistance to the workforce, and then around a quarter of a billion dollars in longer term measures, including: – $20 million to establish the Latrobe Valley Authority; – $22 million for redeployment and retraining; – $20 million for a Worker Transfer Scheme; – $174 million for a Community Infrastructure & Investment Fund; – $7.8 million to upgrade public housing; – $5 million for energy efficiency upgrades for low-income households; – $17 million for a Hi-Tech Precinct; and, – $345 million was to upgrade the Gippsland Rail Line.
Worker Options & Empowerment	+ Worker Transfer scheme helped workers transfer to neighbouring power stations and offered incentives for some to retire early + Worker transition service provided targeted skill training to help workers find new employment, provided emotional support, and career and financial advice + Together, workers in retraining programs obtained over 2,800 accredited qualifications in various trades and industrial skills + The majority of people that initially lost their job when Hazelwood closed had found new employment by mid-2019
Employment Outcomes	+ The launch of the Latrobe Valley Authority: – Helped the creation of more than 2,500 jobs and $99m in private investment – Delivered $50m of business incentives – Advanced $40m economic development program to support Hazelwood suppliers to expand into new markets + The Latrobe Valley's unemployment rate was lower three years after closure than it had been beforehand + The majority of people that initially lost their job when Hazelwood closed had found new employment by mid-2019 + Two-and-a-half years after the plant was shut, an additional 11,200 people had found employment in the region + The former operator established and met a 70 per cent local employment target for power station rehabilitation works
Weaknesses & Challenges	
Alignment / Coordination	+ The workforce and region were provided 5-months' notice of the closure + No extended process of workforce engagement and transition planning occurred before the closure + The Worker Transfer scheme can only be seen as a temporary solution as other generators progressively retire their plant

Relevance & Applicability to Australia	
Key Insight 1	+ Coordinated investment enabled economic growth and diversification along with sustainable jobs for displaced workers
Key Insight 2	+ Access to personalised services and holistic support enabled workers to retrain and enter other growing industries with support and certainty
Key Insight 3	+ Both near term and long-term solutions are necessary and must work together. While economic diversification is not an immediate solution, it provides a key complement to measures like the Worker Transfer Scheme, which was a short-term but necessary support service

Sources

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Region / State

Hunter Valley, NSW

Context

Liddell Power Station is owned and operated by AGL and has played an important role in supplying electricity in NSW for over 50 years. In 2015, AGL announced it would close Liddell in 2022. AGL later extended this to April 2023. AGL's closure of Liddell was coupled with plans to transition the site into an integrated industry energy hub.

Synopsis of Key Actions

+ Extensive engagement with key local stakeholders including employees, Unions, all levels of government, local business and community leaders
+ Commitment to no forced redundancies as a result of Liddell's closure
+ AGL developed plans to repurpose and redevelop the Liddell site and associated infrastructure assets and resources to maintain economic contribution to the region and create employment for workers
+ Government established the Liddell Taskforce in August 2019 to assess the impacts of AGL's announced closure of Liddell on electricity prices, reliability and security, the regional economy and dependent industries

Key Roles Played in Just Transition / Structural Adjustment

Federal Government	+ Established the Liddell Taskforce in August 2019 to assess the impacts of AGL's announced closure of Liddell on electricity prices, reliability and security, the regional economy and dependent industries
State / Local Governments	+ Jointly established the Liddell Taskforce in August 2019 + NSW Government site transition working group established to support Liddell closure program and maximize opportunity for economic diversification in Hunter region
Generation Sector	+ AGL actively working with community, industry and academia to guide the transition, including measures to support and diversify the local economy and upskill the workforce + Formed the Hunter Energy Transition Alliance to work with the community to identify opportunities for new energy investment, future jobs and the Liddell site + AGL working with the community to identify opportunities for new energy investment, future jobs development of industrial energy hub at the Liddell site
Trade Unions	+ Involved with enterprise agreement negotiations, commitment to no forced redundancies and regular Liddell transition engagement and consultation forums

Strengths & Successes

Alignment / Coordination	+ The long notice period for Liddell's closure has helped the local region prepare for the transition to new industries + Key involvement of the generation sector provided workers with some certainty in terms of transition planning and job opportunities

Worker Options & Empowerment	+ Commitment to no forced redundancies as a result of Liddell's closure + Pathways for workers to transfer to Bayswater power station leading into and post closure established + Those consulted felt prepared for the transition, and many were looking forward to new opportunities + Stakeholders acknowledged the significant work already underway to prepare for the transition prior to closure
Employment Outcomes	+ Proactive development of new opportunities via integrated industrial energy hub plans
Weaknesses & Challenges	
Employment Outcomes	+ Viable new opportunities still in development
Relevance & Applicability to Australia	
Key Insight 1	+ The long notice period for Liddell's closure has helped the local region prepare to transition to new industries
Key Insight 2	+ Transition planning from the owner of the Liddell Power Station has resulted in optimism from the community and displaced workers along with new job and training opportunities
Key Insight 3	+ Recognizing the challenge of power station closure, the Commonwealth and NSW Governments established the Liddell Taskforce to assess the impacts of AGL's announced closure of Liddell on electricity prices, reliability and security, the regional economy and dependent industries

Region / State

Collie, WA

Context

Western Australia has experienced very significant uptake of rooftop solar and other renewable sources. As a result, the coal-fired power stations located in the Collie region and owned by state-owned Synergy are being retired in a phased, managed approach in the years to 2029. Collie Power Station will be retired by the end of 2027, and the remaining Muja D units in 2029.

