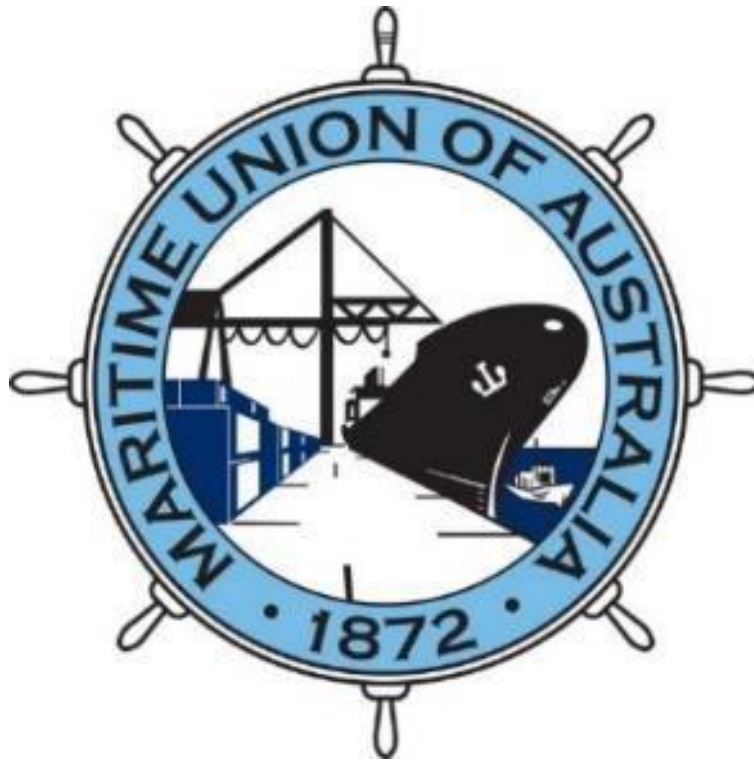


Low Carbon Liquid Fuels: A Future Made in Australia

Submission from the Maritime Union of Australia



5 July 2024

Department of Infrastructure, Transport, Regional Development and the Arts

Department of Climate Change, Energy, the Environment and Water

Submitted via email to: lcfcconsultation@infrastructure.gov.au

Paddy Crumlin, National Secretary,

Maritime Union of Australia

A Division of the Construction, Forestry, Maritime, Mining and Energy Union

365 Sussex St, Level 2,

Sydney NSW 2000

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Background

This submission has been prepared by the Maritime Union of Australia Division (MUA) Division of the Construction, Forestry, Maritime Employees Union (CFMEU).

The MUA represents approximately 14,000 workers in the shipping, offshore oil and gas, stevedoring, port services and commercial diving sectors of the Australian maritime industry. The MUA is also part of the Offshore Alliance (with the AWU) which represents workers on offshore oil and gas facilities.

The MUA represents workers in ports and in port terminals handling refined petroleum, Liquefied Petroleum Gas, Liquefied Natural Gas, and delivering port services to ships carrying refined petroleum and gas products. In some cases these members are employees of port authorities or tugs or lines companies. In specialised private bulk liquids terminals workers are represented by our Bulk Liquid Alliance with the United Workers Union.

MUA members working as seafarers have operated LNG carriers and bunker barges and coastal tankers carrying refined petroleum products around the coast of Australia.

The MUA supports the government taking action to address climate change. We are working hard to prepare our membership and industries for the necessary transition to a zero-net emissions economy and society. We recognise the need to urgently reduce emissions globally and in Australia to prevent global heating from exceeding 1.5°C, but this will have a very significant impact on the jobs held by many of our members. Our ability to provide climate leadership in these industries depends on the ability of governments and of our union to deliver a just transition to our members working in fossil fuel industries, and their communities. If we cannot provide such a transition, we risk significant reductions to workers' living standards, deepening inequality, and a very significant political backlash which could stall the transition we need.

Summary

The MUA welcomes the opportunity to make a submission to the consultation, and the initiative taken to establish a low carbon liquid fuels (LCLF) industry in Australia.

We recognise that low carbon liquid fuels projects will be taking place on First Nations land. First Nations must also be thoroughly consulted and provide Free Prior and Informed Consent for funded projects, and be included in the benefits from these projects.

Proper industrial policy must be developed to ensure this new industry is safe, properly planned, and delivers good quality jobs.

