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BUILDING PROSPEROUS, JUST AND RESILIENT ZERO-CARBON REGIONS:

**Learning from recent Australian and
international experience**

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Melbourne Climate Futures acknowledges the Traditional Owners of the lands on which we work, research and study. We pay our respects to their Elders, both past and present, and extend that respect to all Aboriginal and Torres Strait Islander Australians who have made a contribution to the life of the University of Melbourne community.

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EXECUTIVE SUMMARY

Increasing recognition of the speed with which fossil fuels need to be phased out combined with sharp falls in renewable energy costs are creating significant challenges for many Australian regional communities with a long history of reliance on fossil fuel industries. At the same time, there is also increasing evidence that a well-managed, just transition to a zero-carbon economy can create huge economic, employment, health and environmental opportunities and benefits.

Learning from the diverse ways in which Australian and international governments, communities, trade unions and business are responding to these challenges and opportunities provides an important source of guidance in setting regional transition policy and research priorities. This Discussion Paper therefore provides a concise overview of learning from recent Australian and international policy and research literature about strategies for accelerating just and well-managed regional transitions. Key learning about regional transition policy and research challenges, opportunities and priorities highlighted in the paper includes the following.



BUILDING PROSPEROUS, JUST AND RESILIENT ZERO-CARBON REGIONS: KEY CHALLENGES AND OPPORTUNITIES

Accelerating the just, well-managed phase out of fossil fuel industries is an essential requirement for reducing GHG emissions at the speed and scale required to meet the Paris Agreement global warming targets.

A rapid transition from fossil fuels to renewable energy is now inevitable, given international pressure to phase out fossil fuels and accelerating falls in the price of renewable energy.

The transition policies and strategies we choose now will determine whether Australia's transition to a zero-carbon economy **is fair and well-managed or chaotic and inequitable**.

Australia's rich renewable energy resources can support a secure, reliable and affordable low emissions electricity supply and high value, energy intensive industries.

The transition from fossil fuel-based industries to renewable energy and low emissions industries can **create huge economic, employment, health and environmental opportunities** and benefits for Australian regions - but only if we act now.

A proactive, collaborative and well co-ordinated strategy for accelerating the phase out of fossil fuel industries is likely to achieve far better social, economic and environmental outcomes than an unplanned, reactive approach.

Broad public and political support for accelerating the transition to a zero-carbon economy depends on workers and communities being fully convinced that governments and business are genuinely committed to **inclusive, long-term, well-resourced just transition principles and policies**.



SUCCESS FACTORS DRIVING JUST AND WELL-MANAGED REGIONAL TRANSITION STRATEGIES

Respectful and inclusive engagement with workers, communities and all relevant stakeholders.

Strong, proactive and well co-ordinated policy leadership from all levels of government.

Transition governance authorities providing national level co-ordination and enabling local engagement and accountability.

Well-planned, adequately funded re-employment, retraining and early retirement programs for workers affected by mine and plant closures.

Economic renewal and diversification policies building on regional strengths and informed by local knowledge and experience.

Maximizing the creation of **secure, high-quality jobs**.

Expanding opportunities for all workers and community members, including Indigenous communities, young people, women, people with disabilities and other vulnerable and marginalized groups.

Adequately resourced plans for **rehabilitating and regenerating mine sites and power plants**.

Ensuring government and business commitments to just transition goals and strategies are underpinned by **detailed implementation plans and adequate long-term resourcing**.



POLICY PRIORITIES FOR CREATING JUST AND RESILIENT ZERO-CARBON REGIONS

- I. Set a national target and establish clear policy framework for **reducing emissions by 50-75% by 2030 and achieving net zero emissions by as close as possible to 2035.**¹
- II. Set a national target and establish clear policy frameworks for **expanding renewable energy exports by 70-90% by 2030.**
- III. Establish a national **clean commodity export target of \$100 billion by 2035.**
- IV. **Rapidly phase out fossil fuel subsidies.**
- V. Create and implement a **Zero-Carbon Australia Regional Transition Plan.**
- VI. Establish i) a **national-regional transition** authority to co-ordinate regional transition policies and investment and ii) **regional transition authorities** to engage with local communities and build on regional strengths and knowledge.
- VII. **Plan and invest in a national electrification strategy** and appropriate grid infrastructure enabling rapid implementation of Renewable Energy Industrial Precinct plans and decentralised energy systems.
- VIII. Support the rapid development and scaling up of **community energy projects.**
- IX. Plan, invest in, and implement **national labour market, education and training programs** to ensure skilled workers are available to implement zero-carbon economy transition strategies.
- X. Plan and invest in **mission-oriented regional industry development** and smart specialization strategies informed by local knowledge and experience.



NEXT STEPS IN AUSTRALIAN RESEARCH ON JUST AND WELL-MANAGED REGIONAL TRANSITIONS: KEY KNOWLEDGE GAPS AND RESEARCH PRIORITIES

- I. **Sharing Australian and international learning** about promising and successful regional transition policies and strategies.
- II. Evaluating the **co-benefits of mitigation across key zero-carbon economy transition sectors** (e.g., renewable energy; electrification infrastructure; clean energy transport; manufacturing; food and agriculture; health; biodiversity; carbon draw down initiatives; supply chains).
- III. Monitoring and evaluating the **local economic and employment impact** of regional transition policies and programs.
- IV. Strengthening understanding of regional **transition governance models and practices.**
- V. Strengthening understanding of strategies for **respectfully and effectively engaging Indigenous communities** in the development and implementation of regional energy transition strategies.
- VI. Understanding and addressing key regional transition **challenges and opportunities for women, young people, Indigenous communities, people with disabilities and other marginalised and vulnerable communities.**
- VII. **Identifying skill requirements and labour market policies** required to maximise employment outcomes of regional transition strategies.
- VIII. **Identifying infrastructure investment priorities** required to maximise emissions reduction and the economic and employment potential of regional energy transition strategies.
- IX. Identifying **regional transition investment opportunities, priorities and mechanisms.**

INTRODUCTION

The mining of coal, oil and gas along with industries powered by low-cost fossil fuel energy have been crucial drivers of Australian economic and export growth for well over a hundred years. Fossil fuel-based industries have also been key sources of economic prosperity and employment for many Australian regions and communities.

International pressure to reduce fossil fuel emissions combined with sharp falls in the price of renewable energy are creating significant challenges for many Australian regional communities with a long history of reliance on fossil fuel mining and industries. There is also increasing evidence that a well-managed, just transition to a low-emissions, zero-carbon economy can create huge economic and employment opportunities.

Learning from the diverse ways in which Australian and international governments, communities, trade unions and business are responding to these challenges and opportunities provides an important source of guidance in setting regional transition policy and research priorities. This Discussion Paper therefore provides a concise overview of learning from recent Australian and international policy and research literature about strategies for accelerating just and well-managed regional transitions.

