



Strings Attached:

How Industry Policy Could Strengthen Labour Standards Through Australia's Renewable Energy Transition

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About the Carmichael Centre

The Carmichael Centre, a project of the Centre for Future Work at The Australia Institute, is named in honour of Laurie Carmichael, the legendary manufacturing unionist who passed away in 2018 at the age of 93.

The Carmichael Centre conducts and published research on themes related to Carmichael's legacy, including:

- industrial relations;
- social policy;
- manufacturing and industry policy;
- vocational education; and
- international labour solidarity.

The Centre sponsors an annual Laurie Carmichael lecture, with a prominent labour or progressive personality speaking on Carmichael's legacy.

The Carmichael Centre also hosts a digital archive of Carmichael's writings and other contributions to public discourse.

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Contents

Summary	4
Introduction	6
I. Conditional Industry Policy	8
Climate industrial strategies	10
Conditionality in industry policy	11
Labour standards conditionality	12
Why use industry policy for labour standards in Australia?	15
Conditional procurement in Australia.....	18
II. Labour in Australia’s Net Zero Energy Transition	21
Renewable energy working conditions	25
A Future Made in Australia?	28
The importance of social licence	31
III. Industry Policy Tools for Strengthening Labour Standards	33
The Secure Australian Jobs Code	36
Apprenticeships and training	37
Pay floors and ceilings.....	37
Workplace health and safety	38
Broader public Interest conditionality	39
Conclusion.....	40

Summary

Australia's renewable energy transition and *Future Made in Australia* industrial strategy do not just present opportunities to reduce global carbon emissions and move Australian industry up the economic value chain; they also have the potential to create hundreds of thousands of secure, safe, well-paid jobs. But this requires the Commonwealth government to leverage its power as overseer and financier of energy transition and new manufacturing initiatives to ensure that public money is put towards public good.

This report calls for labour standards to be embedded in Australia's energy transition and *Future Made in Australia* industrial strategy through attaching conditions to public industrial financial support and penalising non-compliance with these conditions. By doing this, the Australian government can ensure that the growing renewable energy sector and associated manufacturing industries feature strong labour standards, and that public money is not being given to companies seeking to undermine established employment standards. This will attract and retain workers in these important industries and reinforce public support for the energy transition – a crucial task given the politics of renewable energy and decarbonisation in Australia.

Labour standards conditionality has been embedded in public industrial supports by many international governments, including the USA, Canada, and Ireland. Such measures have also featured in previous Australian procurement policies at state and federal levels.

This report proposes four main policy recommendations for embedding labour standards within the Australian government's net zero initiatives:

1. **The Secure Australian Jobs Code** must be developed, enacted, and extended beyond just direct government procurement to also apply to recipients of industrial support. This code must establish minimum standards relating to job security, fair wages and conditions, gender equality, hiring equity, environmental sustainability, and the right to join and participate in a union.
2. **Apprenticeship quotas, ongoing training, and skills development** must be built into publicly financed projects to create entry-level pathways into the industry, ensure workers have adequate training to ensure safety, and reduce industry skills shortages.
3. **Minimum and maximum pay standards** can be prescribed to ensure that industry norms are not undercut, and that public finance is not misused to overly remunerate executives and CEOs.
4. **Occupational health and safety** must be prioritised and guaranteed, particularly when working in environments subject to climate change-induced safety risks.

Ensuring that all companies receiving public financial support adhere to these conditions can ensure that Australia's transition to a net zero economy can also be a transition to a strong, secure future of work.

Introduction

Australia's transition to net zero emissions entails significant industrial upheaval: a rapid energy systems transition to renewables, the electrification of other economic sectors, and the development of new manufacturing industries powered by renewable energy. Within this transition, the interests of workers must be considered. This report examines the ways in which the Australian Commonwealth Government can leverage its central position as overseer and financier of the net zero transition to ensure that new jobs created feature strong employment standards. This report calls for labour standards to be embedded within Australia's energy transition and *Future Made in Australia* industrial strategy through attaching conditions to public industrial support. A conditional approach to industry policy can enable Australia to transition to net zero emissions while also strengthening labour conditions and workers' rights. By ensuring jobs in the expanded renewable energy sector and related manufacturing industries feature strong labour standards, workers can be attracted to and retained in these critical sectors and the net zero transition can gain the social licence – the necessary public support – that will help it succeed.

This is an important and timely consideration for the Australian Government. As the global net zero transition progresses, many – including the incumbent Albanese government – have identified the significant potential for Australia to leverage its existing advantages and become a 'renewable energy superpower'. Going beyond just transitioning the existing energy system to renewables, this entails utilising Australia's vast wind, sun, and sea resources to generate large amounts of renewable energy to power a significant expansion of manufacturing industries relating to the energy transition: in particular, renewable energy generation, transmission and storage technologies and componentry (such as solar panels, turbines and batteries), inputs to these technologies (particularly green metals, hydrogen, and processed critical minerals), and products which use renewable energy (including electric vehicles).

This transformation will not happen automatically. While Australia's resource advantages create the potential for successful renewable-powered manufacturing industries, the structural underdevelopment of Australia's manufacturing base and historic lack of government support means that these advantages will not necessarily translate into industrial success. To fulfil the industrial opportunities of decarbonisation, it is necessary for the Australian Government to embrace comprehensive industrial policies and strategy, including significantly expanded public financial investment incentives and co-investment.

However, public finance alone will not be sufficient to ensure that emerging 'green' industries reflect public social, cultural, and environmental expectations. This is of particular importance with regards to labour conditions in renewable industries. As this report notes, existing Australian renewable energy projects receiving public financial and policy supports have often featured inadequate labour standards in comparison with established standards

in the non-renewable energy sector. This has undermined community support for development projects and hindered the maintenance of a long-term renewable energy workforce. To ensure the future success of the net zero transition in Australia, workers' rights and employment standards must be a central consideration.

Conditional industry policy provides important tools to achieve this goal. By attaching strong labour conditions to the awarding of public financial support for private investors and penalising non-compliance with these conditions, the Australian Government can ensure that the growing renewable energy sector and associated manufacturing industries feature strong labour standards. This will attract and retain workers in these important industries, as well as reinforcing critical public support.

This report examines the potential for conditionality to enhance Australia's net zero industry policy and ensure workers are empowered by Australia's climate transition. The first section examines the theory and growing international practice of conditional industry policy, particularly with regards to the net zero transition. This section then examines how and why industry policy tools are appropriate for promoting labour standards in Australia, then details the ways in which conditionality is already being utilised in promoting labour standards through Australia's public procurement. The second section explores the role of labour in Australia's renewable energy transition. It outlines the current state of working conditions in the renewable energy sector in Australia, noting that despite benefitting from government financial and policy supports, poor job quality and working conditions are too common in these industries. This section then overviews the potential for expanded manufacturing industries powered by renewable energy and producing inputs to the energy transition, and the role of public financial support and industrial strategy in fulfilling this potential. The section concludes by noting the importance of strong employment standards for both ensuring the practical success of, and gaining public support for, the transition. The third section outlines several ways the Australian Government can embed strong labour standards into Australia's energy transition through conditional industry policy.

I. Conditional Industry Policy

Industry policy has returned to the forefront of global policy debate.¹ Facing the climate crisis, supply chain shocks brought by the Covid-19 pandemic and the Ukraine War, rising geopolitical tensions and global inequalities, an international consensus is growing around the need for the sectoral composition of economies to be reshaped to address these challenges. This is a repudiation of the ‘structural agnosticism’ of the neoliberal era; instead of allowing supposedly neutral market forces to shape the sectoral structure of an economy in reflection of its ‘comparative advantage’, governments (including in Australia) are acknowledging the need for public intervention into the composition of the economy.²

Industry policy is the use of government policy to influence the presence, size, capacity, and structure of desirable sectors within an economy. Industry policy acts by:

- influencing the inputs to an industrial process (such as labour, capital, or materials) to make them more/less expensive, unavailable, or different;
- influencing the outputs of an industrial process, making them easier, harder, or impossible to sell on the market; and
- altering the governance and ownership structures of firms and industries.³

To accomplish these goals, there are many policy levers in the ‘toolbox’ of industry policy. These policy levers can be generally grouped into ‘carrots’ – mechanisms which stimulate desired activities – and ‘sticks’ – mechanisms which curb undesired activities or compel firms to behave differently. These include:

¹ Ip (2021), ‘Industrial Policy’ Is Back: The West Dusts Off Old Idea to Counter China’, *Wall Street Journal*, <https://www.wsj.com/articles/subsidies-chips-china-state-aid-biden-11627565906>; OECD (2023), *The Return of Industrial Policies*, <https://www.oecd.org/publications/the-return-of-industrial-policies-051ce36d-en.htm>; Ilyina, Pazarbasioglu, and Ruta (2024), ‘Industrial Policy is Back But the Bar to Get it Right Is High’, International Monetary Fund, <https://www.imf.org/en/Blogs/Articles/2024/04/12/industrial-policy-is-back-but-the-bar-to-get-it-right-is-high>; Evenett, Jakubik, Martín, and Ruta (2024), ‘The return of industrial policy in data’, Centre for Economic Policy Research, <https://cepr.org/voxeu/columns/return-industrial-policy-data>;

² Bell (1993), *Australian manufacturing and the state: the politics of industry policy in the post-war era*, Cambridge University Press, p. 206; Thurbon (2012), ‘Developmentalism and Neoliberalism in Australia’ in Chang, Fine, & Weiss (eds.) *Developmental Politics in Transition*, Springer, p. 280

³ Tucker & Sterling (2021), *Industrial Policy and Planning: A New (Old) Approach to Policymaking for a New Era*, Roosevelt Institute, <https://rooseveltinstitute.org/publications/a-new-old-approach-to-policymaking-for-a-new-era/>

- Low interest loans
- Subsidies
- Underwriting and guaranteeing investments
- Direct public equity investments
- Trade policy
- Regulations
- Public procurement strategy
- Equity purchases
- Public provision of goods and services
- Financing via public banks
- Price controls

The recent turn towards industry policy is a global phenomenon. In the European Union, state aid for businesses grew nearly three-fold between 2015 and 2021, and frameworks such as the Green Deal and the European Chips Act herald an increased role for national and supranational government in supporting strategic manufacturing industries.⁴ In the United States, the Biden administration has pursued a ‘modern American industrial strategy’ aiming to strengthen the United States’ manufacturing base through expanded clean technology and semi-conductor manufacturing.⁵ States with existing and longstanding commitments to active industry policy such as China, Japan, and Korea have turned towards supporting the growth of net-zero industries, with China in particular successfully establishing global dominance in renewable energy technology production.⁶ In Australia, the Albanese government has displayed an enthusiasm for revitalising Australian manufacturing and transforming Australia into a ‘renewable energy superpower’, has committed to legislating a ‘Future Made in Australia Act’, and has taken preliminary steps in establishing limited state aid mechanisms and strategic plans for select industries.⁷

Internationally, industry policies are frequently coordinated under overarching industrial strategies. Economist Mariana Mazzucato has observed that many contemporary industrial strategies are not guided by the development of specific sectors or ‘national champion’ firms, but rather overarching policy *missions* which require the coordination of public and private sectors.⁸ As such, best-practice modern industry policy does not seek to ‘pick winners’, thus exposing public-private relationality to risks of cronyism and clientelism, but

⁴ European Commission (2023), ‘State Aid Scoreboard’, https://competition-policy.ec.europa.eu/state-aid/scoreboard_en; Johnston and Espinoza (2023), ‘Ukraine war and green transition keep EU state aid near record level’, *Financial Times*, <https://www.ft.com/content/f93122d3-b9ea-4328-bb8e-745e52e0bfac>