Synopsis of Key Actions

+ Western Australia state premier Mark McGowen personally spearheaded a proactive and holistic approach to the transition of the Collie region and the application of Just Transition principles. This included:
  – Development of the Just Transition Plan in collaboration with the Just Transition Working Group, comprising local industry, community, union and government stakeholders, and,
  – Provision of a $547.4 million funding package for the ongoing Just Transition of Collie
+ Investments are being made to expand the Collie Jobs and Skills Centre and invest in new initiatives to support the local workforce

Key Roles Played in Just Transition / Structural Adjustment

Federal Government	+ Limited involvement
State / Local Governments	+ Established a Ministerial Steering Committee for the Economic Development Plan for the Collie Bunbury Regions, chaired by the Minister for Regional Development to oversee the delivery of the Economic Development Action Plan for the Collie and Bunbury Regions 2020-2026 + Appointed a working group of various Collie stakeholders in anticipation of the generator closures + Developed the Just Transition Plan in collaboration with the Just Transition Working Group, comprising local industry, community, union and government stakeholders + Provided a $547.4 million funding package for the ongoing Just Transition of Collie
Generation Sector	+ Muja's operator will address job losses with a Workforce Development & Transition Manager to respond to individual worker needs
Trade Unions	+ Actively engaged in the co-development of the Just Transition Plan

Strengths & Successes

Proactive	+ The Western Australian government has been extremely proactive in its response and has appointed a working group of various Collie stakeholders in anticipation of the Muja coal-fired generator closure

Aggregated Funding	+ The Western Australian Government has committed to provide a $547.4 million funding package for the ongoing Just Transition of Collie. This is in addition to around $115 million already committed to the Just Transition in 2020. + An additional $12 million will be spent to expand the Collie Jobs and Skills Centre and invest in new initiatives to support the local workforce
Worker Options & Empowerment	+ Committed investment to decommission the power stations after closure creating an ongoing pipeline of local work + The expanded Jobs and Skills Centre is being expanded to offer the following services: – Workforce transition services offering free career, training and employment advice for individuals and businesses; – Fee-free skills assessments and recognition of prior learning to utilize workers' existing skills and knowledge to get a formal qualification, and identify any skills gaps; – Free training for impacted workers who wish to undertake either a full qualification or a short course; and – Assistance connecting jobseekers with employment opportunities and helping employers attract and recruit employees.
Economic Diversification	+ Collie Industrial Transition Fund established to invest in new and emerging industries and create new local jobs
Weaknesses & Challenges	
Federal Leadership	+ No systemic provision of financial support by Commonwealth
Wider Transferability	+ Given the particular socio-political context of Collie, state-ownership of Synergy and the depth of engagement by Western Australia government, some stakeholders may question how transferrable the Collie experience is to other contexts
Relevance & Applicability to Australia	
Key Insight 1	+ Government leadership, engagement and resourcing is an essential ingredient in advancing Just Transition particularly when coupled with the empowerment of local communities and impacted workers to have maximal autonomy to choose their own future
Key Insight 2	+ Economic diversification is a key-long term strategy to promote economic growth and sustainable job opportunities
Key Insight 3	+ Initiative must be taken to make proactive, comprehensive plans to ensure limited impacts to communities and impacted workers
Sources	
+ Collie Just Transition Plan Overview, Government of Western Australia, 2020 + Collie Just Transition Plan, The Department of the Premier and Cabinet, 2020	

Region / State

Lonsdale and Tonsley Park, SA

Context

In May 2004, Mitsubishi Motors Australia Limited announced the closure of its engine foundry at Lonsdale with approximately 700 employees, and its Tonsley Park assembly site with 400 employees as well as 400 voluntary redundancies from its Tonsley Park assembly site.

Synopsis of Key Actions

+ $55 million in combined funding committed by the Federal and State governments
+ $10 million ($10,000 per worker) was provided via the Labour Adjustment Package (LAP) to be delivered through privately run Job Network Agencies (although this service was not used by 38% of displaced workers)
+ Only 34% of workers found full time employment, while over 20% were in casual or part-time employment; the majority of those in casual employment would have rather had full time employment

Key Roles Played in Just Transition / Structural Adjustment

Federal Government	+ Committed $40 million to the Structural Adjustment Fund for South Australia (SAFSA) + Committed $10 million ($10,000 per worker) via the Labour Adjustment Package (LAP) to be delivered through privately run Job Network Agencies
State / Local Governments	+ Committed $5 million to the SAFSA
Industry	+ Committed an additional $450 per worker to the Job Network Providers
Trade Unions	+ Limited involvement