Work on regional just transition strategies is growing and evolving rapidly, both in Australia and internationally. This short paper does not attempt to provide a comprehensive analysis of the rapidly expanding body of research on these crucial developments. Our more modest aim here is to share learning about regional economic transitions of particular relevance to the Australian context as a contribution to informing public debate about just transition challenges and opportunities and to assist in identifying policy and research priorities.

The first section of the paper highlights key learning about regional energy and economic transition challenges and opportunities. This section concludes by noting that broad public support for accelerating the just and rapid phase out of fossil fuel industries depends on communities and workers being fully convinced that there is a genuine commitment to the actions required to create secure, high quality employment opportunities. Section 2 therefore summarises key success factors for achieving just and well-managed regional transition outcomes.

Section 3 draws on the discussion of just transition challenges and success factors to suggest a range of Commonwealth and State government policy initiatives which could play a key role in facilitating and accelerating just and well-managed regional transitions. The paper concludes in Section 4 with some reflections on knowledge gaps and research priorities which could usefully be considered in developing and implementing future just transition research agendas.

INTRODUCTION



1. BUILDING PROSPEROUS, JUST AND RESILIENT ZERO-CARBON REGIONS: KEY CHALLENGES AND OPPORTUNITIES

Recent Australian and international experience in designing and implementing just and well-managed regional energy transitions highlights the following key challenges and opportunities.

1.1. Accelerating the just and well-managed phase out of fossil fuel industries is an essential requirement for GHG emission reductions at the speed and scale required to meet the Paris Agreement global warming target.

If governments are serious about the climate crisis, there can be no new investments in oil, gas and coal, from now – from this year.

Fatih Birol, Executive Director, International Energy Agency, May 2021²

Analysis of reductions in fossil fuel production required to achieve a 50% chance of keeping global warming below 1.5 degrees, published in *Nature* in September 2021 finds that ‘by 2050 nearly 60 per cent of oil and fossil methane gas, and 90 per cent of coal must remain unextracted to keep within a 1.5°C carbon budget’.³

This research, which aligns closely with recent IPCC and IEA findings⁴ also highlights the need for 95% of Australian coal reserves to remain unused in order to achieve a 50% chance of keeping global warming below 1.5 degrees.

As Prof Ian Lowe, Emeritus Professor of Science, Technology and Society at Griffith University notes, ‘this new research refines and emphasises what we have known for a long time: to avoid catastrophic climate change, most of the known fossil fuels will have to be left in the ground. That is one form of carbon capture and storage that has been proven to work.’⁵

There is also increasingly strong evidence that keeping global warming below 1.5°C would require all countries - particularly developed economies such as Australia - to achieve net zero emission well before 2040.⁶ The 2021 Climate Council report, *Aim High, Go Fast* argues for example, that ‘given the scale of the global emissions reduction task, and taking into account Australia’s very high level of emissions and our huge renewable energy resources, Australia should aim to reduce emissions by 75% below 2005 levels by 2030 and reach net zero emissions by 2035. This is a fair and achievable contribution to the global task and an imperative given our high vulnerability to escalating extreme weather.’⁷

1.2. A rapid transition from fossil fuels to renewables is now inevitable, given international pressure to phase out fossil fuels and accelerating falls in the price of renewable energy.

Climate change is the most potent force re-shaping the nation’s future. Beyond huge environmental threats in a land of droughts and flooding rains, Australia has an export-oriented economy heavily reliant on foreign investment. If we fail to join with the rest of the world in committing to rapid cuts in emissions we will be starved of markets and capital.

Travers McLeod and Toby Phillips, Centre for Policy Development⁸

Recent comments by UN Secretary General, Antonio Guterres on the implications of the most recent IPCC climate science update highlight the political and commercial imperatives now further accelerating investment switching from fossil fuels to renewables. ‘Without deep carbon pollution cuts now, the 1.5-degree goal will fall quickly out of reach. There must be no new coal plants built after 2021. OECD countries must phase out existing coal by 2030, with all others following suit by 2040. Countries should also end all new fossil fuel exploration and production, and shift fossil fuel subsidies into renewable energy’.⁹

Research published by the Reserve Bank of Australia [RBA] in September 2021 finds that Australian coal exports would fall by 80% if Australia’s major trading partners implemented policies consistent with keeping global warming below 1.5 degrees.¹⁰ Commitments to zero emissions by 2050 by South Korea, Japan and China combined with the recent decision by China to end financing of all coal-fired power stations outside China suggest that this is indeed the direction in which Australia’s major trading partners are heading.

The RBA paper also notes that ‘the impact of a decline in fossil fuel exports would be significant for certain communities and regions, especially those in which mining accounts for a large share of employment.’

Between 2010 and 2019, the cost of large, utility-scale solar photovoltaic projects fell by 82% with the cost of concentrating solar power falling by 47%. Over the same period the cost wind power fell by 39% (onshore) and 29% (offshore).¹¹

The speed with which Australian renewable energy costs are falling leads Michael Liebreich, CEO of *Bloomberg New Energy Finance* to the following observation. ‘The perception that fossil fuels are cheap and renewables are expensive is now out of date. The fact that wind power is now cheaper than coal and gas in a country with some of the world’s best fossil fuel resources shows that clean energy is a game changer which promises to turn the economics of power systems on its head.’¹²

And, as the Business Council of Australia note in their October 2021 Report, *'Achieving Net Zero with more jobs and stronger regions'*, the transition policies we choose now will determine whether Australia's transition to a zero-carbon economy is fair and well-managed or chaotic and inequitable. 'The momentum for moving towards net zero by 2050 is unstoppable. The pace and scale of change is accelerating globally. Australia is at a crossroads: we can either embrace decarbonisation and seize a competitive advantage in developing new technologies and export industries; or be left behind and pay the price.'¹³

1.3. Australia's rich renewable energy resources can support a secure, reliable and affordable low emissions electricity supply and high value, energy intensive industries.

Australia's vast solar and wind resources combined with well-planned, adequately funded investment in energy transmission, distribution and storage infrastructure have the potential to rapidly expand Australia's access to secure and affordable renewable energy.¹⁴

The 2021 Beyond Zero Emissions [BZE] report, Export Powerhouse, Australia's \$333 billion export opportunity provides a compelling account of the huge potential for low-cost renewable energy to drive investment in high value, energy intensive export industries including green hydrogen, (which can in turn be used to produce ammonia and synthetic fuels), green steel and green aluminium.¹⁵

Importantly, as the BZE report also notes 'to capture this growing momentum towards zero-emissions markets, Australia needs a cohesive industry strategy and an ambitious climate target to keep up with our key trading partners, else risk being left behind.'¹⁶

Rapidly falling renewable energy costs also further strengthen the case for accelerating investment in Australian low emissions industries and community-driven renewable energy projects.¹⁷

1.4. The transition from fossil fuel-based industries to renewable energy and low emissions industries can create huge economic, employment, health and environmental opportunities and benefits for Australian regions - but only if we act now.

