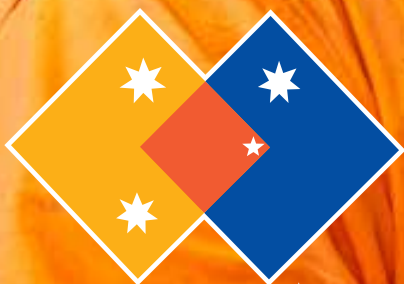


Australia's Opportunity: A Green Manufacturing Superpower



AMWU





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For too long, environmental sustainability and creating more jobs in the manufacturing and energy production sectors have been seen as incompatible with one another. The Australian Manufacturing Workers' Union (AMWU) rejects this framing. Our union – which organises and represents almost 70,000 members from every city and region of Australia – believes that the international shift to renewable energy represents an unprecedented opportunity to revive our nation's battered but resilient manufacturing sector.

Australia's unique opportunity stems from our abundance of renewable energy resources. Research shows Australia has perhaps the greatest natural resources in terms of sun (solar), wind, and waves, among other resources, of any developed nation.¹ We also possess immense mineral resources that will be in high demand in the coming decades, including lithium ion, which is essential to produce batteries for electric vehicles (EVs) and other high demand applications.²

Harnessing our immense renewable energy resources would generate an abundance of cheap power which can be used to revitalise existing industries and build new ones. This includes building the renewable energy infrastructure, such as wind towers and solar panels.

It should also mean value adding to our minerals rather than simply digging them up and shipping them off to other countries that use them to grow their own sovereign capabilities in manufacturing.

Our union is proud to be a democratic organisation. It is run by members, for members. That is why this policy paper is framed around the experiences and ideas of our workplace leaders. Between them, they have decades of experience in the manufacturing sector, and they have a deep knowledge of the challenges it faces. Their testimonies are accompanied by a series of policy proposals that we believe would position the Australian manufacturing industry for significant growth in the decades to come.

The policies sketched in this document would not be enough to make Australia the green manufacturing superpower we believe it can be, but they would be an excellent start.

¹Garnaut, R. 2019. *Superpower: Australia's low-carbon opportunity*. Carlton: La Trobe University Press.

²DIISR. 2021. *Resources and Energy Quarterly - September 2021*. Department of Industry, Science, Energy and Resources, Commonwealth of Australia (Canberra, Australia).



An Abundance of Cheap, Renewable Energy

Australia's renewable energy resources in the forms of wind, solar, and waves are unparalleled in the industrialised world.

In this context, the global shift away from fossil fuels presents our country with a tremendous economic opportunity.

By investing in Australian made green energy infrastructure to harness our abundant natural resources, we can generate huge amounts of affordable electricity that fuels an industrial revival and helps us become a green manufacturing superpower.

High energy prices are broadly acknowledged as a handbrake on the international competitiveness of Australian manufacturing and industry more broadly.

With the introduction of international carbon tariffs in some jurisdictions and declining investment in fossil fuel technologies, a continued reliance on old energy sources will leave Australian industry increasingly priced out of global markets.

The alternative is an ambitious and co-ordinated industry policy to generate electricity from renewable resources alongside major investments in the national energy grid and other energy infrastructure.



Samantha Facey,

Quality Control

McCain Smithton, Tasmania

Sam works at McCain Foods Smithton in quality control. Along with her colleagues, she is responsible for processing locally grown potatoes into the chips we buy at the supermarket.

“I check the finished product. I make sure that the bags, the boxes, the codes are all okay. And I check the product, the length, the defects, the solids, the colour when it’s cooked to texture, and make sure it’s okay. And if not, I make changes accordingly.”

Sam wants to see Tasmania’s renewable energy resources being used to develop an advanced manufacturing sector in the state.

“It’s the same as with any of our resources. I don’t want to see them dug up and sent away, I want to see us adding value to them and creating good jobs.”

Sam has been involved with the AMWU’s Support Aussie Made campaign from the start. She says that adding value to Australia’s natural resources is a message that resonates with a lot of the people she talks to.

“People are crabby at the fact that we take our natural resources, send them away, and they’re then made into things we’ve got to buy back.”