⁵ Deese (2022), *Remarks on Executing a Modern American Industrial Policy*, The White House, <https://www.whitehouse.gov/briefing-room/speeches-remarks/2022/10/13/remarks-on-executing-a-modern-american-industrial-strategy-by-nec-director-brian-deese/>

⁶ Thurbon et al. (2023), *Developmental Environmentalism: State Ambition and Creative Destruction in East Asia’s Green Energy Transition*, Oxford University Press; Joyce (2023), *A New Era for Climate Industry Policy*, Carmichael Centre, https://www.carmichaelcentre.org.au/a_new_era_for_climate_industrial_policy;

⁷ Joyce & Stanford (2023), *Manufacturing the Energy Revolution*, Centre for Future Work, <https://futurework.org.au/report/manufacturing-the-energy-revolution/>

⁸ Mazzucato (2021), *Mission Economy: A Moonshot Guide to Changing Capitalism*, Allen Lane

instead for governments to ‘pick the willing’ by working with firms to achieve public policy objectives.⁹

CLIMATE INDUSTRIAL STRATEGIES

Increasingly, many governments are developing industrial strategies relating to the ‘mission’ of addressing the climate crisis. Free markets have been unreliable or ineffective at transitioning economies from carbon-intensive processes, technologies, and consumption patterns and towards low or zero carbon alternatives; despite the intensification of climate-related risks and harm, it has remained profitable to invest in carbon intensive activities including in fossil fuel extraction and production, due to maintained demand resulting from insufficient global investment in renewable alternatives.¹⁰ Government attempts to factor in the full cost of carbon emissions into market economies through frameworks such as carbon pricing and feed-in tariffs have effectively promoted emissions reduction, but have faced political backlash – particularly in Australia – from both business interests and consumers concerned about price increases of goods and services.¹¹ The growing frequency of governments pursuing climate industrial strategies reflects a recognition of the need for public intervention into the composition of market economies to transition to net zero emissions.¹²

Prominent recent examples of climate industrial strategies include the efforts of the United States to support investment in renewable energy generation and the manufacturing of clean technologies, primarily through the Inflation Reduction Act (IRA) and the Infrastructure Investment and Jobs Act (IIJA).¹³ The European Union’s Green Deal Industrial Plan aims to provide a framework to support Europe’s clean technology manufacturing capacity, critical

⁹ Mazzucato (2022), *Rethinking the social contract between the state and business: a new approach to industrial strategy with conditionalities*, UCL Institute for Innovation and Public Purpose, <https://www.ucl.ac.uk/bartlett/public-purpose/wp2022-18>

¹⁰ Milman (2023), ‘Monster profits’ for energy giants reveal a self-destructive fossil fuel resurgence’, *The Guardian*, <https://www.theguardian.com/environment/2023/feb/09/profits-energy-fossil-fuel-resurgence-climate-crisis-shell-exxon-bp-chevron-totalenergies>

¹¹ Rabe (2018), ‘The economics—and politics—of carbon pricing’, *Brookings*, <https://www.brookings.edu/articles/the-economics-and-politics-of-carbon-pricing/>; Pearse (2015), *The political economy of carbon pricing in Australia: Contestation, the state and governance failure*, PhD thesis, University of NSW, <https://unsworks.unsw.edu.au/entities/publication/c7823d77-4bfb-4063-8c66-4cf2832e6231>

¹² Bigger & Strecker (2023), *Green Industrial Strategy for Just Transitions*, Climate and Community Project, <https://www.climateandcommunity.org/green-industrial-strategy/>; Rodrik (2014), ‘Green industrial policy’, *Oxford Review of Economic Policy*, Vol. 30, No. 3, pp. 469-491; Joyce (2023), *A New Era for Climate Industry Policy*, Carmichael Centre, <https://www.carmichaelcentre.org.au/a-new-era-for-climate-industrial-policy>

¹³ Mazzocco (2024), *Green Industrial Policy: A Holistic Approach*, Centre for Strategic and International Studies, <https://www.csis.org/analysis/green-industrial-policy-holistic-approach>

minerals supply, and overall decarbonisation efforts.¹⁴ Most successfully, the Chinese government has pursued a remarkable climate industrial strategy through the 13th and 14th Five Year Plans (2016-2020; 2021-2025) and, since 2015, the Made in China 2025 industrial plan.¹⁵ These efforts have resulted in China becoming the leading global supplier of many clean energy technologies, and the country now seems likely to reach emissions reduction goals faster than expected.¹⁶

CONDITIONALITY IN INDUSTRY POLICY

Intrinsic to industry policy is *conditionality*: public finance is provided to private firms to make specific investment decisions, adhere to certain standards, or engage in certain operational practises. Generally, the conditions attached to public finance relate only to the investment decisions themselves. However, conditions can also relate to social and environmental objectives. This can allow governments to pursue a ‘multi-solving’ approach: simultaneously addressing priorities such as labour standards, environmental sustainability, and gender equality while expanding desirable sectors and industries.¹⁷ By removing the incentive to compete by compromising on safety, working conditions, skills investment, and other practices, conditionality can establish a ‘floor’ under labour, social and environmental standards in targeted industries. Conditionality also ensures that governments – and the broader public – share in the rewards of successful private investments, as well as the risks and losses.

Industry policy with conditionality is a common practice of governments across the world. Mazzucato and Rodrik (2023) have recently catalogued a range of case studies of industry policy conditionalities, including:

- Germany’s state-owned Kreditanstalt für Wiederaufbau (KfW) bank offering low-interest loans and grants for the construction and retrofitting of energy efficient buildings, combined with partial debt forgiveness following the completion and certification of an energy efficient construction project.

¹⁴ Veugelers (2024), ‘Green Industrial Policy in Europe: Past, Present, and Prospects’, *Journal of Industry Competition and Trade*, <https://link.springer.com/article/10.1007/s10842-024-00418-5>

¹⁵ Thurbon et al. (2023), *Developmental Environmentalism*, Oxford University Press; Chen & Chulu (2022), ‘Complementary institutions of industrial policy: a quasi-market role of government inspired by the evolutionary China Model’, *Third World Quarterly*, <https://doi.org/10.1080/01436597.2022.2142551>

¹⁶ International Energy Agency (2023), *Energy Technology Perspectives*, <https://www.iea.org/reports/energy-technology-perspectives-2023>; Dinneen (2023), ‘The renewable energy revolution is happening faster than you think’, *The New Scientist*, <https://www.newscientist.com/article/2387712-the-renewable-energy-revolution-is-happening-faster-than-you-think/>

¹⁷ Estevez (2023), *Multi-Solving, Trade-Offs, and Conditionalities in Industrial Policy*, Roosevelt Institute, <https://rooseveltinstitute.org/publications/multi-solving-trade-offs-and-conditionalities-in-industrial-policy/>

- The partnership between the UK government, Oxford University, and AstraZeneca to develop a vaccine against Covid-19, through which the UK government funded clinical trials committed to purchase 100 million doses of the vaccine before these trials were completed in exchange for AstraZeneca operating on a not-for-profit basis throughout the pandemic.
- The United States CHIPS Act, whereby semiconductor manufacturing companies are eligible for loans, loan guarantees, and tax credits in exchange for investment into U.S. semiconductor manufacturing facilities. These funds are restricted from being used for stock buybacks or dividend payments.

Likewise, conditional industry assistance is widely used in Australia to advance industrial, economic and social objectives. Notably, this occurs through the Commonwealth Government's special investment vehicles, including:

- The Clean Energy Finance Corporation (CEFC) and the Australian Renewable Energy Agency (ARENA) provide low interest loans and grants at low interest for the construction and development of renewable energy technology in Australia.
- The Northern Australia Infrastructure Fund (NAIF) provides low interest loans and grants to support the firms investing in northern Australia.
- Export Finance Australia provides low interest loans, bonds, guarantees, insurance, and, in some circumstances, equity for export-oriented Australian businesses and overseas infrastructure development.

In each of these cases, government finance for private industry is contingent on certain conditions being met. This ensures that the investment decisions of firms receiving public support can be guided according to public policy ambitions, and the benefits of this investment can be shared widely.

LABOUR STANDARDS CONDITIONALITY

Conditionality in industry financial support can be used to alter the employment practices of private firms receiving public support. This is an important step to avoid undermining established norms and expectations regarding labour conditions in certain industries and to improve them in existing industries. By intent, industry policies can create significant shifts in sectoral and labour market composition. These shifts can be exploited by employers to bypass prevailing wages and conditions established within an industry, utilising the upheaval of industrial change to prescribe new employment standards with reduced conditions. Attaching labour standards conditions to any public support directed to private firms precludes this from occurring, ensuring that the jobs created by public-sponsored private investment feature best-practice labour standards.

There is experience in both Australian and international jurisdictions of promoting labour standards through industrial assistance mechanisms.¹⁸ In Australia, several state governments consider job quality as a factor in granting financial assistance to private industry, although as noted by Howe and Landau (2009) this is generally a minor consideration when compared with commitments to job creation.¹⁹ In contrast, some European governments consider job quality as a key criterion for industrial assistance.²⁰ For example, the Irish Industrial Development Authority prioritises job quality – “decent pay, good conditions, a work-life balance, and inclusive opportunities” – as well as employment location in determining allocation of industrial assistance.²¹ Since 2024, the German government has mandated that government contracts with an estimated value of 10,000 Euros or more must only be granted to companies that comply with the working conditions established in the relevant industry collective agreements.²²

The United States government has recently advanced the practice of labour standards conditionality in its climate industry policy initiatives. Building on a legacy of embedding ‘prevailing wage’ requirements and other labour standards into federal government-funded projects, the U.S.’ recent industrial policies – the Inflation Reduction Act (IRA), the Infrastructure Investment and Jobs Act (IIJA), and the CHIPS Act, – feature strong incentives for employers receiving public money to pay good wages and benefits, to be receptive to unions, and to invest in training. For example, the IRA’s Production Tax Credit provides suppliers US 0.3 cents per kWh of renewable energy generation. However, that credit amount is increased fivefold to US 1.5 cents if the company meets prevailing wage and apprenticeship rules. Similarly, the investment tax credit for offshore wind energy projects increases from 6% to 30% if prevailing wage and apprenticeship standards are met.²³ These conditions and incentives ensure that the goals of high pay and conditions cannot be undermined by an influx of new jobs and workers, as well as ensuring businesses invest in skilling new workers and providing entry-level employment.²⁴ These are a positive example

¹⁸ Stanford (2018), ‘Raising the Bar: How Government Can Use its Economic Leverage to Lift Labour Standards Throughout the Economy’, Centre for Future Work, <https://futurework.org.au/report/raising-the-bar-how-government-can-use-its-economic-leverage-to-lift-labour-standards-throughout-the-economy/>

¹⁹ Howe and Landau (2009), ‘Do investment attraction incentives create decent jobs? A study of labour conditions in industry assistance contracts’, *Labour and Industry*, <https://doi.org/10.1080/10301763.2009.10669386>

²⁰ Ibid

²¹ IDA Ireland (2021), *Driving Recovery and Sustainable Growth 2021-2024*, <https://www.idaireland.com/driving-recovery-and-sustainable-growth-2021-2024>, p. 44

²² Hey (2023), ‘Collective bargaining agreements in public procurement’, *Bird&Bird*, <https://www.twobirds.com/en/insights/2023/germany/tarifbindung-bei-der-oeffentlichen-auftragsvergabe>

²³ BlueGreen Alliance (2022), *A User Guide to the Inflation Reduction Act*, <https://www.bluegreenalliance.org/site/a-user-guide-to-the-inflation-reduction-act/>

²⁴ It is important to note that while companies are incentivised to pay prevailing wages to workers employed in the construction of factories, no such incentives apply to the workers employed in the factories themselves.

of the potential for labour standards to be embedded in industry policies, creating good jobs in expanded desirable sectors.