Research evidence on the employment creation potential of a rapid expansion in renewable energy and low emissions industries is now extensive and compelling.¹⁸

Analysis undertaken for the Clean Energy Council by researchers at University Technology Sydney shows that Australian policy settings consistent with meeting the Paris Agreement climate targets could lead to the expansion of renewable energy employment from 25,000 to 44,000 jobs by 2025.¹⁹

While two thirds of these new renewable energy jobs could potentially provide high quality employment for workers currently employed in the coal industry it is unrealistic to assume that all workers will be able to directly move to jobs in the renewable energy industry. This further highlights the importance of proactive regional transition planning and investment to ensure no workers and no communities are left behind – and of focussing on the far larger employment creation potential of a rapid transition to low emissions industries in a zero-carbon economy.

The *Million Jobs Plan* published in 2020 by Beyond Zero Emissions illustrates the broader employment creation potential of a rapid well-managed transition to a zero-carbon economy.²⁰ The BZE report argues that investment required to achieve emissions reductions consistent with Australia's Paris Agreement targets could potentially create over 200,000 jobs in renewable energy and transmission; 940,000 jobs in energy efficiency and retrofitting; 140,000 jobs in electrified transport; 230,000 jobs in clean manufacturing and mining; 200,000 jobs in land regeneration and 80,000 jobs in waste management and recycling.

Renewable energy opportunities and challenges in the Upper Spencer Gulf region of South Australia

In 2016, communities in Port Augusta, Whyalla and Port Pirie in the Upper Spencer Gulf region in South Australia were deeply concerned about employment and economic prospects following the closure of Northern, South Australia's last brown coal-fired power plant, the Leigh Creek coal mine, and the Atrium steel mill. While the path over the following five years has not been entirely smooth and many challenges remain, renewable energy investments in the Upper Spencer Gulf illustrate many of the possibilities - and some of the limitations - of clean energy projects in driving regional economic renewal.²¹

Interest in the most promising initial opportunity, [Aurora solar thermal power station](#) was triggered by the work of [Repower Port Augusta](#) in bringing together a coalition of community, union, government and investor groups to explore the economic and employment potential of solar thermal power. The \$650m, 150MW plant would have been the world's largest solar tower with storage, providing 5% of the state's energy needs and 50 ongoing jobs. High initial hopes were dashed in 2019 when the project's main investor Solar Reserve withdrew from the project.

A wide range of other projects with the potential to attract over \$5 billion in investment and to create over 3000 construction and 200 ongoing jobs are now however well underway.

The two-stage 220MW [Bungala solar power plant](#) 10km north-east of Port Augusta was fully completed in 2020 as one of Australia's biggest solar farms, providing electricity to over 80,000 households and offsetting 520,000t of carbon dioxide emissions. While the project promised to create up to 350 jobs during construction, Ben Jewell, SA organiser for the Communications, Electrical and Plumbing Union is sceptical about how many of these jobs went to local workers. "We went out there and there were 150 guys employed and 140 of them were backpackers. This should have been an opportunity

for Port Augusta to build their skill base, give the locals transferable skills because it was going to be a renewable energy hub. But that just didn't happen".²²

The 59 turbine 212MV [Lincoln Gap wind farm with 10MW of grid scale battery storage](#), will power 155,000 homes and says to employ over 130 construction jobs and 10 ongoing jobs in Phase 1 with further jobs likely to be created if the doubling of the wind farm and battery storage project goes ahead.

The \$500 [Port Augusta Renewable Energy Park](#), the country's biggest hybrid wind and solar project will when finished, feature 210MW of wind energy capacity and 107MW of solar energy. The 18-months construction and commissioning stage promised to create 200 jobs with 20 ongoing jobs anticipated once the project becomes operational (scheduled commissioning in late 2021).

In Whyalla, UK entrepreneur Sanjeev Gupta's GFG Alliance has committed \$1bn to convert the Liberty Whyalla steelworks to a 'green steel' model through recycling steel and by investing in renewable energy and hydrogen projects. Fully implemented these projects have the potential to save over 2000 jobs, however, it has been a "rollercoaster" for the region after big project announcements have had to secure refinancing.²³

While many of these projects play crucial roles in helping South Australia accelerate progress towards achieving 100% renewable energy, progress in turning promising ideas into completed projects remains uneven. Important concerns also remain about the extent to which renewable energy projects will generate significant numbers of secure, ongoing, high-quality local jobs.²⁴ These concerns further strengthen the case for strong and consistent national leadership in setting emissions reduction and renewable energy targets and in exploring a wide range of regional employment and economic opportunities.

1.5. A proactive, collaborative and well co-ordinated strategy for accelerating the phase out of fossil fuel industries will achieve far better social, economic and environmental outcomes than an unplanned, reactive approach.

While there are numerous examples of the risks and pitfalls of reactive and defensive regional transition policies, there is also an increasing number of case examples illustrating the value and effectiveness of proactive and well-managed regional transition planning.²⁵

As the 2019 *Oil Change International Report* on phasing out fossil fuels notes, there is an increasingly stark choice between two contrasting strategies: Deferred Collapse and Managed Transition.²⁶

‘Deferred collapse: continue to pursue maximum extraction by subsidising companies and encouraging them to shed workers, until worsening climate impacts force rapid action to cut emissions globally, pushing many workers out of work in a short space of time.

....Or

Managed transition: stop approving and licensing new oil and gas projects, begin a phase-out of extraction and a Just Transition for workers and communities, negotiated with trade unions and local leaders, and in line with climate change goals, while building quality jobs in a clean energy economy.’

In Germany’s Ruhr Valley collaborative planning combined with strategic public investment in transport infrastructure; tertiary education and research; environmental technologies; and cultural and service industries has underpinned strong economic renewal outcomes over the period in which regional employment in coal dependent industries has fallen from over 800,000 to close to zero.²⁷

In Ontario, Canada, the successful implementation of plans to close all coal-fired power stations between 2007 and 2014 highlights the importance of building broad political support for an orderly closure process backed by adequately resourced redeployment, retraining and economic renewal strategies.²⁸

In 2018, the government of Spain began implementing plans to rapidly close the country’s remaining coal mines, which in the 1960s employed over 100,00 miners. In announcing her government’s commitment to allocate €250M to support just transition strategies, the Spanish Minister for Ecological Transition, Teresa Ribera, noted ‘our aim has been to leave no one behind. We also want to go further, we want to innovate. That is why we offer the drawing up of ‘Just Transition’ contracts, with the aim of helping the regions to consolidate the employment of the future.’²⁹

In confirming the support of the Spanish trade union movement for the coal phase out strategy, Montserrat Mir Roca, Spanish Confederal Secretary for the European Trades Union Congress, added that Spain has ‘shown that it’s possible to follow the Paris agreement without damage to people’s livelihoods. We don’t need to choose between a job and protecting the environment. It is possible to have both.’³⁰