Cam Brady, Printer

News Corp, Melbourne

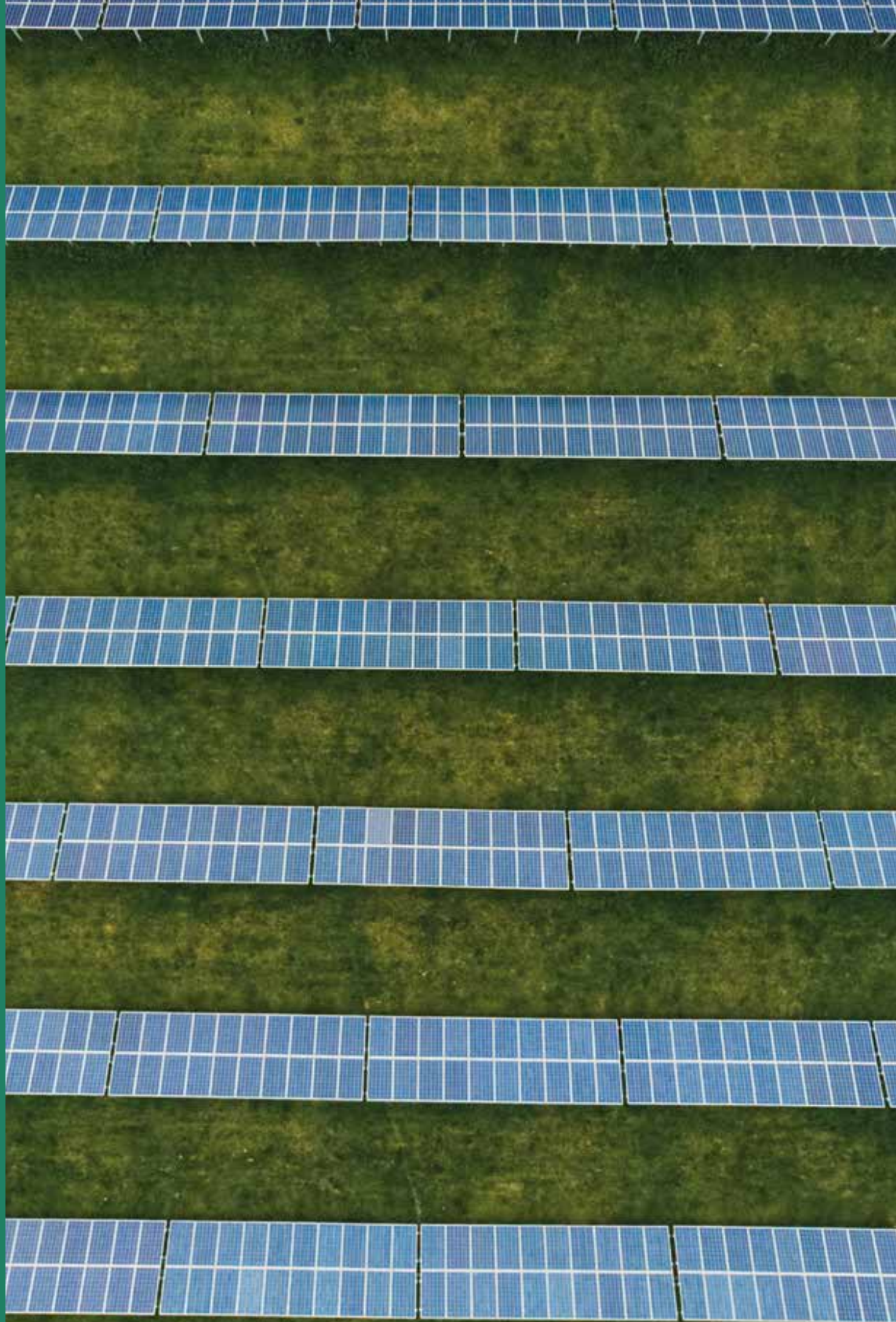
“The price of energy is impacting our industry a lot. Our suppliers recently said that due to energy and logistics costs, they’re putting up the price of newsprint by 30 to 40 per cent,” says Cam, a printer at News Corp.

“That rings alarm bells for me, because we print a lot of smaller papers; that’s 5,000 country papers, essentially. These outfits aren’t going to be able to absorb a cost hike like that. That risks jobs, and it impacts the communities that rely on those papers.”

“One of the reasons that manufacturers in this country cite for going offshore is that energy costs are too high.”

Cam wants to see Australia’s natural resources in wind and solar harnessed to generate good manufacturing jobs and says that we need to move quickly to take advantage of the opportunity.