Ensuring that public investment creates good jobs requires a multifaceted framework for measuring job quality. The International Labour Organisation (ILO) defines ‘decent work’ as “productive work for women and men in conditions of freedom, equity, security and human dignity”.²⁵ Work is considered decent if it:

- pays a fair income;
- guarantees security in employment;
- features safe working conditions;
- ensures equal opportunities and treatment for all workers;
- includes social protection for the workers and their families;
- offers prospects for personal development and encourages social integration; and
- workers are free to express their concerns and organise.²⁶

Similarly, the Organisation for Economic Co-operation and Development (OECD) measures job quality according to three criteria: earnings quality, labour market security, and quality of working environment.²⁷

The Australian Government’s 2023 employment white paper *Working Future* draws from these measures and offers three criteria for measuring job quality:

1. **Safety and Fair Treatment** encompassing the prevention of workplace accidents and injury, freedom from harassment or discrimination, and equal opportunity within the workplace.
2. **Security and Flexibility** referring to a worker’s reasonable certainty about tenure of employment, pay, and conditions, as well as a worker’s access to flexible work arrangements with regards to start and finish times, job sharing, and, where possible, work from home arrangements.
3. **Fair pay** reflecting the payment of living wages, at or above industry norms, with potential for real wage increases over time. This includes the payment of legally mandated superannuation and leave entitlements.²⁸

²⁵ International Labour Organisation (2012), *Gender Equality and Decent Work*, p v, https://www.ilo.org/wcmsp5/groups/public/---ed_norm/---normes/documents/publication/wcms_088023.pdf ; International Labour Organisation (2023) ‘Decent Work’, <https://www.ilo.org/global/topics/decent-work/lang-en/index.htm>

²⁶ European Commission 2023, ‘Employment and decent work’, https://international-partnerships.ec.europa.eu/policies/sustainable-growth-and-jobs/employment-and-decent-work_en

²⁷ OECD 2016, ‘Job quality’, <https://www.oecd.org/statistics/job-quality.htm>

²⁸ Commonwealth of Australia (2023), *Working Future: The Australian Government’s White Paper on Jobs and Opportunities*, <https://treasury.gov.au/employment-whitepaper/final-report>

These criteria constitute relevant and clear means of measuring job quality. However, when compared with the ILO decent work framework, *Working Future's* criteria are incomplete; they do not mention the right of workers to have voice in their workplaces, nor to collectively organise. These are fundamental components of job quality: evidence demonstrates that when workers can express opinions and influence change in their workplaces, job satisfaction increases.²⁹ This is particularly clear with regards to union membership: extensive research finds strong correlations between union membership and job satisfaction, workplace productivity, quality of life, and civic engagement.³⁰ For this reason, this report incorporates a fourth criterion of job quality:

4. **Voice and Collective Bargaining**, which involves workers' individual and collective ability to participate in and affect managerial decisions in their workplace; the right to join or establish a union and organise without interference or discrimination; and the ability to collectively bargain over workplace conditions.

This report combines these criteria as a framework for ensuring the jobs created through government industry policy are good jobs, proposing conditionalities that reflect the multifaceted nature of job quality.

WHY USE INDUSTRY POLICY FOR LABOUR STANDARDS IN AUSTRALIA?

Nevertheless, industry policy levers are not typically used for lifting employment standards and labour conditions, in Australia or elsewhere. Ordinarily, government interventions into employment standards utilise direct measures such as labour regulations, minimum standards, and industrial laws. In Australia, the system of industrial awards and, since the 1990s, enterprise bargaining have provided the framework through which labour conditions are established and negotiated, respectively at the national and firm levels. These are underpinned by a set of eleven National Employment Standards (NES), which guarantee minimum conditions for all employees. However, the effectiveness of these measures in protecting and raising employment standards in Australia has declined.

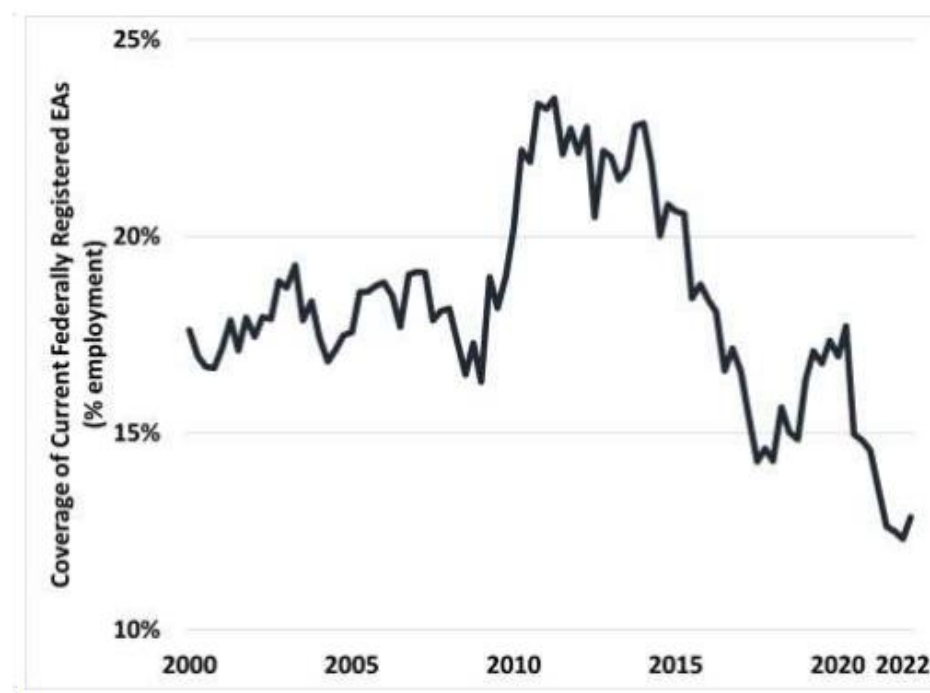
Though once setting industry-wide standards, awards are now limited to setting industry-specific minimum conditions of employment: a safety net, rather than the primary method of wage fixing. To establish above-award employment conditions at a firm level, workers can engage in bargaining to establish an enterprise agreement (EA). Enterprise bargaining is an effective means of raising pay and conditions at the firm level, and following the passage of

²⁹ Stanford and Poon (2021), *Speaking Up, Being Heard, Making Change*, Centre for Future Work, <https://centreforfuturework.ca/2021/03/16/voice/>

³⁰ Trillium Asset Management (2022), *The Investor Case for Supporting Workers' Rights*, <https://www.trilliuminvest.com/news-views/the-investor-case-for-supporting-workerorganizing-rights>

the *Secure Jobs, Better Pay* reforms in 2023, can be conducted across multiple employers in the same industry. However, the effectiveness of enterprise bargaining in raising pay and conditions is predicated on employees and employers engaging in enterprise bargaining. This has become increasingly infrequent in Australia. Between 2013 and 2022, the number of current EAs registered with the Fair Work Commission has plunged by over half, and the proportion of workers covered by a current EA has declined from 22-23% in 2013 to 12% in 2022 (as demonstrated in Figure 1).³¹ Instead, workers' pay and conditions are set by individual arrangements, or reduced to Award levels.

Figure 1: Federal Collective Bargaining Coverage, 2000-2022



Source: Calculations from DWER and ABS Data in Stanford, Macdonald, and Raynes (2022)

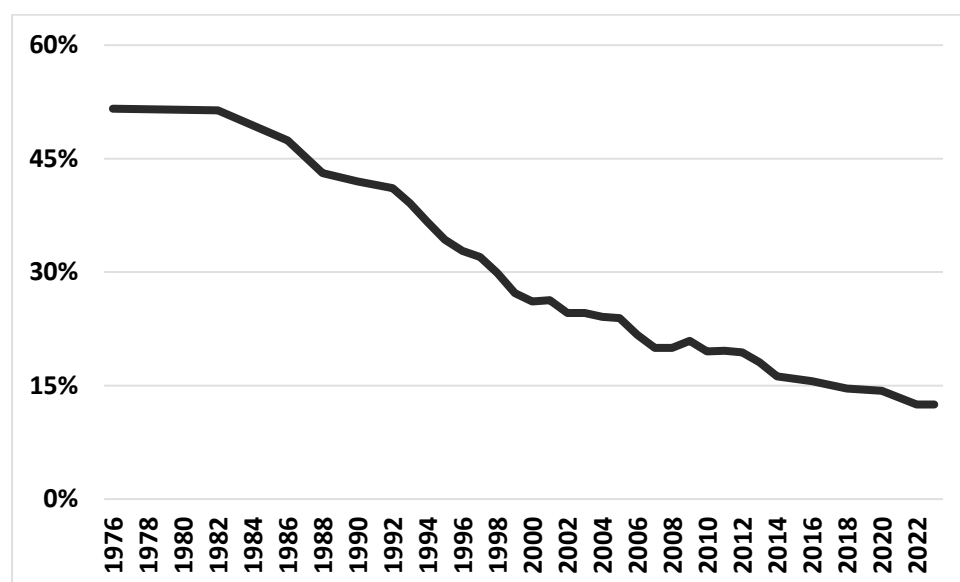
The decline in collective bargaining coverage reflects, and is primarily caused by, a decline in workers' membership of trade unions.³² Fewer workers in unions means an absence of organised worker pressure on employers to negotiate new enterprise agreements, as well as diminishing resources for union representation, bargaining, and enforcement of enterprise agreements. Union membership in Australia has declined from over 50 per cent of all employees in the 1970s to 12.5% of workers in 2022 (see Figure 2). This is due to several factors, including severe restrictions on union rights and activities under Australian law; structural changes in the labour market away from traditionally unionised industries such as

³¹ Stanford, Macdonald, and Raynes (2022), *Collective Bargaining and Wage Growth in Australia*, Centre for Future Work, <https://futurework.org.au/report/collective-bargaining-and-wage-growth-in-australia/>

³² Pennington (2019), *On the Brink: The Erosion of Enterprise Agreement Coverage in Australia's Private Sector*, Centre for Future Work, <https://futurework.org.au/report/on-the-brink/>

manufacturing and towards new services industries with more precarious and fragmented jobs; and sustained demonisation of unions by sections of Australia’s business, political, and media classes.³³ With fewer unionised workers to bargain for new enterprise agreements, the enterprise bargaining system is not adequate for single-handedly promoting better employment standards in Australia.

Figure 2: Trade union membership in Australia (% of workforce)



Source: ABS (2023)

Another factor contributing to the decline in enterprise bargaining is the rise of ‘sham contracting’ and gig work. Many Australian workers are nominally employed as independent contractors, allowing employers to avoid paying employee benefits such as superannuation and leave entitlements.³⁴ Employed as sole traders on individual fixed-term contracts, these workers are not eligible for enterprise bargaining and are not legally entitled to award or NES conditions. More than 1.1 million Australian workers – 8 per cent of employed persons – are independent contractors.³⁵ Of these, approximately 38 per cent do not have control over their own working procedures: a significant indicator of ‘employee-like’ employment arrangements.

It is therefore timely for governments to consider additional means of raising labour standards in Australia to supplement and strengthen employment regulation. Conditional

³³ For detailed analysis of the decline of union membership in Australia, see Peetz (1998), *Unions in a Contrary World*, Cambridge University Press

³⁴ ACTU (2018), *ABN Abuse: The Rise of Sham Contracting*, <https://www.actu.org.au/wp-content/uploads/2023/06/media1385230d182-the-rise-of-sham-contracting-and-abuse-of-the-abn-system-14-september-2018.pdf>

³⁵ ABS (2022), ‘Characteristics of Employment, Australia’, <https://www.abs.gov.au/statistics/labour/earnings-and-working-conditions/characteristics-employment-australia/latest-release>

industry policy can leverage the finance provided to private industry during industrial structural change and intervene into the investment and employment decisions of firms, raising labour standards in publicly-supported industries with flow-on effects to the broader economy.