‘Not having to play catch up’: Responding to the closure of the Hazelwood Power Station, Latrobe Valley, Victoria

The announcement, on 2 November 2016, by French company Engie SA that the Hazelwood power station would close in five months came as a huge shock to workers and the community. After all, only six months earlier Engie Asset Manager, George Graham, advised a Latrobe Valley public meeting that ‘I can categorically say that there is no decision to close Hazelwood’.³¹

Initial Victorian Government transition funding commitments following the closure of Hazelwood included: \$22 million for redeployment, retraining and financial counselling; \$20 million for the *Latrobe Valley Worker Transfer Scheme*; \$20 million to establish the *Latrobe Valley Authority*; \$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 *Morwell Hi-Tech Precinct*; \$500,000 for a *New Energy Jobs & Investment Prospectus* and \$345 million to upgrade the Gippsland Rail Line.³²

While longer notice would clearly have made for a far smoother transition process, swift action to redeploy and assist retrenched workers; the Latrobe Valley Authority’s role as a focus for facilitating collaborative economic renewal planning; and strong state government investment in physical and social infrastructure has meant that employment outcomes over the four years since Hazelwood closed have not been as bad as some had feared.³³

As Latrobe Valley Authority CEO Karen Cain notes, the history of the closure of Hazelwood is however one more compelling example of the value of proactive regional transition planning. ‘Right up until the day of closure there were still people in the community believing that somebody would stop this from happening. We had workers still believing that they would have a job.... If we’d had more time we could have been doing more early work on where job creation was occurring and understanding where the opportunities were for more direct links to the skills and experience of the workers and not having to play catch up.....’³⁴

1.6. Broad public and political support for accelerating the transition to a zero-carbon economy depends on workers and communities being fully convinced that governments and business are genuinely committed to inclusive, long-term, well-resourced just transition principles and policies.

The preamble to the Paris Climate Agreement requires that all government signatories to the Agreement will work 'taking 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'.³⁵

The COP-24 *Silesia Declaration on Just Transition Principles* signed by representatives of 60 national governments builds on this foundation by noting that, 'just transition of the workforce and the creation of decent work and quality jobs are crucial to ensure an effective and inclusive transition to low greenhouse gas emission and climate resilient development, and to enhance the public support for achieving the long term goals of the Paris Agreement'.³⁶

The International Labor Organization's [ILO] *Guiding principles for a just transition* summarised below provide a useful overview of key principles informing just transition policies and strategies.³⁷

ILO Guiding principles for a just transition towards environmentally sustainable economies and societies for all

(a) Strong social consensus on the goal and pathways to sustainability is fundamental. Social dialogue has to be an integral part of the institutional framework for policymaking and implementation at all levels. Adequate, informed and ongoing consultation should take place with all relevant stakeholders.

b) Policies must respect, promote and realize fundamental principles and rights at work.

(c) Policies and programmes need to take into account the strong gender dimension of many environmental challenges and opportunities. Specific gender policies should be considered in order to promote equitable outcomes.

(d) Coherent policies across the economic, environmental, social, education/training and labour portfolios need to provide an enabling environment for enterprises, workers, investors and consumers to embrace and drive the transition towards environmentally sustainable and inclusive economies and societies.

(e) These coherent policies also need to provide a just transition framework for all to promote the creation of more decent jobs, including as appropriate: anticipating impacts on employment, adequate and sustainable social protection for job losses and displacement, skills development and social dialogue, including the effective exercise of the right to organize and bargain collectively.

(f) There is no "one size fits all". Policies and programmes need to be designed in line with the specific conditions of countries, including their stage of development, economic sectors and types and sizes of enterprises.

(g) In implementing sustainable development strategies, it is important to foster international cooperation among countries.

While the goals and principles of 'Just Transition' are an increasingly central element in discussions about the phase out of fossil fuel industries, the language and ideas of 'Just Transitions' still remain contested and problematic in a range of ways.³⁸

Some critics remain concerned, for example, about the risk that the language of 'Just Transition' is too often used as a rhetorical smoke screen for the closure of fossil fuel industries with no genuine commitment to the long-term investment required to fully address the challenges facing impacted workers and communities. This risk might be compounded by limited policy making expertise and fiscal capacity of governments seeking to implement just and well-managed structural adjustment policies.³⁹

Other key concerns include tensions between the goals of accelerating the speed of emissions reductions and the time and care required to ensure inclusive, respectful decision-making process; the tendency for some Just Transition strategies to focus primarily on unionized workers directly impacted while failing to address broader regional community concerns; resource allocation trade-offs between compensating and supporting fossil fuel workers and the investments required to address other pressing social, economic and environmental policy challenges;⁴⁰ and the extent to which Just Transition goals should extend beyond the phase out of fossil fuels to encompass and enable the transition to more climate resilient and regenerative communities and economies.⁴¹



2. SUCCESS FACTORS DRIVING THE CREATION OF JUST AND WELL-MANAGED REGIONAL TRANSITION STRATEGIES

2.1. Respectful and inclusive engagement with workers, communities and all relevant stakeholders

The only way we're going to effectively deliver the two seemingly competing objectives of strong climate action and secure livelihoods is to deepen our engagement with regional communities – not just coal workers, but also farmers, local business owners and First Nations groups.

Amanda Cahill, CEO, The Next Economy⁴²

The most successful regional transition processes commonly begin with a firm and genuine commitment to inclusive and respectful dialogue and engagement with impacted workers and communities.⁴³ As Sharan Burrow, General Secretary of the International Trade Union Congress notes, genuinely inclusive dialogue and engagement strategies extend well beyond consultation on pre-ordained policy options to enable all relevant stakeholders to contribute to fully informed and transparent discussions and deliberation.⁴⁴

Just transition plans are a first step to generate the confidence that people need for backing structural change. These plans need to be constructed through social dialogue with relevant stakeholders at the national level, at municipal level and with workers and their unions at the industry and enterprise level.

Social dialogue will bring the policy coherence we need to ensure that climate action also means job creation and community renewal. It allows us to bring together industrial strategy, innovation, deployment of clean technologies and investment in green infrastructure, along with the measures we need to smooth out the transition: Social protection, skills training, redeployment, labor market policies and community development and renewal.⁴⁵

Transition policies need to be carefully tailored to address the concerns and build on the strengths of specific regions and communities. Particular attention needs to be paid to ensuring inclusion of groups who are often side lined from these discussions including women, young people, Indigenous people and socio-economically disadvantaged groups.