Strengths & Successes

Aggregated Funding	+ $55 million in combined funding – $45 million contributed to the SAFSA by the federal and local government which offered grants to new businesses wanting to invest in South Australia or existing businesses that wanted to expand their business in South Australia – $10 million ($10,000 per worker) via the Labour Adjustment Package (LAP) to be delivered through privately run Job Network Agencies – Mitsubishi committed an additional $450 per worker to the Job Network Providers

Weaknesses & Challenges	
Funding Allocation	+ Over half of the SAFSA funding went to businesses on the northern side of the city when most of the displaced Mitsubishi workers lived in the southern region + Allocation of funds to the private Jobs Network agencies was unsuccessful as workers reported a poor experience and many did not use this service + No funds were set aside by either Federal or State government for re-training or up-skilling workers
Worker Options & Empowerment	+ Workers were not provided with the necessary education and training opportunities to equip them with the skills required to be able to move into employment in other local industries such as mining and defense
Employment Outcomes	+ Significant job insecurity and poorer working conditions experienced – Only 34% of workers found full time employment, while over 20% were in casual or part-time employment; the majority of those in casual employment would have rather had full time employment – Of those in full-time employment 31% reported that their current job was worse than their job at Mitsubishi, while 41% of those in casual employment found their current job worse than their job at Mitsubishi – Some 71% of respondents reported that they were now earning less that when employed at Mitsubishi + Of those who did use the Job Network provider, their reported experience was one of disappointment and frustration as they felt that the Job Networks were more used to long-term unemployed, rather than skilled workers with a long work history
Relevance & Applicability to Australia	
Key Insight 1	+ Funding should be directed to invest in retraining and up-skilling to enable workers to transition into permanent, well-paying employment
Key Insight 2	+ Job placement and networking services must be tailored to the needs of workers
Key Insight 3	+ Often, jobs being lost are permanent, well-paying jobs. Workers need to be transitioned to jobs of a similar caliber for job security and maintenance of quality of life
Sources	

+ T. Barrett, From the ground up: A Blueprint for economic diversification in regional Australia, Blueprint Institute, 2021
+ ACTU, Sharing the challenges and opportunities of a clean energy economy: A Just Transition for coal-fired electricity sector workers and communities, Australian Unions

Region / State

Newcastle Steel Works, NSW

Context

In 1960, BHP's Newcastle steelworks employed an estimated 12,000 to 16,000 people, but over the 15-year period that began in 1982, employment decreased from over 12,000 workers to 3,200 due to a decrease in global steel demand and competition from Asian steel producers. In 1997, BHP announced that it would close its Newcastle steelworks in 1999. At the time, the closure was thought to be Australia's largest de-industrialisation event.

Synopsis of Key Actions

+ The national government, BHP, and labor unions negotiated a five-year Steel Industry Plan (1984-1988) to support the industry
+ The Transition Steering Team (TST) formed in 1996 inside the steelworks, consisting of representatives from BHP management, labour unions and other (non-union) employees

Key Roles Played in Just Transition / Structural Adjustment

Federal Government	+ Limited involvement
State / Local Governments	+ Established the Economic Development Office + Initiated an Economic Development Strategy for the Hunter Valley region + Provided funding for new projects in the region
Industry	+ Created the Transition Steering Team to internally plan for the plant closure + BHP collaborated with universities and the state Department of Education to train employees in specific vocations, such as teaching, for which workers with needed skills were in short supply + Provided funding for new projects in the region
Trade Unions	+ Unions accepted some downsizing, reduced wage demands, and agreed to use less confrontational approaches, in order to improve the plant's viability in the short-term and thus ensure that some workers could continue to be employed + Cooperative approach with BHP
Community Organizations	+ Community leaders formed the Common Purpose Group with the intention to develop a coherent, common vision of economic development for the city and region

Strengths & Successes

Aggregated Funding	– BHP and state and federal governments came together to pledge AUD 30 million towards new projects in the Hunter region as part of the Hunter Advantage Fund – The Personal Pathways employee support program did not end up costing BHP any extra funds; it paid for itself through avoided salaries and redundancy entitlements of those employees who found new employment before the closure

Worker Options & Empowerment	+ The TST helped to negotiate redundancy packages and redeployment benefits for workers that unions later described as “unprecedented” in scope + The TST helped develop and promote the Personal Pathways program, a series of individual, employee-tailored support mechanisms that included support services for retraining and finding new employment, as well as the provision of services for financial planning and mental health needs – Included additional special support for certain groups of workers (e.g., those aged over 45 or with disabilities) – 7,000 separate training events were organized by the time the program finished
Employment Outcomes	– Within a year after the steelworks closure, an estimated 90% of the participants had found new employment
Weaknesses & Challenges	
Funding Allocation	+ Financial support from the government only came after community groups and BHP lobbied for funding
Employment Outcomes	+ Regional job numbers increase but the expansion came largely from part-time, casual, low-paid, and temporary positions
Relevance & Applicability to Australia	
Key Insight 1	+ A combination of direct, tailored support for workers along with regional economic development measures provided job opportunities that matched the skills that workers had
Key Insight 2	+ Long-term collaboration and trust between key stakeholders provided a forum for transition planning and implementation
Key Insight 3	+ Proactive planning minimized costs and job losses
Sources	

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