CONDITIONAL PROCUREMENT IN AUSTRALIA

Beyond conditional industrial assistance, there is precedent in Australia for governments to leverage their financial power to incentivise private businesses to improve job quality. State and federal governments have successfully established procurement strategies whereby minimum labour standards must be met for businesses to be granted government procurement contracts. These are valuable case studies of the capacity for Australian Governments to ‘multi-solve’: procure goods and services needed by government while also leveraging government’s presence as a significant customer to increase labour standards in implicated industries.

Between 2010 and 2014, the Australian Government implemented the **Fair Work Principles** which ensured private companies working on federal contracts complied with minimum labour standards and fair practices. These measures, applying to any regular projects over \$80,000 and construction projects over \$9 million, required government contractors to certify that their operations complied with the terms of the then-recently implemented Fair Work Act. Additionally, provisions were applied to two sectors considered at high risk of labour standards violations: cleaning services and purchases of textiles, clothing, and footwear. Government cleaning services contractors became subject to the “Commonwealth Cleaning Services Guidelines”, requiring government cleaning contractors to pay wages superior to the minimum award. Similarly, providers of government clothing and footwear were required to be accredited under the “Home Workers Code of Practice”: a voluntary code administered by Ethical Clothing Australia. Unfortunately, these measures were all revoked in 2014 following the election of the Abbott Coalition government.

In 2022, the Victorian Government implemented the **Fair Jobs Code**, mandating that government contractors and businesses receiving significant grants adhered to employment, industrial relations, and labour conditions obligations. The Fair Jobs Code explicitly promotes secure and permanent employment, workplace health and safety, equality and diversity, and the right to join and participate in a union.³⁶ For all government contractors with contract value over \$3 million and businesses receiving grants over \$500,000 with commitments to deliver jobs, compliance with the Fair Jobs Code is now mandatory.

³⁶ Victorian Government (2023), *Fair Jobs Code Fact Sheet*, <https://www.buyingfor.vic.gov.au/fair-jobs-code-fact-sheet>

Since 2019, the Queensland government has implemented a procurement policy underpinned by commitments to net zero targets, local jobs and businesses, improved social outcomes, Indigenous procurement, and engagement with unions.³⁷ For larger projects worth over \$100 million – principally construction projects – an additional set of **Best Practice Principles** apply.³⁸ These relate to workplace health and safety, apprenticeships and training, and industrial relations. The Best Practice Principles are reflected in a template enterprise agreement provided to tender contractors reflecting industry best-practice, ensuring public money is not spent on projects which undercut employment norms won through collective action. Notably, this includes mandating the payment of wages at or above industry norms, which are detailed in the **Best Practice Industry Conditions**.³⁹

Likewise, the Australian Capital Territory (ACT) government has enshrined a **Secure Local Jobs Code** which mandates that government contractors must meet best-practice ethical and labour standards. Contractors tendering for construction, cleaning, security, or traffic management work are required to hold a Secure Local Jobs Certificate which ensures compliance with pay and employment, insurance, health and safety, training, and collective bargaining standards.⁴⁰ An additional Ethical Treatment of Workers Certificate is required for government contracts of \$200,000 or more.

Across many Australian jurisdictions, therefore, governments are utilising their purchasing and investment power to establish and maintain strong labour standards. This trend is expected to extend to the federal level: the Commonwealth Government has signalled its intent to develop a **Secure Australian Jobs Code** to apply to procurement contractors. If extended to apply to all recipients of Commonwealth finance – including through initiatives such as the National Reconstruction Fund or the Clean Energy Finance Corporation – this would ensure that the significant investment power of the Commonwealth Government puts upward pressure on labour conditions across the Australian economy.

The principles of labour standards conditionality thus have broad potential application throughout Australia's economy, to any industries that benefit from public support and

³⁷ Queensland Government (2023a), *Queensland Procurement Strategy 2023*, <https://www.forgov.qld.gov.au/finance-and-procurement/procurement/procurement-resources/search-for-procurement-policies-resources-tools-and-templates/queensland-procurement-strategy-2023>

³⁸ Queensland Government (2023b), *Best practice principles: Quality, safe workplaces*, Office of Industrial Relations, <https://www.forgov.qld.gov.au/finance-and-procurement/procurement/procurement-resources/search-for-procurement-policies-resources-tools-and-templates/best-practice-principles-quality-safe-workplaces>

³⁹ Queensland Government (2022), *Best Practice Industry Conditions*, https://www.forgov.qld.gov.au/_data/assets/pdf_file/0010/212410/best-practice-principles-quality-safe-workplaces.pdf

⁴⁰ ACT Government (2019), 'Secure Local Jobs Code begins today', https://www.cmtedd.act.gov.au/open_government/inform/act_government_media_releases/rachel-stephen-smith-mla-media-releases/2019/secure-local-jobs-code-begins-today

targeted assistance in many forms: including direct or indirect financial support, procurement contracts, favourable regulatory provisions, and other policy levers. Governments at all levels should consciously use these levers to lift labour conditions wherever they can. The emergence of new industries related to the renewable energy transition (including renewable energy production, and manufacturing industries related to renewable energy), constitutes a timely and promising opportunity to apply these principles of labour standards conditionality. But the general goal – using government’s financial leverage and purchasing power to demand better labour standards – has broader applicability and potential.⁴¹ Many industries in Australia are supported by targeted financial and regulatory support from government: including privately-delivered but publicly-funded services (like aged care, child care, disability services, employment services, and some education); natural resource projects (including, ironically, new fossil fuel developments⁴²); and many activities in transportation, construction, finance, and other sectors. A holistic commitment to attaching labour standards conditionality to all these forms of subsidy and support should infuse government's interventions in these other sectors, too.

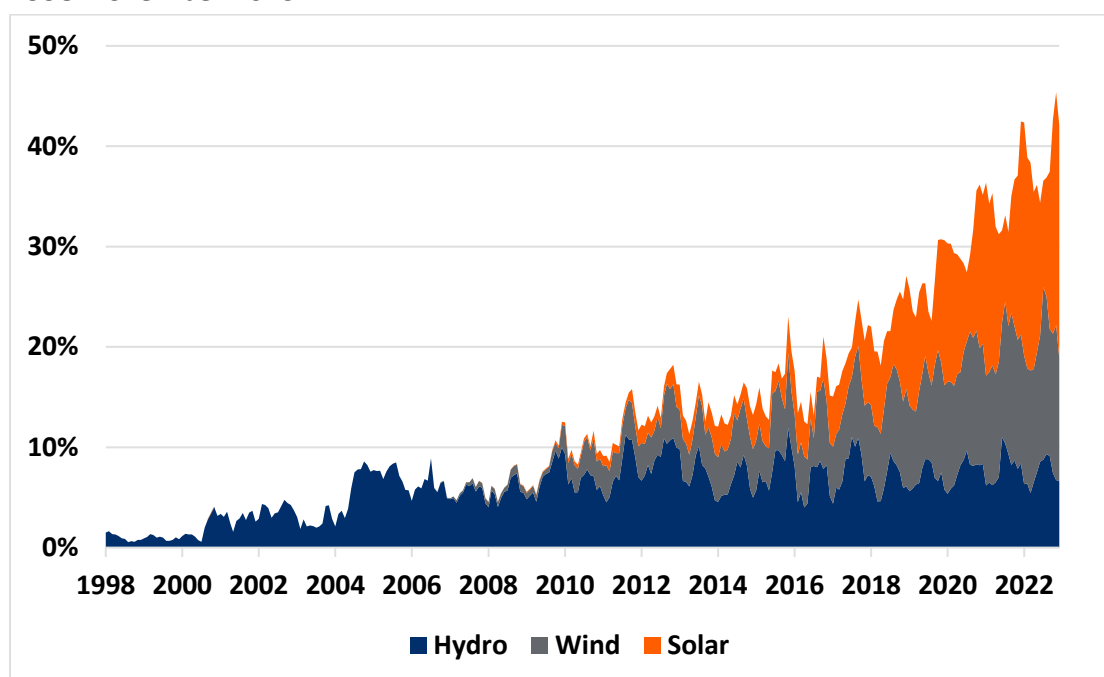
⁴¹ Stanford (2018), ‘Raising the Bar,’ describes the broader relevance and applicability of labour standards conditionality in various dimensions of government economic activity.

⁴² Fossil fuel industries benefit from an estimated \$14.5 billion annually in direct and indirect government subsidies; see Campbell et al. (2024), *Fossil Fuel Subsidies in Australia 2024*, The Australia Institute, <https://australiainstitute.org.au/report/fossil-fuel-subsidies-in-australia-2024/>

II. Labour in Australia's Net Zero Energy Transition

Australia is undergoing a gradual, though at times chaotic, renewable energy transition, with significant implications for workers. As demonstrated in Figure 3, between 2007 and 2023 wind and solar energy generation grew from barely 1 per cent to 38.6 of Australia's overall electricity supply as a direct result of government policy. The Australian Government has legislated a target for 82% renewable energy by 2030, entailing further escalation in the construction of renewable energy generation and corresponding transmission capacity. The opportunities for employment across this transition are significant, and it is important to ensure this is organised and coordinated to minimise social and economic disruption to affected workers and communities, as well as ensuring that the new jobs created feature strong labour conditions.⁴³

Figure 3: Renewable Energy in Australia (percentage of overall energy supply), December 1998-November 2023



Source: OpenNEM (2023)

Beyond transitioning Australia's energy system, many prominent voices – including the present Commonwealth Government – have argued that Australia is well-placed to develop

⁴³ Stanford (2020), *Employment Aspects of the Transition from Fossil Fuels in Australia*, Centre for Future Work, <https://futurework.org.au/report/employment-aspects-of-the-transition-from-fossil-fuels-in-australia/>

into a ‘renewable energy superpower’: utilising Australia’s extensive natural resources, including wind and sun, and global economic position to revitalise domestic manufacturing through embracing the industrial opportunities of the global net zero transition. This entails developing Australia’s renewable energy generation capacity to power new manufacturing industries producing, for both domestic consumption and export:

- renewable electricity generation, transmission and storage technologies (such as solar panels, turbines, and batteries);
- manufactured inputs to these and other products (including green metals, processed critical minerals, and green hydrogen); and
- other products and processes associated with the energy transition (including electric vehicles and home energy efficiency)

Signalling its commitment to realising this vision, the Australian Government has released industrial strategies for critical minerals and hydrogen and is developing a strategy for a domestic battery industry.⁴⁴

Developing Australia into a renewable energy superpower not only entails the emergence of new manufacturing industries, but also a massive further expansion in renewable energy generation to power manufacturing processes. This is in addition to growing the electricity system to electrify other sectors of the economy in accordance with Australia’s legislated emissions reduction targets: 43% below 2005 levels by 2030, and net-zero emissions by 2050. The Australian Energy Market Operator (AEMO) has forecast that to meet net-zero emissions by 2050, Australia will require seven-fold increases in renewable energy generation capacity.⁴⁵ This does not factor in the creation of new renewable-powered manufacturing industries; the AEMO’s 2023 *Green Energy Exports* projection estimates that to support the creation of large-scale new renewable-powered manufacturing industries would require more than twelve-fold increases in Australia’s wind and solar generation capacity.⁴⁶

The prospect of rapidly transforming and expanding the electricity sector away from fossil fuels and towards renewables involves significant consequences for employment in this sector. In 2019, the ABS estimated 26,850 Australian workers were employed directly in