As the *Canadian Just Transition Task Force Report* also notes 'energy production in local areas often has a long history, and in some cases, communities strongly identify with their industries as part of their identities. Where it is determined to be relevant by local voices, cultural cohesion and continuance should form a particular strand of participatory dialogue.'⁴⁶

The German Coal Commission ('Commission for Growth, Structural Change and Employment') provides a useful demonstration of the role which appropriately resourced multi-stakeholder engagement strategies can play in creating the conditions for a more informed and constructive public debate about a just, orderly phase out of coal-fired power generation. The Coal Commission's 31 members included a broad range of stakeholders including several former State Premiers and senior representatives from energy utilities and business; trade unions; environmental NGOs; research institutions and coal dependent regions.

In reviewing the role of the German Coal Commission in building public support for the rapid and equitable phase out of coal, the independent climate change policy think tank, e3G, highlights the following conclusions.⁴⁷

1. Multi-stakeholder engagement is essential for countries where phase out debates are complex and contentious: Including relevant stakeholders in a participatory institution provides legitimacy and ownership for the managed transition. This also ensures good representation of specific regional challenges and opportunities.
2. Commissions should be mandated to lay out multiple policy options: By mandating a commission to explore feasible policy pathways it can inform public debate and political decision-making. Ultimately, the government has the responsibility to opt for a specific pathway. This requires political leadership and the transparent choice of a specific outcome.
3. Multi-stakeholder commissions need a strong regional component: In order to develop fast and just transition strategies for affected regions, regional stakeholders need to be brought to the table. Leveraging regional strengths and identifying challenges is key for developing regional priorities and tailored transition strategies.
4. Effective financing of the transition is a key challenge: Funding for regional transition strategies is a unique opportunity to create innovative low carbon economies.
5. Outcomes of expert commissions are not set in stone: The German case shows that ambiguities in the final report can fuel continuous public and political conflict instead of channelling and resolving it.

Creating spaces for respectful conversation: The Central Queensland Energy Futures Summit

The energy transition debate in Queensland has frequently been constrained by the difficulty of creating spaces for constructive conversations between workers and communities often with sharply different experiences, priorities and perspectives. The Central Queensland Energy Futures Summit, held in Gladstone in April 2021, therefore provides one useful example of processes for engaging diverse stakeholders in respectful discussion about energy transition challenges and opportunities.⁴⁸

The Gladstone Summit, hosted and facilitated by *The Next Economy*, was attended by over 140 participants from a wide range of organisations and constituencies including fossil fuel and renewable energy companies; key industry players and economic development organisations; State government departments; local Government Councillors and CEOs; Universities and TAFE Colleges; trade unions; environment, community and Traditional Owner groups.

Key conclusions from the Summit included:

- Fossil fuel use is declining and renewable energy generation and storage options are expanding – the energy transition is accelerating in Australia and globally, with coal expected to decline rapidly and coal-fired electricity plants tending to close earlier than the end of their technical life.
- Net-zero goals have been adopted by nations across the world including the EU/UK, USA, China, Japan, and Korea – leaving declining room for fossil fuel exports.
- Solar is now the cheapest form of energy in history and fossil fuels are becoming less economic.
- The pace of change tends to be underestimated, for example, the history of IEA projections for annual PV additions over the last 10 years have underestimated the rate of expansion, and coal-fired power plants are shutting down earlier than expected.
- Central Queensland (and Australia more broadly) is vulnerable as a leading global producer, user and exporter of coal, but there are also opportunities due to the high-quality mix of solar, wind and hydro energy generation.
- Queensland has potential to be a large-scale clean energy producer and exporter, exploiting new markets and supply chain opportunities for clean energy and for minerals and metals processing, as well as green hydrogen.
- The energy transition must be managed well and coordinated early, otherwise Central Queensland will have significant job and business losses and major social and economic impacts.

Priority actions identified included:

- Maximise employment and industry opportunities from renewable energy, by considering both short-term opportunities (i.e., generation, transmission construction and operation and maintenance) and more extensive medium/long-term opportunities (green hydrogen, green steel, etc).
- Renewable Energy Zones could be leveraged for higher local employment and industry development. This includes co-locating energy generation and storage with manufacturing and other production opportunities.
- A regional coordination body is needed to manage changes not just to the energy sector, but to the whole regional economy. This should include a Regional Transition Authority as well as broader community engagement and local government leadership.
- Regional research and strategic planning is urgently needed to identify the energy transition impacts on regional industries, jobs and skills requirements, future opportunities, and transition training pathways.
- Protect employees and communities impacted by the energy transition through fair terms and conditions, local content in all new contracts, and employment and workforce transition incentives to retain the local workforce.
- Need a variety of training and employment transfer options. Employees and local people need good career advice, guidance, mentoring, financial support and information.
- Additional infrastructure is needed (e.g., transmission upgrades). Existing infrastructure can also be repurposed, retrofitted and reused for the new industries and economic opportunities. The impact on land and water resources needs to be considered when making decisions about any new developments.
- Better co-ordination, communication and engagement between industry players, the workforce, local communities, government, environment groups and First Nations groups is critical. Conversations need to be honest and independently facilitated.
- Government and political leadership and support is crucial, alongside consistent policy frameworks and investment to enable a just transition in regional Queensland.

2.2. Strong, proactive and well co-ordinated leadership from all levels of government

*“There is no national plan. I don’t care what side of politics, someone just make a friggin’ plan. We should lock them in a room in Canberra, kick pizzas under the door, and not let them out until someone’s made a plan.”*⁴⁹

John Dowling from the Gippsland Trades and Labor Council, reflecting on the urgent need for a national energy transition plan

While respectful and inclusive engagement with regional communities is an essential precondition for successful implementation of integrated just transition plans, high level leadership and co-operation between all levels of government along with relevant business, union and community organisations are also essential.⁵⁰

This leadership needs to include communication of a clear and compelling narrative about the necessity of phasing out fossil fuel mines and industries to meet emissions reduction targets along with the significant employment opportunities which can be created through a proactive and well-managed transition to a clean energy economy.

The costs and responsibilities for addressing the impacts of fossil fuel transition strategies need to be fully transparent and equitably shared. Options for sourcing the funds required to adequately support long-term, comprehensive just strategies include general taxation revenue; revenue from a carbon price; revenue sourced from the phase out of fossil fuel subsidies; and revenue from reverse auction strategies.

Engineers Australia notes that a comprehensive national plan for Australian regional transitions would need to include the following elements.⁵¹

- how Australia will achieve its emissions reduction targets through the electricity generation sector, outlining a transition from fossil fuel-based power plants to renewable energy and low carbon emission options;
- a timeline for when Australia will begin the transition away from major capacity fossil-fueled power stations, and what generation options will be used to replace them;
- the obligation costs that the major fossil fuel power stations will incur when exiting the market, outlining incentives to exit where required;
- incentives for investors for net zero and low emission technologies with policies to run alongside research and development, drawing on market forces where possible;
- changes to the electricity grid to accommodate more distributed generation and management of supply availability and resilience; and
- policies for increased reliability and resilience of Australia’s electricity system through a mix of generation and distribution applications, energy storage solutions and smart-grid technologies.