“We need to look at renewables as a way to get costs down – because globally that’s the way we’re heading – and if we don’t get on board now, we get left behind and we’ll be buying everyone else’s technology when, really, we’ve got an opportunity to create brand new industries and actually export our technologies to the world.”



Recommendation 1:

The AMWU is calling for major investments in the development of renewable energy resources, including offshore and onshore wind, geo-thermal, solar, and hydrogen.

This should be complemented by major investments in the infrastructure of the national electricity grid, including firming technologies - such as batteries and pumped hydro - that don't lock carbon emitting assets into our future energy mix.

Recommendation 2:

The federal government should consider the development of a National Hydrogen Jobs Plan in the vein of the policy of the South Australia government. The plan would lay out areas and projects to be prioritised for research and development, and investment, with a view to maximising good jobs and providing Australian households and industry with affordable energy. This should include an examination of water requirements for the electrolysis process and the potential need for desalination plants to compliment the emergent hydrogen industry.

Recommendation 3:

The AMWU recommends the establishment of a governmental body tasked with supporting research and development in advanced green manufacturing technologies in Australia. This may sit within the scope of the Australian Renewable Energy Agency and must include a requirement that all intellectual property, design, and manufacture be maintained in Australia by organisations receiving support.



Building Green Energy Infrastructure

To capitalise on Australia's immense natural resources in solar, waves, and wind, a significant investment in green energy infrastructure is required. This represents a dual opportunity for our economy if we choose to build that infrastructure in Australia. Unfortunately, this opportunity has so far been squandered as imported infrastructure – often of inferior quality – has systematically undermined high-quality Australian producers.

As can be seen in the testimony of Jamie Wombwell below, nowhere is this negligence more evident than in the Abbott-Turnbull-Morrison government's refusal to support Australia's only wind tower manufacturer, Keppel Prince, in regional Victoria. Jamie has watched imported wind towers being unloaded at his local port while the jobs of his colleagues disappeared.

Australia also has access to many of the essential minerals for building batteries for electric vehicles and other applications. However, Australia has long ranked poorly in terms of economic complexity, relying heavily on extracting natural resources and exporting them without value adding.

Australia should move from a 'comparative advantage' approach to a 'competitive advantage' approach which pro-actively favours value adding industries that facilitate increasing economic returns in the long term.

Building Australia's renewable energy infrastructure and goods for export, like batteries, presents a major opportunity for the federal government to lead both in Australia's energy transition and its industrial rejuvenation.



Jamie Wombwell, Welder

Portland, Victoria

Jamie currently works at Portland Aluminium but previously worked at Keppel Prince where, as a welder, he worked with his colleagues to build wind towers for Australia's wind farms. Jamie is not the only one of his colleagues who has had to seek out other employment.

"I was out there recently talking to the manager of the wind tower section, and they've gone from about 150 workers to about ten," he says.

Why have so many jobs at mainland Australia's only wind tower manufacturer disappeared? "Because the federal government has seemed to be uninterested in supporting the jobs of the future in terms of renewable energy infrastructure, preferring to get stuff from offshore because it's a tiny bit cheaper, and that's if they've been willing to support renewable energy at all."

The loss of jobs has hit the regional Victorian city of Portland hard. "It's a real kick in the guts because they even bring the imported, inferior quality towers in through our ports."

Jamie hopes that the community campaign that he and his colleagues have waged to bring wind tower manufacturing back to Portland can win the support of the federal government.

"If they can set up local content requirements on every renewable energy project, it would create thousands of good jobs because there are hundreds of these wind towers going up Australia wide, and every single one is being brought in from overseas at the moment, every single one."

Recommendation 4:

The AMWU supports a policy mandating local content requirements in any project attracting government investment, finance, and other forms of support. This should include minimum requirements of 90 per cent local content in engineering and design services, and for complex manufactures. New regulations should also include improved and harmonised definitions of “local content” that ensure only value that is added by workers in Australia is included.

Further, intellectual property, and design and manufacture work must be maintained in Australia where government investment or support is contributed.

Recommendation 5:

The AMWU believes a National Battery Manufacturing Strategy is required to maximise the impact of government’s policy levers across different portfolio areas and support the developments of a sustainable battery industry. Our union welcomes the pledged funding for a battery manufacturing facility in Gladstone but believes that more work needs to be done to identify and support other projects. A national battery manufacturing strategy must be truly national and support the development of export products from the west coast as well as support for the domestic market of the east coast.