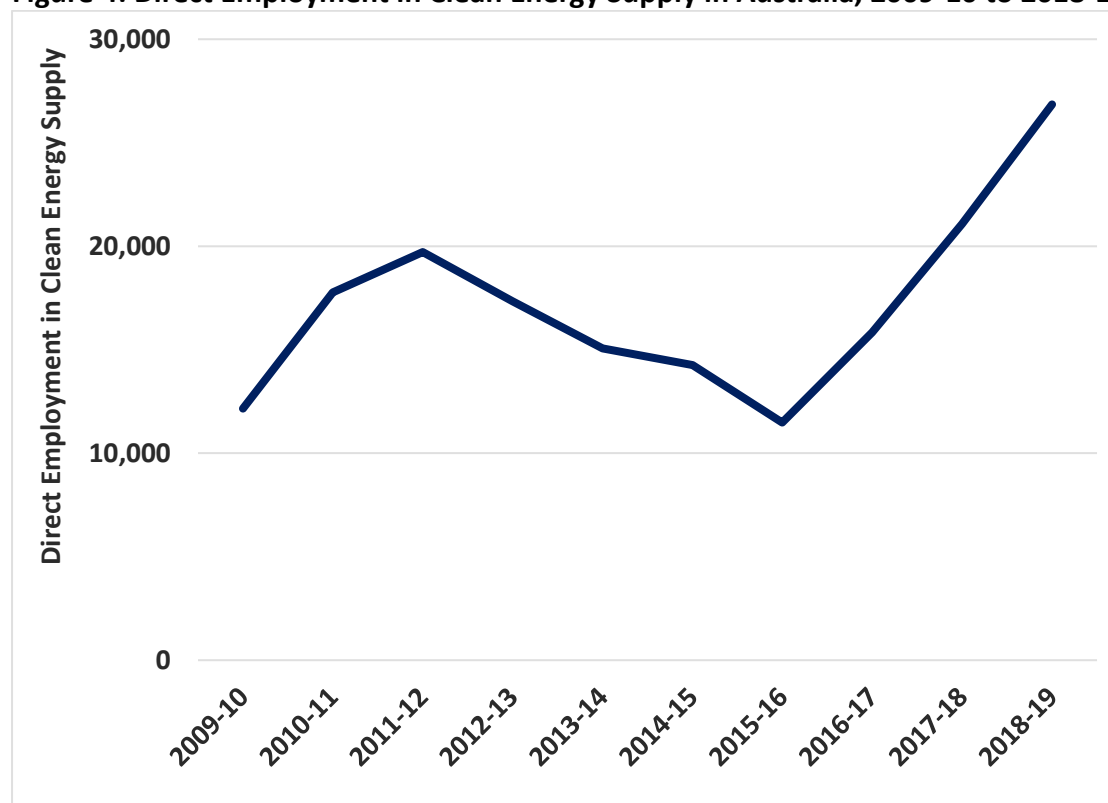
⁴⁴ Department of Industry, Science and Resources (2023a), *Critical Minerals Strategy 2023-2030*, <https://www.industry.gov.au/publications/critical-minerals-strategy-2023-2030>; COAG Energy Council (2019), *Australia’s National Hydrogen Strategy*, <https://www.dcceew.gov.au/energy/publications/australias-national-hydrogen-strategy>; Department of Industry, Science and Resources (2023b), *National Battery Strategy: issues paper*, <https://consult.industry.gov.au/national-battery-strategy-issues-paper>.

⁴⁵ AEMO (2023a), *Draft 2024 Integrated Systems Plan for the National Electricity Market*, <https://aemo.com.au/consultations/current-and-closed-consultations/draft-2024-isp-consultation>

⁴⁶ AEMO (2023b), ‘NEM generation by year’, *2024 Draft ISP Results Workbook*, <https://aemo.com.au/consultations/current-and-closed-consultations/draft-2024-isp-consultation>

renewable energy activities: a 120 per cent increase from ten years prior, as shown in Figure 4.⁴⁷ The Australian Government’s employment white paper *Working Future* projects that this workforce must increase further by 127 per cent between 2023 and 2033.⁴⁸ Similarly, the Institute for Sustainable Futures at the University of Technology Sydney (UTS) estimates the overall electricity sector workforce must increase from 37,000 in 2023 to 81,000 in 2049 under the AEMO’s 2022 ‘step change’ model (shown in Figure 5).⁴⁹

Figure 4: Direct Employment in Clean Energy Supply in Australia, 2009-10 to 2018-19



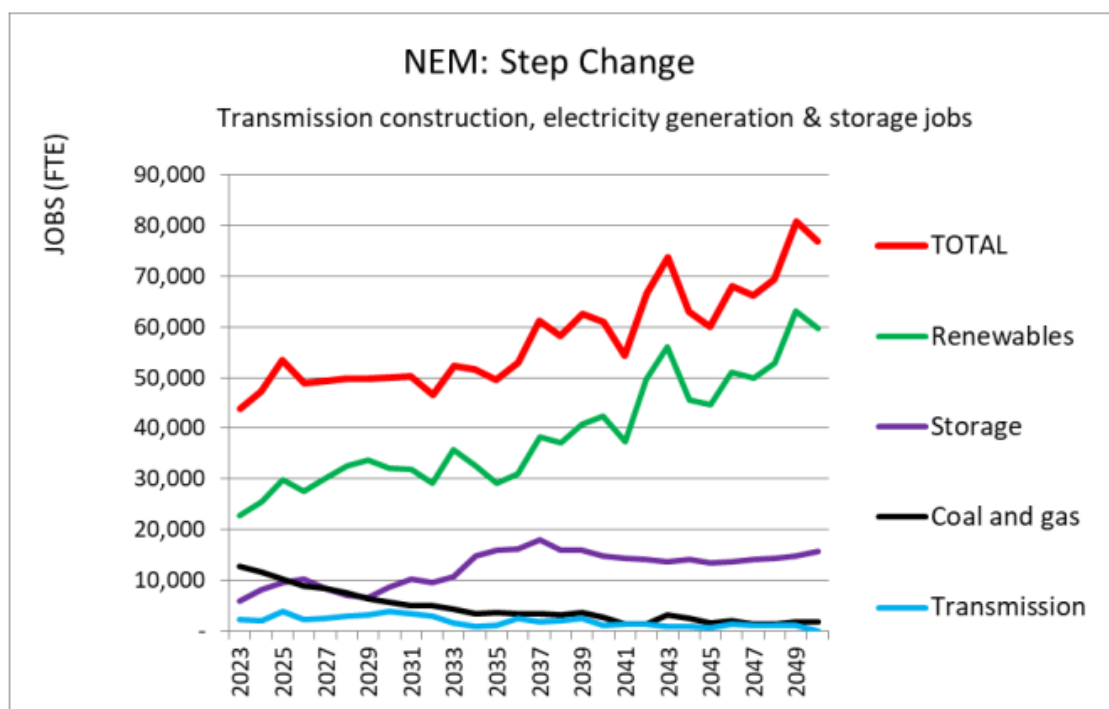
Source: ABS Labour Force Statistics (2020), ‘Employment in Renewable Energy Activities, Australia’

⁴⁷ ABS (2020), ‘Employment in Renewable Energy Activities, Australia’, <https://www.abs.gov.au/statistics/labour/employment-and-unemployment/employment-renewable-energy-activities-australia/latest-release>

⁴⁸ Commonwealth of Australia (2023), *Working Future: The Australian Government’s White Paper on Jobs and Opportunities*, <https://treasury.gov.au/employment-whitepaper/final-report>

⁴⁹ Rutovitz et al. (2023), *The Australian Electricity Workforce for the 2022 Integrated Systems Plan: Projections for 2050*, <https://www.uts.edu.au/isf/explore-research/projects/australian-electricity-workforce-2022-integrated-system-plan-projections-2050>

Figure 5: Australian Transmission Construction, Electricity Generation, & Storage Jobs: Step Change Model



Source: Rutovitz et al. (2023)

The prospect of stimulating substantial new ‘green’ manufacturing has broader implications for workers in these industries and in the broader Australian economy. Economic sectoral change sometimes entails and is often motivated by a desire to bring down labour costs by eroding working conditions. As this report will examine, this is already occurring to some extent in the energy transition, as the pay and conditions of many jobs in the fossil fuel energy sector have not been replicated in many private renewable energy generation projects. That the energy transition, the decarbonisation of many sectors, and the expansion of renewable-powered industries will be facilitated, underwritten, and often directly financed by government only strengthens the imperative for ensuring that new jobs created in Australia’s climate transition feature strong labour standards.

This section firstly analyses labour conditions in the existing renewable energy sector, noting that many projects receiving public support nonetheless engage in exploitative employment practices. Secondly, it examines the potential growth of renewable-powered manufacturing industries and the ramifications for labour in these industries. Finally, it argues that the importance of gaining ‘social licence’ – sufficient public support – for the clean energy transition, as well as the importance of long-term workforce retention and development, necessities ensuring that new clean energy jobs feature strong labour standards.

RENEWABLE ENERGY WORKING CONDITIONS

While some Australian states retain electricity generation under public ownership, Australia's electricity sector has been predominantly privatised.⁵⁰ Accordingly, the bulk of investment in renewable energy generation in Australia has come from the private sector.⁵¹ The desire to maximise the profitability of private renewable energy projects has placed downward cost pressures at the expense of working conditions. Indeed, concerns have been raised by unions regarding employment standards in renewable energy development projects, with particular focus on employment insecurity and underinvestment in skills and training.⁵² While working conditions are generally better and more secure in publicly-owned renewable energy projects, which are more likely to be covered by an enterprise agreement, even some publicly-owned projects have seen the profit motives of contractors be prioritised ahead of project working conditions.

Insecure Work

Insecure work is prevalent across Australia's economy, and the renewable energy industry is no exception. Renewable energy development projects have been criticised for an overreliance on labour hire employment, and concerns have been raised of developers employing underqualified workers on short-stay visas over local workers.⁵³ This prevalence of insecure work in the renewable energy industry is due to both structural and operational factors. Structurally, renewable energy projects often involve large short-term bursts of employment in construction and installation, but result in fewer ongoing jobs in operation and maintenance.⁵⁴ Additionally, renewable energy projects generally have smaller generation capacity than fossil fuel projects and are by their nature geographically dispersed. These factors encourage developers to rely on casualised, short-term labour, and make it difficult for workers and unions to organise for better employment security.

⁵⁰ The history and consequences of this privatisation are detailed by Richardson (2019), *The Costs of Market Experiments: Electricity Consumers Pay the Price for Competition, Privatisation, Corporatisation and Marketization* (Canberra: Australia Institute), <https://australiainstitute.org.au/wp-content/uploads/2020/12/P470-Electricity-Consumers-Pay-the-Price-WEB.pdf>.

⁵¹ de Atholia, Flannigan and Lai (2020), *Renewable Energy Investment in Australia*, Reserve Bank of Australia, <https://www.rba.gov.au/publications/bulletin/2020/mar/renewable-energy-investment-in-australia.html>

⁵² Perkins (2020), 'Unions warn of exploitation, dangerous practices in renewables sector', *Sydney Morning Herald*, <https://www.smh.com.au/national/unions-warn-of-exploitation-dangerous-practices-in-renewables-sector-20201127-p56ihp.html>;

⁵³ Bavas (2017), 'Queensland solar farms actively hiring backpackers, insider claims', *ABC News*, <https://www.abc.net.au/news/2018-09-26/queensland-solar-farms-employing-backpacker-labour/10302500>

⁵⁴ Rutovitz et al. (2023), *The Australian Electricity Workforce for the 2022 Integrated Systems Plan: Projections for 2050*, <https://www.uts.edu.au/isf/explore-research/projects/australian-electricity-workforce-2022-integrated-system-plan-projections-2050>

Compounding this, operational norms have emerged in the renewable energy industry which result in indirect and insecure employment. Renewable energy projects often entail renewable energy developers contracting engineering procurement construction (EPC) firms, which then subcontract again to labour hire firms, which then generally employ workers on casualised, contract bases.⁵⁵ The complication and delegation intrinsic to this model make standards relating to employment, procurement, or community relations difficult to enforce – even with the best intentions from the developers themselves.