2.3. Transition governance authorities combing national and state level policy co-ordination with local accountability, knowledge and expertise

National and provincial governments have established a variety of Just Transition governance arrangements bringing together key stakeholders to develop co-ordinated and inclusive approaches to the design and implementation of orderly coal phase out strategies.⁵² The Australian Council of Trade Unions has drawn on many of these examples in developing the following recommendations for the establishment of an independent and appropriately resourced Australian *Just Transition Authority* engaging all relevant stakeholders in order to:

- oversee a planned and orderly closure of Australia’s coal-fired power stations;
- manage an industry-wide multi-employer pooling and redeployment scheme, where existing workers would have an opportunity to be redeployed to remaining power stations or low-emissions generators;
- develop a labour adjustment package to support workers obtain new decent and secure jobs, including by providing funding for workers to access job assistance support, retraining, early retirement and travel and relocation assistance; and
- map potential new industries to affected regions based on competitive and other advantages as well as worker skills. As part of this mapping exercise, infrastructure gaps should be identified and prioritised;
- develop and implement specific industry and environmental policies to attract new investment, the growth of new industries and the creation of quality, secure jobs in affected regions.⁵³

Creating locally driven, place-based partnerships: Learning from the experience of The Latrobe Valley Authority

The Latrobe Valley Authority was established by the Victorian Government in November 2016 with the aim of ‘leading the transition and transformation of the Latrobe Valley by working for and with workers, business and the community to transition to a strong future through response, recovery and long-term strategic work.’⁵⁴

Key principles and priorities informing the development and implementation of the LVA work program have included:

- enabling and broadening multi-level governance and leadership;
- identifying and building on regional economic and community strengths and capabilities;
- drawing on evidence and learning from successful regional innovation strategies both locally and internationally;
- facilitating collaborative partnerships; and
- maintaining a strong focus on evidence-based actions and outcomes.

The 2019 European Commission review of learning from the Latrobe Valley Authority experience has identified the following key success factors for ‘transitioning the traditional leadership relationship between the government and local level to a locally-driven, place-based partnership’:

- having a local team who are skilled and are in direct relationships with the affected community;
- working continually by building capacity and new projects step-by-step, and putting emphasis on long-term rather than short-term development;
- using already existing local clusters and networks as a basis to further expand and address new stakeholders; and
- working with local businesses that help lead the efforts, growing skills within the community and building collaboration, cooperation and mutually beneficial partnerships between key actors that previously operated in relative isolation.⁵⁵

2.4. Re-employment, retraining and early retirement support for workers affected by mining and plant closures

Workers in the coal-fired power sector at risk of losing their jobs need to be adequately supported through a well-integrated and co-ordinated mix of re-employment, retraining, relocation, income support and early retirement programs.⁵⁶

Recent experience from many international jurisdictions provides strong evidence of the value of proactive and carefully coordinated pooled redundancy schemes enabling workers from plants scheduled for closure to be offered redeployment opportunities at other power stations which are continuing to operate.⁵⁷

Opportunities to access retraining should be made available to workers prior to any workplace closure or redundancy and while workers are still earning an income. Skill audits should be conducted to assess current employee skill sets and identify retraining priorities informed by analysis of emerging and potential economic and employment opportunities.

Workers who do not wish to participate in redeployment and retraining schemes should be able to access appropriately resourced voluntary redundancy packages and early retirement schemes.

Noting that new clean energy jobs will not necessarily be in the same locations as existing coal sector jobs and that some workers will therefore need to seek employment in new locations, relocation and retraining packages are also likely to be required.

2.5. Economic renewal and diversification policies and strategies building on regional strengths and informed by local experience and insights.

There are increasingly strong ethical and strategic arguments for ensuring that fossil fuel phase out strategies include comprehensive, long-term plans to create sustainable economic alternatives and high-quality, secure employment for affected workers, businesses and communities.

As the UNFCCC *Just Transitions Report* notes ‘the likelihood that the overall net employment outcome will be positive should not obscure the reality that far-reaching mitigation policies will change global, regional and national economies in potentially profound ways and severely disrupt the lives of affected workers and their communities. Regions which lack diversification, which have a limited capacity for innovation, or whose economic mainstay is vulnerable to decisions made elsewhere will face the greatest challenge, as will workers with skills that are in less demand or who are unable to acquire new skills.’⁵⁸

Learning from recent European regional transition experiences highlights the importance of proactive economic diversification and renewal strategies drawing on ‘Smart Specialisation’ principles including i) the identification of regional strengths and assets, informed by local knowledge and expertise; ii) the prioritisation of research and innovation investment in competitive sectors, and iii) the development of a shared vision for regional innovation.⁵⁹

Research on the economic renewal challenges facing coal dependent regions also highlights the tendency for these regional economies to be overspecialised in declining, capital-intensive industries. Ownership of incumbent industries by a small number of large (often multinational) companies often creates high barriers to entry for new entrepreneurs and start-ups. Strategies and policies with the potential to assist in overcoming industrial path dependency and encouraging economic diversification are likely to include:

- prioritising a culture of innovation and entrepreneurialism over the short-term protection for declining industries;
- identifying and enabling vertical and horizontal industry and supply chain linkages and collaboration;
- facilitating new job creating innovation and investment including through diversification and new market access advice, new product and process commercialisation support, tax and co-investment incentives, business loan guarantees; and regional procurement strategies; and
- encouraging university, TAFE and other research institute partnerships to support new start-up businesses.⁶⁰

Exploring economic renewal and transition options in the Hunter Valley, New South Wales

“Regions that don’t cope well with economic change invariably express two regrets: we wish we worked together, and we wished we planned ahead.”

Hunter Jobs Alliance 2021⁶¹

The Hunter Jobs Alliance [HJA] is ‘a community union alliance grounded in the local’ aiming to build a future for the Hunter region with full employment, good union jobs, a thriving healthy living environment, an equitable society, a stable climate and renewable prosperity.⁶²

The 2021 HJA report, *No Regrets: Planning for Economic Change in the Hunter*, draws on a broad range of Australian and international research to identify the following priority actions for creating a strong foundation for regional economic transition and renewal.⁶³

- Anticipatory planning and community participation, informed by principles of genuine and respectful engagement with all stakeholders; longterm government planning and resource commitments; clear and transparent accountability mechanisms; and the establishment of a multi-stakeholder statutory authority with a mandate to plan for and implement proactive and collaborative regional transition strategies.

- Public investment in the Hunter’s Future informed by clear recognition of the importance of compensating mining regions for the social, economic and environmental costs of energy transition policies. The Report argues that a significant share of coal royalties should be earmarked to address regional economic renewal challenges.

- Investment attraction including through improved co-ordination and targeting of government loans, grants and co-investment initiatives.