Recommendation 6:

To rebuild our heavy industry supply chains, we recommend the establishment of a green (i.e., carbon-neutral) primary metal manufacturing sector council, to be supported by a broad infrastructure and secretariat at the Department of Industry, Science, Energy and Resources. The council should be made up of representatives from industry, government, and trade unions, and engage sector stakeholders to identify the most promising sub-sectors for investment and development. The council would develop investment and innovation plans for the identified sub-sectors and oversee the implementation of these plans with the support of other government bodies.



Regions Undergoing Industrial Restructuring

As with all major structural shifts in the economy, some workers and regions will be impacted more than others.

With the international shift away from fossil fuels, Australia's coal mining and energy production regions are going to experience significant economic reorganisation. These changes cannot be left to the whims of the market.

Instead, ambitious and targeted industry policies are needed to ensure that well-paid, secure jobs are available that utilise and build on workers' existing skill sets and ensure the prosperous futures of their communities.

Research has demonstrated that these regions possess existing advantages that can form the basis of a shift to green industries, including access to renewable energy resources and highly skilled workforces.³

A strong industrial future for these regions will require governments to join forces with workers and their unions to navigate the restructuring of local economies.

The AMWU is already active in this space, working with environmental and community organisations to advocate for economic diversification and industrial renewal in areas like the Hunter Valley, Central Queensland, south-west Western Australia, and the La Trobe Valley.

³Teske, S. et al. 2012. Wind turbines off the coast could help Australia become an energy superpower. *The Conversation*. Available at: https://theconversation.com/wind-turbines-off-the-coast-could-help-australia-become-an-energy-superpower-research-finds-164590?utm_source=twitter&utm_medium=bylinetwitterbutton

Daniel Graham, Scaffold Supervisor

Muja Power Station, Collie

“Coal has been the blood that fills the vessels for Collie. We have a number of coal-fired power stations, and that’s really been our main industry,” says Daniel, who works at the Muja Power Station. “Coal has created work for the people in our community going back for many decades.”

The Muja Power Station has been scaling down its operations in recent years, though. “It’s in line with the global movement that we’re going to reduce emissions and, obviously, phase out coal-fired power stations, and look into renewables.”

Daniel first got involved with the AMWU during the negotiation of a new enterprise agreement at the plant but soon became part of the union’s organising around a just transition for coal industry workers. This included work with the Just Transition Working Group which brought together unions, employers, community leaders, government, and others to develop a plan to protect the jobs and future of Collie over the coming years, during which we will see a decline in the demand for coal.

“Through organising with the AMWU, we’ve been able to have a say in these processes. Now we’ve been offered training and a pathway for when the units gradually close down, a pathway that’s going to transition us away from this industry and into new industries.”

Daniel and his colleagues are advocating for the creation of green metals manufacturing and lithium-ion battery manufacturing in Collie. “There’s been a feasibility study around the green magnesium smelter and the battery processing facility. We’ve got great facilities here, we’ve got a railway line, our highway is in great shape, they’ve all been upgraded. And one of the things we have here in the South West is the skilled labour to build these things. The people in this area have built up a skill base over generations and have passed it on through apprenticeships and training, so we have the skilled workers.”

Daniel wants to see the federal government invest in the infrastructure required to get green metal manufacturing off the ground in the southwest of Western Australia.



Recommendation 7:

The government should establish a tripartite advisory body tasked with assessing any major project or firm that would attract government investment or support for its social, industrial, employment, and sovereign capability outcomes.

Recommendation 8:

The AMWU supports the creation of more manufacturing common user facilities in the model of the Australian Marine Complex in Western Australia. These facilities have a demonstrated track record of building the capacities of small and medium enterprises and strengthening Australia's supply chain resilience. When targeted at areas undergoing industrial restructuring, they can help facilitate the retraining and redeployment of workers in new industries.

Recommendation 9:

Global demand for aluminium will continue to increase as a key material for global development and decarbonisation. Smelters such as Tomago, Boyne, and Portland drive the economies and industrial base of their regions. Maintaining and growing Australia's aluminium industry requires large-scale storage and renewable builds to deliver reliable and sustainably priced energy inputs. Current policy settings have not addressed this critical issue as the grid shifts. Sector specific energy policy and public investment are required to ensure the stability and energy pricing requirements of aluminium smelters are met.