The precarity of this model is intensified by the boom-bust cycle of private sector renewable investment in Australia.⁵⁶ Inconsistent investment has left EPC contractors declaring bankruptcy, sometimes with incomplete projects – leaving workers and suppliers unpaid by thousands of dollars and leading many to withdraw from the renewable energy industry altogether.⁵⁷

Insufficient investment in skills and training

The lack of a long-term, stable workforce resulting from inconsistent energy policy, investment and employment creates the additional problem of under-skilling. This is a result of both industry and government underinvestment in training and apprenticeships, as well as reflective of the broader skills shortages facing the Australian economy. Australia's vocational education and training (VET) system has suffered from a combination of policy mistakes and fiscal mismanagement over past decades, leading to a dramatic decline in vocational training enrolments and skills shortages across several economic sectors.⁵⁸

In the renewable energy sector, industry surveys and the National Skills Shortage Priority List have identified current shortages across a range of key occupations including civil, electrical, and mechanical engineers, construction managers, electricians, and transmission line-workers.⁵⁹ Resultantly, reports have emerged of workers employed in renewable energy projects not provided with sufficient vocational training, contributing to unsafe work practices and accidents.⁶⁰

⁵⁵ ACTU (2020), *Sharing the Benefits with Workers*, pp. 19-2

⁵⁶ Clean Energy Council (2020), *Clean Energy at Work*, <https://www.cleanenergycouncil.org.au/resources/resources-hub/clean-energy-at-work>

⁵⁷ ACTU (2020), *Sharing the Benefits with Workers*

⁵⁸ Pennington (2020), *An Investment in Productivity and Inclusion: The Economic and Social Benefits of the TAFE System*, Centre for Future Work, <https://futurework.org.au/report/an-investment-in-productivity-and-inclusion/>

⁵⁹ Rutovitz et al. (2023), *The Australian Electricity Workforce for the 2022 Integrated Systems Plan: Projections for 2050*, <https://www.uts.edu.au/isf/explore-research/projects/australian-electricity-workforce-2022-integrated-system-plan-projections-2050>

⁶⁰ Perkins (2020), 'Unions warn of exploitation, dangerous practices in renewables sector', *Sydney Morning Herald*, <https://www.smh.com.au/national/unions-warn-of-exploitation-dangerous-practices-in-renewables-sector-20201127-p56ihp.html>

Other poor employment practices

As detailed in the ACTU report *Sharing the benefits with workers* (2020), several other examples of poor employment practices have been identified in the renewable energy sector.⁶¹ These include:

- Poor on-site facilities for workers
- No local advertisement for employment
- Overseas workers filling roles promised to local community
- Culture of removing workers who raise safety concerns
- Hostile responses to unions visiting sites, including calling police and locking workers inside workplaces

In a particularly egregious case, workers on the publicly-owned Snowy Hydro 2.0 project – a pumped hydro battery development – were reportedly served maggot-ridden food, housed in unsanitary work camps, repeatedly exposed to unsafe work practices, and employed on casual bases by private contractors.⁶² The profit incentives of the private contractors, the absence of labour conditions attached to the contracts, and the lack of government oversight on the project resulted in this dismal example of employment misconduct.

Compounding these operational practices, the ability for existing regulatory infrastructure to oversee safety and standards compliance for renewable energy development projects is complicated by the geographic dispersal of renewable energy development projects. Many projects occur in locations far from safety regulator inspectorates, challenging the capacity of traditional regulatory enforcement infrastructure.

The renewable energy sector is set to expand significantly, and it appears that large components of this expansion will come from private renewable energy developers receiving government support. This includes the guaranteeing of profitability through mechanisms such as the Capacity Investment Scheme (CIS). As this industry expands, it is important that poor employment practices do not expand as well. Already, the absence of conditionality attached to public financial support has allowed renewable energy developers to receive financial support through the CEFC, ARENA, and other funding mechanisms while also engaging in negative employment practices. Labour standards conditionality with strong enforcement mechanisms are an important step in ensuring that workers' rights and

⁶¹ ACTU (2020), *Sharing the Benefits with Workers*, <https://www.actu.org.au/policies-publications-submissions/sharing-the-benefits-with-workers-a-decent-jobs-agenda-for-the-renewable-energy-industry/>

⁶² Safety Solutions (2023), 'Snowy Hydro workers threaten walk-off over unsafe work conditions', <https://www.safetysolutions.net.au/content/business/news/snowy-hydro-workers-threaten-walk-off-over-unsafe-work-conditions-38322345>; Angury and Byrant (2021), 'Snowy Hydro 2.0 project management is putting progress ahead of workers safety, union says', *ABC News*, <https://www.abc.net.au/news/2021-06-01/snowy-hydro-20-project-allegations-of-unsafe-working-practices/100180884>

conditions are prioritised through the transition to renewable energy, and that employers do not prioritise profits over workers' livelihoods.

A FUTURE MADE IN AUSTRALIA?

Beyond the transition of the energy sector from fossil fuels to renewable energy, Australia has great potential to reap other industrial and economic benefits from the renewable energy transition. Australia could leverage its many advantages, including mineral and resource endowments, vast access to sun, sky, ocean, and land, and trading capacity, to develop renewable-powered manufacturing industries that can capture a significant share of a growing global market for technologies relating to the energy transition. This includes renewable energy technologies (such as solar panels, turbines, and batteries), manufactured inputs to these and other products (including green metals, processed critical minerals, and green hydrogen); and other technologies and processes associated with the energy transition (including electric vehicles and home energy efficiency).⁶³ Professor Ross Garnaut has prominently championed Australia's potential to become a 'renewable energy superpower', and this language has since been taken up by the Australian Government.⁶⁴ This push has taken on greater urgency since the enactment of the US Inflation Reduction Act (IRA) in 2022, and the Australian Government has been widely called on to respond with complementary and competitive industrial incentives.⁶⁵

At the 2024 federal budget, these calls came to fruition with the announcement of the Future Made in Australia Act (FMAA). The FMAA aims to support investment in Australian value-added manufacturing initiatives relating to the renewable energy transition. While it remains to be legislated, the budget suggests the FMAA will entail approximately \$22.7 billion of new public spending over ten years from 2024. The majority of this is accounted for by two new tax credits which incentivise private investment into domestic critical minerals processing and renewable hydrogen production. These credits are available from 2027 and, while currently uncapped, are estimated to entail \$13.7 billion in public industrial

⁶³ Joyce and Stanford (2023), *Manufacturing the Energy Revolution: Australia's Position in the Global Race for Sustainable Manufacturing*, Centre for Future Work, <https://futurework.org.au/report/manufacturing-the-energy-revolution/>

⁶⁴ Garnaut (2019), *Superpower: Australia's Low-Carbon Opportunity*, La Trobe University Press; Joint Standard Committee on Trade and Investment Growth (2023), *Australia's transition to a green energy superpower*, https://www.aph.gov.au/Parliamentary_Business/Committees/Joint/Joint_Standing_Committee_on_Trade_and_Investment_Growth/GreenEnergySuperpower/Report; Maskiell (2023), 'Australia can be clean energy 'superpower': PM tells APEC', *Australian Financial Review*, <https://www.afr.com/politics/federal/ex-detainees-face-tough-penalties-under-new-laws-20231117-p5ekpp>.

⁶⁵ Dean and Jackson (2024), 'Industry Policy', *Journal of Australian Political Economy*, <https://www.ppesydney.net/labor-in-government-a-new-special-issue-of-jape/>, Joyce and Stanford (2023), *Manufacturing the Energy Revolution: Australia's Position in the Global Race for Sustainable Manufacturing*, Centre for Future Work, <https://futurework.org.au/report/manufacturing-the-energy-revolution/>;

support by 2034-35. Approximately \$4.5 billion in new funding is also slated for the Australian Renewable Energy Agency (ARENA) across several new initiatives, providing grants, subsidies, and investment for the manufacturing and development of renewable technologies, including batteries and solar panels. These initiatives are expected to be legislated in the second half of 2024.

As well, the Australian Government has already begun to develop select industry plans for the growth of new renewable-powered manufacturing industries. This indicates a growing recognition on the part of the Australian Government of the multi-faceted measures and long-term planning required to position Australian industry well in the changing global economic environment brought about through the net zero transition – not to mention the resurgence of active industry policy in other industrial countries.

Since 2019, a series of Critical Minerals Strategies have been developed by the Department of Industry, Science, and Resources to provide a framework for the expansion of Australia’s critical minerals industries. Critical minerals (such as lithium, cobalt, and manganese) are essential components of most renewable energy technologies, including batteries, solar PV, and wind turbines. Australia is endowed with globally unique abundances of critical mineral reserves and is already a leading producer of many raw critical minerals (summarised in Table 1).

Table 1

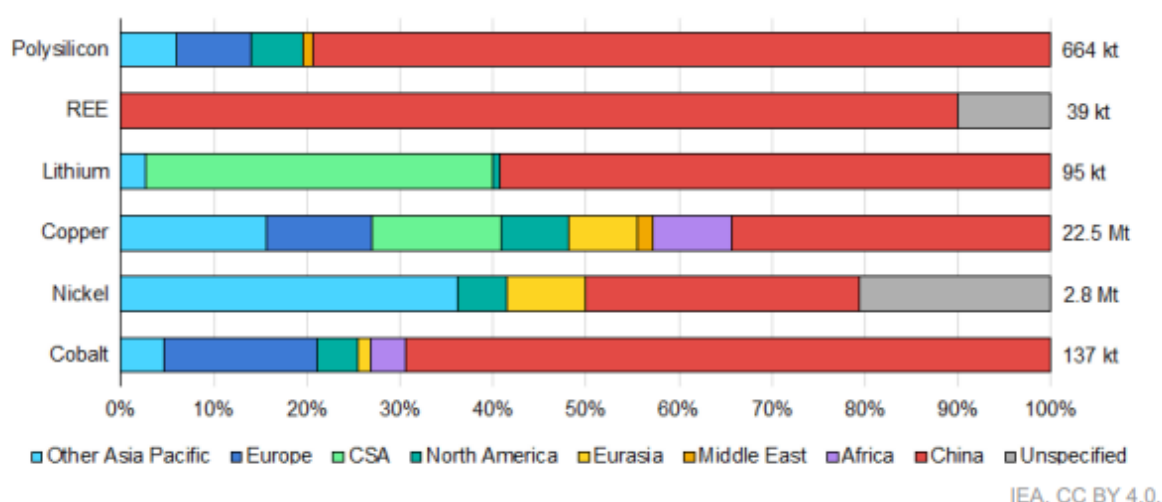
Australia’s Endowment of Critical Minerals

	Global Rank: Established Reserves	Global Rank: Production (2021)
Lithium	2	1
Rare Earths	6	4
Cobalt	2	3
Graphite	8	na
Manganese	4	3
Bauxite	2	1
Silica	na	15
Vanadium	2	na

Source: Adapted from Dept. of Industry, Science and Resources (2022, p. 7) in Joyce and Stanford (2023, p. 35)

However, Australia’s existing critical minerals industry only occupies very early stages of the global supply chain; the bulk of critical minerals processing occurs offshore, with China occupying a globally dominant position in the refining of several critical minerals – including polysilicon, rare earth elements, lithium, and cobalt (demonstrated in Figure 6). The Australian Government’s *Critical Minerals Strategy 2023-2030* (2023) outlines limited steps to increase domestic sovereign capacity in critical minerals processing, strengthening supply chain resilience and capturing greater economic benefits from the critical minerals industry.