- Supply chain diversification including through more strategic use of infrastructure investment and procurement policy as well as through leveraging local knowledge, expertise and networks.

- Worker support services including improved access to career advice, labour markets, retraining, financial advice, and counselling.

- Increased access to training opportunities informed by improved understanding of future local workforce needs and career paths.

- Create clear, commonly understood expectations for business in closure and retrenchment situations, including transparency, consultation, adequacy of funding, maximised notice periods, timely communication, and site rehabilitation commitments.

2.6. Maximizing the creation of secure, high-quality jobs

While reaffirming that ‘managed well, transitions to environmentally and socially sustainable economies can become a strong driver of job creation, job upgrading, social justice and poverty eradication’ the International Labor Organization also cautions that, ‘the job-creating potential of environmental sustainability is not a given: the right policies are needed to promote green industries while ensuring decent work within them.’⁶⁴

Similar analysis and concern leads the UNFCCC technical report on *Just Transition of the Workforce and the Creation of Decent Work and Quality Jobs* to conclude that ‘jobs created in the transition to a low-carbon economy must be ‘decent’. This means jobs that provide adequate incomes and social protection, safe working conditions, respect for rights at work and effective social dialogues.’⁶⁵

Achievement of employment outcomes on this scale and of this quality will require strong political leadership to drive proactive industry and innovation policies as well as sustained strategic investment in the necessary infrastructure, supply chain logistics, research, education and training and labour market programs.⁶⁶

2.7. Expanding employment opportunities and access to services for all community members

It is important to recognise that the impact of coal transitions on households, communities, contractors and businesses affected by plant closures extends well beyond workers directly employed in plants and mines. Particular attention needs to be paid to addressing the employment and community support priorities of vulnerable individuals including women, low-income households, Indigenous communities and other marginalised groups.

As Samantha Smith, co-ordinator of the ITUC Just Transition Centre notes, long-term investment in health, education and community services and infrastructure as well as in broader economic diversification, industry policy and labour market programs will therefore play a crucial role in strengthening the resilience and revitalisation of regional communities.⁶⁷

‘An increased focus on the role of communities in just transition is critical, for two reasons. First, from previous industrial transitions we know that workers and their families need new jobs where they live, not new jobs in a different part of the country that they cannot access. Social ties, home ownership, aging parents, or poverty can make it impossible for people to move when the local employer shuts down.

Second, deindustrialization can tear apart the economic and social fabric of communities, starting a vicious spiral where a declining tax and revenue base means less funding for public services, more employers and workers moving away, and fewer and fewer jobs left. Reversing this cycle and revitalising communities takes plans and sustained effort. It also takes investment in infrastructure, public services, schools and training facilities and hospitals – in short, all of the things that draw employers and families back to the region.’

Evaluation of recent regional transition experience also demonstrates the diverse ways in which women in communities impacted by coal industry closures frequently face additional pressures due to the impact on households of increased substance abuse and gender-based violence as well as from heightened demand for health and community services.⁶⁸ Care is therefore needed to ensure that women are fully engaged and consulted in coal transition planning and that employment opportunities and community services infrastructure recognise and address the particular challenges faced by women in navigating the transition process.

‘Indigenous agencies have got to be in the planning wheelhouse’: Placing Indigenous communities at the centre of just transition strategies

‘Indigenous agencies have got to be in the planning wheelhouse: they’ve got to be able to plot the course of their own development, rather than having to negotiate with third parties which want access to Indigenous land’

Joe Morrison, CEO Northern Land Council⁶⁹

The Northern Territory [NT], which has some of the world’s best access to solar energy still relies on gas and diesel for over 95% of electricity generation with many remote Indigenous communities still heavily reliant on diesel or gas-fired generators.⁷⁰ There is growing recognition in the Territory however of the potential for a rapid expansion in renewable energy to generate employment, improve energy security, reduce energy costs and strengthen community resilience.⁷¹ The NT government has therefore now set a target of 50 percent renewable energy by 2030 for electricity consumption and is developing a vision to become a leader in the global transition to renewable hydrogen.⁷²

As the recent Beyond Zero Emissions [BZE] report, *10 Gigawatt Vision* notes, a comprehensive and co-ordinated renewable energy transition strategy has huge potential to significantly raise the NT renewable energy target, creating over 8000 new jobs and over \$2billion in revenue by 2030.⁷³ Strategic investment in solar PV, batteries, and stored hydrogen could also enable small remote communities achieve a rapid transition to 100 percent renewable energy.

The Protect Country Alliance, a broad coalition of NT Indigenous and non-Indigenous organisations and communities calling for a ‘just transition to a safe climate future’ has highlighted the importance of ensuring that expanded public investment in renewable energy benefits all Territorians – and that Indigenous communities are front and centre in the decision-making process.⁷⁴

“As representatives of Aboriginal and non-Aboriginal organisations and communities, we acknowledge that Aboriginal and Torres Strait Islander peoples have cared for country sustainably for tens of thousands of years. We acknowledge the disproportionate effect that both the causes and impacts of climate change are having on Aboriginal land, culture and communities. Justice for Aboriginal and Torres Strait Islander people and respect for First Nations’ knowledge must be the foundation of our collective response. The health and livelihoods of people and country depend on a rapid and just transition to a zero-carbon future, alongside long term adaptation strategies.” Protect Country Alliance⁷⁵

The Protect Country Alliance Declaration also highlights the importance of government leadership in:

- Legislating targets of 100 per cent renewables by 2030 and net zero emissions by 2050;
- Ensuring no new fossil fuel developments, including a permanent ban on oil and gas fracking;
- Reducing emissions from Government operations and embedding legislative commitment to mitigate climate change impacts into all areas of government decision-making;
- Leading the clean energy transition through public investment in renewable energy supply and infrastructure upgrades, supporting workers and communities to transition from gas and diesel power generation to clean energy jobs and opportunities;
- Ensuring jobs and income from new large-scale renewables projects flow to local communities, providing opportunities for public and community-owned and operated energy projects, and supporting workforce development in ecologically sustainable industries;
- Listening to communities to understand how they are experiencing climate change, recognising traditional and local knowledge, ensuring the climate change response is informed by the experience and expertise of local communities, and resourcing locally-driven solutions;
- Adaptation planning to address the impacts of climate change already affecting communities, including extreme heat, drought and more extreme weather events like cyclones and bushfires, prioritising planning with Aboriginal communities and low-income communities who are experiencing the impacts first and worst; and
- Building climate resilience of communities by addressing existing vulnerabilities that exacerbate climate change impacts, including providing climate resilient housing, access to health services that are equipped to respond to climate risks, guaranteed access to adequate and potable water, energy and food security, disaster resilient infrastructure and sustainable economic opportunities for people to live and work on country, helping restore and revitalise land, water and climate.⁷⁶

2.8. Adequately resourced, long-term rehabilitation plans for mine sites and power plant

Sufficient funding needs to be available to carry out rehabilitation of mine sites and regions to an acceptable standard, in ecologically sound ways, and in line with community expectations. Governments therefore need to ensure that coal mining and power generation companies allocate sufficient funds to support site rehabilitation and just transitions strategies before they relocate or go bankrupt.