Recommendation 10:

Value adding precincts – or clusters of industry, research, and education activity in a specific geographic area – should be established in existing energy generation and extractive industry regions with the express purpose of developing value-adding manufacturing industries and sustainable employment opportunities.

Recommendation 11:

We strongly support the Australian Council of Trade Union's call for the establishment of a national Energy Transition Authority to oversee the orderly and equitable transition of the energy sector. The key focus of the authority would be to minimise the impact of power plant closures on workers and their communities through managing this transition and delivering on plans for the future prosperity of affected regions.



Electric Vehicles

In 2017, Australia ceased to be a mass producer of cars when Holden-General Motors and Toyota closed their last remaining plants. In the years since, the production of EVs has emerged as a major global manufacturing industry in which Australia currently only plays a supporting role.

The shift from internal combustion engines to EVs represents a significant opportunity for Australia to rebuild and expand its manufacturing industry by harnessing key existing industrial strengths (infrastructure), capabilities (skills and knowledge) and rich natural resources (unrivalled critical minerals reserves). Australia still has a toehold in global automotive value chains as a components manufacturer, as well as maintaining the capacity to build buses – some electric – among other heavy vehicles. In Western Australia in particular, the demand for electric vehicles for the resource industry is set to increase. The AMWU believes this position should be leveraged to help rebuild mass vehicle manufacturing in this country.

EV manufacturing is highly complex and innovation intensive and would provide an ideal anchor industry for developing a more advanced manufacturing sector in Australia. Such complex manufacturing is essential to building Australia's sovereign manufacturing capabilities.

A mass production EV industry would create tens of thousands of good jobs, train thousands of apprentices and upskill other workers, and would have a significant multiplier effect, creating thousands more jobs across the economy.



Mick West,

Automotive Electrician

Brisbane Bus Build, Queensland

Mick West, an automotive electrician and AMWU activist, is one of around fifty workers at Brisbane Bus Build.

“Things are going well right now and I think the firm is looking to hire more people,” Mick says.

The joint venture between Brisbane City Council and Volgren takes partially built buses and performs the final assembly and fitout for Australian clients. The plant has grown significantly in recent months as they have received a surge in orders for their electric model.

“There’s a lot of interest in Australian built electric buses right now,” says Mick.

Brisbane Bus Build is currently filling orders from councils and private buyers from around the country, but Mick thinks there is more that could be done to support the industry.

“I don’t see much policy and action so far from the federal government supporting the manufacture of electric vehicles or supporting the jobs this work creates.”

With the right supports, Mick believes that electric vehicle building in Australia could expand and become more complex.

“At the moment we import the chassis and the electric drive, but we could build them here and add value to our resources. It would create a lot of good jobs as well as environmentally sustainable public transport.”

Recommendation 12:

The federal government should create an EV Manufacturing Industry Commission, with a board comprising major stakeholders from government, unions, and industry leaders, to be chaired by an EV industry expert. The commission would be tasked with holding a broad consultation and inquiry into Australia's EV mass production possibilities, beginning with mapping the existing automotive manufacturing sector, then examining how Australia can establish a firmer foothold in global value chains and how to attract one or more EV original equipment manufacturers to Australia.

Recommendation 13:

The federal government should identify necessary investments in Australian supply chains to strengthen capabilities for participation in global EV value chains. Investment tax credits could be used to more closely link extraction industries to manufacturing capabilities, incentivising firms that typically export raw resources to instead invest in or connect to downstream production to supply emerging EV battery and components industries in Australia.

Recommendation 14:

EV value chains mean the entire life of the materials involved, and Australia should develop a plan for refurbishing and recycling EV batteries. These batteries require specialised skills, infrastructure, and facilities to transport, test, and – when possible – disassemble, repair, and refurbish. When repair and refurbishment is not possible, they must be recycled. Australia must begin building this capacity now.

Summary of Recommendations

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PROHIBITED ITEMS AT PORTLAND ALUMINIUM

- Aluminium or Steel Storage Containers
- Firearms, Weapons, Explosives
- Steel, Aluminium or Wire Reinforced Lockers
- 1" Angle Grinders
- Rope, Rings & Exposed or Damaged Jewellery
- Other Gamma or Synthetic Material
- Second Ice Pack Aid Drawings
- Video and Photographic Footage
- Non-Medical Drugs Including Alcohol
- Cigarette Lighters



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