Figure 6: Regional Shares of Global Production of Selected Critical Minerals, 2021



Source: International Energy Agency (2023)

The Australian Government has also developed a *National Hydrogen Strategy* (2019) to facilitate the development of a domestic clean hydrogen export industry. At the 2023 budget, 2 billion was allocated to establish the Hydrogen Headstart program to de-risk private investment in several selected renewable hydrogen projects. The program intends to facilitate the development of two or three flagship projects to deliver one gigawatt of electrolyser hydrogen capacity by 2030, and is expected to begin funding projects in 2026. In December 2023, a shortlist of six applicants to receive Hydrogen Headstart funding was released, including: BP, HIF Australia Pacific, KEPCO Australia, Origin Energy, Stanwell Corporation, and Murchison Hydrogen Renewables.⁶⁶ At this point, none of the applicants has yet negotiated a memorandum of understanding with relevant unions, creating uncertainty regarding expectations of labour conditions in these potential projects.

Additionally, the Australian Government is currently formulating a National Battery Strategy to develop a domestic battery manufacturing industry. This plan will aim to leverage

⁶⁶ ARENA (2023), ‘Six shortlisted for \$2 billion Hydrogen Headstart funding’, <https://arena.gov.au/news/six-shortlisted-for-2-billion-hydrogen-headstart-funding/>

Australia's mineral supplies and educated workforce to capture part of growing global markets for batteries and boost domestic supply chain security.

Further renewable industrial opportunities also exist for Australia. Nahum (2020) and Dean (2022) both argue that Australia is well placed to develop an electric vehicle manufacturing industry due to its unique mixture of productive assets: mineral reserves, skilled labour, renewable energy potential, and existing industrial assets from past and ongoing automotive manufacturing.⁶⁷ Australia also has further manufacturing potential, including for 'green' steel, aluminium, zinc and other metals, transmission equipment, and of wind turbines and components.

Taken together, the potential for a *Future Made in Australia* to drive an expansion of domestic manufacturing and make Australia a 'renewable energy superpower' entails significant consequences for labour. Employment in renewable energy technical services, construction, and manufacturing will grow, and new industrial and employment norms will be established. Those jobs will be vital in ensuring that the energy transition enhances the economic well-being of Australian workers – all the more so if those jobs offer good wages, security, and working conditions. The central role of government in building these new industries through sectoral development strategies and financial support provides an opportunity for government to advance the interests of workers and the broader public by embedding conditionality in public industrial supports.

THE IMPORTANCE OF SOCIAL LICENCE

The importance of obtaining social licence – sufficient public support – for the energy and industrial transitions associated with decarbonisation gives additional cause for ensuring that new renewable energy and manufacturing industries feature strong labour conditions. Indeed, ensuring that the workers employed in the climate transition will see their working and living conditions improve is not merely a desirable add-on to climate industry policy. Rather, it is necessary for the ultimate success of Australia in playing its role in averting climate disaster by rapidly decarbonising its energy sector and building successful manufacturing industries – for both practical and political reasons.

As previously noted, ensuring the successful transition of the energy system requires an expanded and sustained workforce. Workers must be attracted to, trained for, and retained in clean energy installation and maintenance, construction, manufacturing, and other associated administrative and technical activities. Ensuring clean energy workers have

⁶⁷ Nahum (2020), *Powering Onwards: Australia's Opportunity to Reinvigorate Manufacturing through Renewable Energy*, Centre for Future Work, <https://futurework.org.au/report/powering-onwards/>; Dean (2022), *Taking Charge of an Electrified Future*, Carmichael Centre, https://www.carmichaelcentre.org.au/taking_charge_of_an_electrified_future

secure, well-paid jobs and proper training will ensure existing fossil fuel sector workers with high energy literacy are retained and deployed to new energy work, and will also aid in attracting new workers to these jobs. Currently, the conditions of labour in many renewable energy undertakings do not promote the attraction and retention of workers. The job insecurity, labour conditions, uncompetitive pay, and boom-and-bust cycle of renewable energy developments in Australia have led to significant attrition in the clean energy workforce, leaving many developers struggling to retain staff.⁶⁸ This compounds existing labour challenges for renewable developers including geographic disparity and competition with adjacent sectors (such as infrastructure construction and the fossil fuel industry).⁶⁹ The AEMO has warned that the growing demand for skilled workers may not be met if present employment conditions continue, particularly underinvestment in training and the boom-bust cycle of renewable employment.⁷⁰ Improved pay, working conditions and long-term employment stability can be delivered through direct and permanent worker employment and coordinated project deployment. This would make renewable energy industries more attractive to workers, thus ameliorating skills shortages and creating an expanded and sustained workforce.

As well as practical, there are important political reasons why Australia's climate industrial strategy must prioritise improving workers' livelihoods. The transition away from fossil fuels to renewable energy and away from carbon intensive economies to net zero emissions will entail significant change and upheavals to some lifestyles and economic models.⁷¹ If this transition comes to be associated with worsening employment living conditions, it will not gain long-term public support to ensure its success. Renewable energy rollout in Australia has encountered criticism and sometimes disruptions from some farmers, conservationists, and other interest groups. Ensuring that new renewable energy infrastructure and manufacturing industries feature good jobs with strong labour standards can aid in garnering public support for the energy transformation and industrial changes of the net zero transition.

⁶⁸ Clean Energy Council (2020), *Clean Energy at Work*,

<https://www.cleanenergycouncil.org.au/resources/resources-hub/clean-energy-at-work>

⁶⁹ Briggs et al. (2022), 'Building a 'Fair and Fast' energy transition? Renewable energy employment, skill shortages and social licence in regional areas', *Renewable and Sustainable Energy Transition*, <https://doi.org/10.1016/j.rset.2022.100039>

⁷⁰ AEMO (2023), *Draft 2024 Integrated Systems Plan*, <https://aemo.com.au/consultations/current-and-closed-consultations/draft-2024-isp-consultation>, p. 78

⁷¹ Rainnie and Snell (2023), 'Renewable energy and the promise of jobs, regional regeneration and first nations opportunities', *Labour and Industry*, <https://doi.org/10.1080/10301763.2023.2289097>

III. Industry Policy Tools for Strengthening Labour Standards

This sections above have outlined the ways in which a more conditional approach to industry policy can enable the Australian Government to advance its industrial and climate objectives while also strengthening labour standards in industries implicated in Australia's climate industrial strategy. It has also established that there are strong reasons to advance labour opportunities and conditions in Australia's transition to renewable energy and net zero emissions, and in the expansion of new renewable-powered manufacturing industries. This final section examines the steps the Commonwealth Government can take to ensure new publicly supported renewable energy and related industries feature strong labour standards. Again, the general goal of using government's economic leverage to promote stronger labour standards in industries benefiting from public assistance should apply more broadly across government's various economic interventions. But the immediate opportunities associated with new jobs in industries related to the renewable energy transition, and the importance of strengthening social licence for that transition, makes this an especially promising venue in which to apply these principles of labour standards conditionality.

In seeking to receive public industrial supports through special public investment vehicles such as ARENA, the National Reconstruction Fund, or the Capacity Investment Scheme, companies may compete to offer the most cost-effective project proposal. Embedding labour standard benchmarks as mandatory conditions for consideration in awarding contracts or grants ensures that competitive tender processes do not transpire as a race to the bottom on employment standards.

It is important to recognise that the effectiveness of this strategy depends on take-up. Strong labour standards must also be accompanied by substantial industry supports to encourage businesses to invest in accordance with Australia's climate, industrial, and labour strategies. Without backing up Australia's economic ambitions with financial incentives, as well as corresponding disincentives and disciplinary mechanisms for companies acting in contravention to those goals, it is unlikely that private investment will correspond with public ambitions.

As already noted, several factors must be considered in the promotion of labour standards. The Australian Government's employment white paper *Working Future* suggests three components for determining job quality: safety and fair treatment, security and flexibility, and fair pay. These provide a positive, though incomplete, framework for measuring job quality. A broader approach requires consideration of a fourth factor: voice and collective bargaining. The recommendations proposed in this section reflect this multifactored

assessment of job quality. These are: the implementation of the proposed Secure Australian Jobs Code, and its extension to all publicly funded projects; apprenticeship quotas and ongoing training; pay floors and ceilings; and mandatory monitoring of workplace health and safety standards

Table 2
Industry Policy Tools for Strengthening Labour Standards

Recommendation	Targeted factors of job quality	Description
The Secure Australian Jobs Code	Security and flexibility; fair pay; voice and collective bargaining	A proposed set of conditions relating to job security, fair wages and conditions, gender equality, hiring equity, and the meaningful ability to join and participate in a union. Currently expected to apply to Commonwealth procurement contractors. Should be extended to apply to all recipients of public finance, including renewable energy and manufacturing.
Apprenticeships and training	Safety and fair treatment	Apprenticeship quotas and ongoing training and skills development requirements must be built into publicly financed projects. Structures must be established connecting employees of publicly funded renewable projects with TAFEs, training institutes, group training organisations and universities where appropriate.
Pay floors and ceilings	Fair pay	Pay standards in line with industry norms must be made mandatory for projects receiving public financial support. This is essential for attracting workers, ongoing job satisfaction, and ensuring that companies do not attempt to undercut established industry pay standards. Pay ceilings also ensure public subsidies are not used to reward executives and CEOs.
Workplace health and safety	Safety and fair treatment	Companies must guarantee the safety of their workers, particularly when working in environments subject to climate change-induced safety risks. Mandatory reporting and ongoing engagement with unions must be considered as means of ensuring this occurs.

THE SECURE AUSTRALIAN JOBS CODE

The *Secure Australian Jobs Code* (SAJC) is a proposed series of conditions to which businesses must adhere to be considered for Commonwealth procurement contracts. The SAJC is yet to be finalised but has been committed to by the incumbent ALP Commonwealth Government.⁷² The SAJC is expected to relate to job security, fair wages and conditions, gender equality, hiring equity, and the right to join and participate in a union. It is modelled on procurement codes established by the Queensland, Victoria, and ACT governments.

There is potential for the SAJC to be extended beyond procurement to apply to all recipients of public fiscal support. This would include renewable energy developers receiving Commonwealth subsidies and incentives, including through the Australian Renewable Energy agency (ARENA), the Clean Energy Finance Corporation (CEFC) and the Capacity Investment Scheme (CIS), as well as recipients of industrial financial support through the National Reconstruction Fund (NRF) and any additional funding mechanisms. Doing so would ensure that publicly funded projects underpinning Australia's transition to net zero emissions feature best practice labour standards. Broadening the SAJC's applicability would also help to lift labour standards in any other sectors that also receive public financial support and incentives.

The effectiveness of the *Secure Australian Jobs Code* will depend on the strength of its prescriptions and on the means of enforcement. The SAJC must incorporate a holistic and progressive vision of employment standards, reflecting best practices from enterprise agreements and developed in consultation with workers' representatives and labour law experts. The results of this might include mandates regarding stable and secure employment for workers; participation strategies and hiring targets for First Nations workers, women, and local employees in regional areas; rights to association, representation, and bargaining; clear targets for employment of apprentices; safety standards, including regarding hours of work and fatigue management. It might also include other requirements beyond the labour standards realm, such as domestic content requirements and environmental considerations.