While mine rehabilitation has the potential to be a valuable source of employment for workers formerly employed in the coal fired power industry, it is important that there is clear understanding that these jobs are likely to be short-term and that long-term employment and economic development strategies are also essential.

The economic renewal strategies designed and implemented in the Ruhr region, Germany, provide a useful example of the ways in which, with proper planning, initial investment in the remediation and rehabilitation of regional environments in the wake of plant and mine closures can provide a strong platform for developing long-term environmental protection and environmental services industries.⁷⁷

2.9. Ensuring government and business commitments to just transition goals are underpinned by detailed implementation plans and adequate long-term resourcing

The task for governments is to ensure that regional businesses, industries, and people are empowered to embrace new opportunities where long-term profits, jobs, and opportunities await. Without proper support, many communities and individuals across Australia will feel the loss of coal and the jobs it provides deeply. A range of proactive policies will help communities to not only navigate decarbonisation, but also foster prosperity far into the future.

Blueprint Institute, 2021⁷⁸

It is essential that government and business commitments to just transition principles are underpinned by detailed implementation and resourcing plans (i.e., that the commitment to ‘a just transition’ is substantive and not limited to public relations rhetoric). The costs and responsibilities for addressing the impacts of coal transition strategies also need to be fully transparent and equitably shared.⁷⁹

In Alberta, Canada, the provincial 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 counselling, 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.⁸⁰

The German Coal Commission recommended funding of €40 billion over 20 years to support transition and economic renewal strategies in lignite mining regions, co-designed with relevant government, business, union and community representatives. The Commission also recommended compensation of up to €2 billion per year for energy users (both private households and industry) to address energy price rise impacts.⁸¹

In the case of the closure of the Hazelwood power plant in the Latrobe Valley, the Victorian State government has been the primary source of financial support providing \$335 million in initial funding, including \$22 million for redeployment and retraining; \$20 million for a *Worker Transfer Scheme*; \$20 million to establish the *Latrobe Valley Authority*; \$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 *Morwell Hi-Tech Precinct*. \$345 million was allocated to upgrade the Gippsland Rail Line.⁸²

Allocating resources at the scale required to adequately fund a comprehensive response to the full range of Australian regional transition challenges clearly has significant budgetary implications. Communities, governments and business in Australia and internationally are all however increasingly clear that the cost of failing to take effective and decisive climate action will be far greater than the cost of a well-managed, well-coordinated strategy for accelerating the transition to a just and resilient zero-carbon economy.

3. POLICY PRIORITIES FOR ACCELERATING THE CREATION OF PROSPEROUS, JUST AND RESILIENT ZERO-CARBON REGIONS

Co-ordinated and collaborative policy leadership from all levels of government will play a crucial role in facilitating and accelerating the creation of prosperous, just and resilient zero-carbon regions. Key policy priorities which could inform and underpin the development and implementation of an integrated Australian zero-carbon economy regional transition plan include the following:

- I. Set a national target and establish clear policy framework for reducing emissions by 50-75% by 2030 and achieving net zero emissions by as close as possible to 2035.⁸³
- II. Set a national target and establish clear policy frameworks for expanding renewable energy exports by 70-90% by 2030.
- III. Establish a national clean commodity export target of \$100 billion by 2035.
- IV. Rapidly phase out fossil fuel subsidies.
- V. Create and implement a Zero-Carbon Australia Regional Transition Plan.
- VI. Establish i) a national-regional transition authority to co-ordinate regional transition policies and investment and ii) regional transition authorities to engage with local communities and build on regional strengths and knowledge.
- VII. Plan and invest in a national electrification strategy and appropriate grid infrastructure enabling rapid implementation of Renewable Energy Industrial Precinct plans and decentralised energy systems.
- VIII. Support the rapid development and scaling up of community energy projects.
- IX. Plan, invest in, and implement national labour market, education and training programs to ensure skilled workers are available to implement zero-carbon economy transition strategies.
- X. Plan and invest in mission-oriented regional industry development and smart specialization strategies informed by local knowledge and experience.

4. NEXT STEPS IN AUSTRALIAN RESEARCH ON JUST AND WELL-MANAGED REGIONAL TRANSITIONS: KEY KNOWLEDGE GAPS AND RESEARCH PRIORITIES

Successful development and implementation of strategies for creating just and prosperous zero-carbon regions will require a carefully integrated program of research and evaluation with a strong emphasis on accelerating the dissemination of learning within and between regional communities. Knowledge gaps and research priorities which could usefully be considered in the design of just transition research agendas and finding programs include the following:

- I. Sharing Australian and international learning about promising and successful regional transition policies and strategies.
- II. Evaluating the co-benefits of mitigation across key zero-carbon economy transition sectors (e.g., renewable energy; electrification infrastructure; clean energy transport; manufacturing; food and agriculture; health; biodiversity; carbon draw down initiatives; supply chains).
- III. Monitoring and evaluating the local economic and employment impact of regional transition policies and programs.
- IV. Strengthening understanding of regional transition governance models and practices.
- V. Strengthening understanding of strategies for respectfully and effectively engaging Indigenous communities in the development and implementation of regional energy transition strategies.
- VI. Understanding and addressing key regional transition challenges and opportunities for women, young people, Indigenous communities, people with disabilities and other marginalised and vulnerable communities.
- VII. Identifying skill requirements and labour market policies required to maximise employment outcomes of regional transition strategies.
- VIII. Identifying infrastructure investment priorities required to maximise emissions reduction and the economic and employment potential of regional energy transition strategies.
- IX. Identifying regional transition investment opportunities, priorities and mechanisms.

CONCLUSION

Results from the 2021 Australia Institute *Climate of the Nation* survey provide further compelling evidence of the extent of public support for decisive action to address the climate crisis and accelerate the transition to a just and resilient zero-carbon economy.⁸⁴

82% of Australians are concerned that climate change will result in more bushfires, more droughts and flooding, and animal and plant species extinction. 82% of Australians also support a phase out of coal fired power stations. 79% rank solar in their top three preferred energy sources compared to 15% for coal and 19% for gas. 12% prefer Australia's economic recovery to be primarily powered by gas while 63% prefer renewables investment. 67% of Australians want Australia to be a world leader in finding solutions to climate change.⁸⁵

An increasingly large majority of Australians now clearly recognise the close alignment between the urgency of climate action and the opportunities arising from a well-managed transition to a zero-carbon economy. Australian and international learning about success factors and policy priorities facilitating and accelerating the creation of prosperous, just and resilient zero-carbon regions can play a key role in addressing these challenges and maximizing these opportunities.

CONCLUSION

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