Reporting mechanisms must be established to ensure compliance with the *Secure Australian Jobs Code*. As a condition of applying for finance through any of these funding mechanisms, applicant businesses must detail how they will fulfil the expectations of the SAJC; following the successful awarding of public support, regular reports substantiated with documentary evidence must demonstrate ongoing adherence. Enforcement mechanisms and disincentives for failure of compliance must also feature, including, in severe cases, the right to claw back public financial support.

⁷² ALP (2023), *Australian Labor Party National Platform*, <https://www.alp.org.au/media/3569/2023-alp-national-platform.pdf>, p. 20

APPRENTICESHIPS AND TRAINING

Apprenticeship quotas and ongoing training and skills development requirements must be built into publicly financed projects. This is particularly important for renewable energy development projects, which feature high labour intensity requirements at construction and installation stages but far fewer ongoing employment demands. Shortages of many in-demand skills already exist, and the coming expansion of renewable energy generation will require substantial workforce expansion. As noted above, employment levels in renewable energy industries will more than double in coming years. The Australian Government is already establishing a new Clean Energy Apprentice program which provides federal support for state-based TAFE programs to promote clean energy technical education. However, the necessity of developing an expanded, highly skilled renewable energy construction and installation workforce requires the embedding of training and skills development within projects.

The Australian Government is developing an **Australian Skills Guarantee** program which will mandate apprenticeship targets of 10 per cent of all labour hours to be undertaken by apprentices/trainees on major Commonwealth construction projects of \$10 million or more, with further targets for female trainees and apprentices.⁷³ The Skills Guarantee must be extended to renewable energy projects and to new manufacturing facilities supported by public funding through the Australian Renewable Energy Agency, the National Reconstruction Fund, the Clean Energy Finance Corporation, and other investment vehicles. As well as apprenticeships, employers must invest in ongoing training and skills development for employees. Structures must be established connecting employees of publicly funded projects with TAFEs, training institutes and universities where appropriate.

PAY FLOORS AND CEILINGS

The payment of fair wages must be a central consideration of conditionality in industrial support mechanisms. Ensuring that companies receiving public financial support pay fair wages is important for attracting workers to these important projects, for ongoing job satisfaction, recruitment, and retention, and for ensuring that supported companies do not attempt to undercut established industry pay standards. In making sure this does not occur, it is necessary to assess the *prevailing wages* that are paid for relevant occupations and trades.⁷⁴ Industry pay standards for many trades and occupations, particularly in the

⁷³ Department of Employment and Workplace Relations (2023), 'Australian Skills Guarantee', <https://www.dewr.gov.au/australian-skills-guarantee>

⁷⁴ In the United States, assessments of prevailing wages are undertaken by the Department of Labor in accordance with the Davis-Bacon Act. A prevailing wage is the wage paid to at least 50% of workers in a construction occupation for a local area. If there is no single rate for at least 50% of workers in that occupation, then the prevailing wage is the average rate paid in the area for that occupation. Payment of prevailing wages

construction industry, are significantly higher than legal award minimums. Without a legal mandate for the payment of industry and occupation-specific prevailing wages in renewable energy installation and maintenance and in new renewable manufacturing projects, employers will push down industry wage standards to increase profitability. Instituting wage standards as a condition of public industry support ensures that fairness and the maintenance of living standards is prioritised through the structural changes unleashed by the renewable transition. This is already a feature of Queensland Government construction procurement policy, with wage standards mandated through the Best Practice Industry Principles.⁷⁵

Additionally, government should consider imposing requirements (or preferential treatment) to ensure public financial support is not used to increase compensation for CEOs and top executives. Wage ‘ceilings’ can also be an important component in industry policy to promote reinvestment and reduce income inequality.

WORKPLACE HEALTH AND SAFETY

It is also essential to ensure that publicly supported companies guarantee the safety of their workers. While ensuring workplace health and safety demands legislative measures, direct regulation and ongoing oversight, industry policy incentives can also aid in promoting health and safety. Mandatory reporting of compliance with health and safety requirements could be established as a condition of receiving public industrial supports, as could compulsory consultation with relevant unions.

One relevant dimension in ensuring workplace health and safety through the net zero transition as global heating progresses is protecting workers from potential heat stress injury. Significant employment in Australia’s net zero transition and the expansion of renewable-powered manufacturing industries will occur outside of urban environments, in regional and rural areas and particularly in hot climates. Heat stress already poses serious health and safety risks for many workers across Australia, and the safety risks of working in high heat will only increase with further global heating.⁷⁶ Australia currently has no regulations specifying maximum temperatures for working, however employers have duties

is mandatory for construction companies receiving government contracts and certain tax credits. See also: Mahalia (2008), *Prevailing Wages and Government Contracting Costs*, Economic Policy Institute, <https://www.epi.org/publication/bp215/>;

⁷⁵ Queensland Government (2022), *Best Practice Industry Conditions*, https://www.forgov.qld.gov.au/_data/assets/pdf_file/0010/212410/best-practice-principles-quality-safe-workplaces.pdf

⁷⁶ Humphreys, Newman, and Goodman (2020), *Heat Stress and Work in the Era of Climate Change: What We Know and What We Need To Learn*, Centre for Future Work, <https://futurework.org.au/report/heat-stress-and-work-in-the-era-of-climate-change/>

to provide and maintain for employees, as far as practicable, a working environment that is safe and without risks to health. Heat stress, as well as other workplace health and safety aspects of the net zero transition must be considered as part of Australia's transition industrial strategy.

BROADER PUBLIC INTEREST CONDITIONALITY

Beyond labour standards, there is potential for industry policy conditionality to shape corporate behaviour in other ways. For example, companies which engage in tax avoidance should not be eligible for public industrial support, and public funds should be precluded from being used for shareholder buybacks or executive bonuses. Developers should also be required to engage with relevant First Nations organisations, particularly with regards to identifying and protecting sacred sites and artefacts, maintaining access to Country, and promoting Indigenous employment.⁷⁷ Conditionality might also relate to domestic content requirements or environmentally sustainable industrial practices.

Additionally, government should consider taking equity shares in companies receiving public industrial support. This would advance government oversight, as well as allowing the public to share in the financial rewards of private investment as well as the risks.

⁷⁷ For the importance of increased Indigenous employment in clean energy projects, see Briggs et al. (2024), *Powering First Nations Jobs in Clean Energy*, First Nations Clean Energy Network, https://www.firstnationscleanenergy.org.au/ready_set_go_12_actions_to_power_first_nations_jobs_in_clean_energy

Conclusion

The transition from fossil fuel to renewable energy and the potential expansion of Australian renewable-powered manufacturing industries presents both risks and opportunities with regards to labour. Australia's renewable energy transition has so far relied largely on private sector investment, development, and operation – albeit shaped by significant government policy and fiscal support. Many renewable energy developments feature the same cost-cutting and competitive drivers associated with profit-driven development in other industries. With the notable exception of state-owned renewable energy development, it seems likely that profit-driven private development will continue to characterise Australia's renewable energy generation and manufacturing industries. Given the prevalence of insecure employment and unsafe working conditions in some segments of the private renewable energy sector, there is a risk that these features will expand with the sector. However, the central role of government finance and policy in overseeing and funding Australia's net zero transition presents an opportunity for the Australian Government to leverage its position to ensure that employment in renewable industries features fair pay and strong working conditions.

Embedding conditionality in Australia's industry assistance mechanisms is a clear and practical means of promoting stronger labour standards in Australian renewable industries. While industry policy is not the traditional domain of employment regulation, taking a joined-up approach to industry, employment, and climate policy can allow the Australian Government to advance its ambitions of revitalising Australian manufacturing, transitioning the energy system to renewables and bringing down emissions, and promoting secure work and fair pay together. Unveiling substantial and attractive industry policy supports that are contingent on meeting ambitious employment standards can enable the Australian Government to reshape employment norms and expectations in new renewable energy industries.

Ensuring employment in renewable industries features strong labour standards is important for both practical and political reasons. Workers must be attracted to, trained for, and retained in the many trades and professions associated with clean energy employment. Ensuring clean energy workers have secure, well-paid jobs and proper training will aid in attracting workers to these jobs and ensuring experienced and skilled workers remain in the industry. Additionally, obtaining and maintaining public support for the energy transition and the associated expansion of renewable-powered manufacturing industries is of central importance. If renewable projects of any type are associated with exploitative employment practices, they risk losing this necessary public support.

For similar reasons that government industry assistance and procurement can and should be used to strengthen labour standards in renewable energy and manufacturing industries, government should also use their economic leverage to mandate strong employment

standards in other industries receiving government financial assistance, including publicly-funded human and community services (such as the aged care and early childhood education and care sectors, and disability support funded through the NDIS).

Unfortunately, even as the Commonwealth Government undertakes important measures to speed the development of renewable energy and related substantiable manufacturing industries, the transition to renewable energy and a net-zero economy is being undermined by other policies which facilitate and subsidise the continued expansion of fossil fuel production (such as the recently announced Future Gas Strategy). Apart from jeopardising Australia's emissions reduction targets, these new fossil fuel projects exacerbate future employment transitions away from fossil fuel industries – by creating additional jobs in fossil fuel industries which must soon be phased out. A genuine commitment to emissions reduction would require the Commonwealth Government to stop approving new fossil fuel projects (including coal and gas expansions), eliminate subsidies for fossil fuel industries (currently estimated at \$14.5 billion per year⁷⁸), and expand the mandate of employment transition measures proposed in the new Net Zero Economy Agency (NZEa) to support the necessary eventual phase-out of the full range of fossil fuel production, refining, and transportation activities.⁷⁹ Capturing the full economic and employment potential of renewable energy expansion and related manufacturing activities described in the FMAA (complemented by the labour standards conditions described above) will not be possible if Australia continues to expand fossil fuel production and use. This contradiction in current government policy needs to be resolved, if our ambitions for high-quality, secure jobs in renewable energy and sustainable manufacturing are to be achieved.

This report advances four main policy recommendations for embedding labour standards within the new generation of Australian industry policies, aimed at accelerating the development of renewable energy and complementary sustainable manufacturing activities. Firstly, the proposed Secure Australian Jobs Code must be developed, enacted, and extended beyond just government procurement to also apply to recipients of industrial support. This code must establish minimum standards relating to job security, fair wages and conditions, gender equality, hiring equity, environmental sustainability, and the right to join and participate in a union. Secondly, apprenticeship quotas and ongoing training and skills development requirements must be built into publicly financed projects to create entry-level pathways into the industry, ensure workers have adequate training to ensure safety, and

⁷⁸ Campbell et al. (2024).

⁷⁹ At present the transition supports described in NZEA legislation apply only to a subset of existing fossil fuel jobs: namely, positions in fossil fuel-powered electricity generation facilities and related dependent facilities. For more on the need to expand those measures to support the phase-out of all fossil fuel work, see Stanford and Joyce, *Submission to the Senate Finance and Public Administration Committee Inquiry into the Net Zero Economy Authority Bill 2024 and the Net Zero Economy Authority (Transitional Provisions) Bill 2024*, Centre for Future Work, April 2024.

reduce industry skills shortages. Thirdly, minimum and maximum pay standards can be prescribed to ensure that industry norms are not undercut, and that public finance is not misused to overly remunerate executives and CEOs. Finally, companies must guarantee the safety of their workers, including when working in environments subject to climate change-induced safety risks. Mandatory reporting and ongoing engagement with unions should be required to support this goal.

A conditional approach to industry policy is in line with international best practice and can allow for productive public-private relations in the social interest. The Commonwealth must take this opportunity to embed workers' rights in its vision to make Australia a renewable energy superpower. That will ensure that the benefits of the energy transition flow through to all classes and regions in Australian society, and reinforce both the economic benefits of and political support for moving forward with that transition as quickly as possible.