A revitalised Australian refining and fuel industry offers an opportunity to revitalise Australian shipping. As domestic petroleum refineries closed and national neglect and a race to the bottom undermined Australian shipping over the past decade, Australian crew were removed from tankers operating around the coast. The current government has an ambition to grow Australian shipping.

Funding for low carbon liquid fuels should align with and promote that vision.¹

We offer a package of recommendations with the aim of ensuring a just transition, and to maximise the contribution of this new industry to the Australian economy and communities.

¹ DITRDCA, [Maritime Strategic Fleet](#), accessed July 2024. Minister Catherine King, [Report shows Strategic Fleet can bolster Australia's maritime and freight sectors](#), November 2023. Prime Minister Anthony Albanese, [Labor Will Create a Strategic Fleet to Protect Our National Security and Economic Sovereignty](#), January 2022.

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Recommendations

Recommendation 1: Ensure ARENA’s strategic leadership, advice, culture and resourcing is re-oriented to provide for a full understanding of the many stakeholders and considerations involved in establishing new areas of industry with strong social license, and for the development of a skilled workforce. At a minimum this involves developing strong relationship with unions representing project workforces, Safe Work Australia, and the relevant Jobs and Skills Councils, and training providers.

Recommendation 2: Review the opportunities for Future Made in Australia low carbon liquid fuels policy to align with government objectives to grow Australian shipping and contribute to the availability of high-quality, low emissions and fit-for-purpose ships with skilled crews in critical trades.

Recommendation 3: Include as a ‘community benefit principle’ for Future Made in Australia support the strengthening of domestic and international transport resilience and capability, across all modes including shipping.

Recommendation 4: Review the opportunities for Future Made in Australia low carbon liquid fuels policy to align with the government’s Maritime Emissions Reduction National Action Plan to grow Australia’s skills and capabilities in decarbonised shipping.

Recommendation 5: Eligibility of projects for public support under Future Made in Australia low carbon liquid fuels policies must be conditional on the entity receiving support providing ongoing evidence of:

- Domestic and international supply chains and exports that maximise the use of Australian registered ships, particularly where public funds are supporting export projects
- A requirement for Australian employment and training of Australian seafarers on those ships

A higher level of tax credits could be provided to companies that utilize Australian shipping and/or the strategic fleet network, similar to what is provided in the US Inflation Reduction Act.

Recommendation 6: The Australian government must act to support and reestablish Australian manufacturing capacity for transport fuels and other transport energy sources.

Recommendation 7: Public funding for low carbon liquid fuels should include merit criteria to require that all projects maximise the contribution of the project to the Australian economy and local communities, including to:

- a) ensure quality jobs through the implementation of a Secure Jobs Code, to be applied across government-funded projects.
- b) maximise the use of locally produced and supplied goods and services, including ships
- c) maximise the employment of suitably qualified local workers, including energy workers, engaged under registered industrial instruments, agreed between relevant unions and employers
- d) provide for training and skills development of local workers, minimum requirements for trainees and apprentices, worker transition opportunities from industries facing closure, and the employment of workers from groups underrepresented in the workforce.

Recommendation 8: The government should establish new Future Made in Australia industry governance arrangements, such as a Board or Task Force, that will include oversight of the implementation of the low carbon liquid fuels policy and support. This should cover merit criteria for supply chain and workforce planning and funding requirements to ensure that projects contribute to the Australian economy and community.

Community benefit sharing and the low carbon liquid fuels industry

It is critical that ordinary people see positive results from any public funding for the LCLF industry. This can best be achieved by ensuring that the industry provides quality secure, union jobs in their surrounding community and in its import and export supply chains. While many well-established fuel facilities and port terminals do currently provide quality jobs and union agreements, it is critical that new facilities not undermine this, or that the introduction of new processes not result in production pressures that undermine established safety processes.

We understand that a portion of government funding to support LCLFs will be distributed through ARENA. This puts ARENA in a critical position with significant responsibility for establishing new areas of industry, selecting projects to be funded and making decisions on billions in public investment. These projects will set the benchmark for those to follow, either setting the industry up for success or setting the seeds of problems that will be much harder to solve later. Very substantial work is needed to ensure that ARENA is capable to lead this work, in terms of its organisational knowledge, governance and culture.

There has been no satisfactory consultation process between ARENA and unions in terms of ARENA's current merit criteria for any area of current funding. Current merit criteria are highly deficient. To give one example, Hydrogen Headstart projects shortlisted by ARENA do not so far have satisfactory strategies for developing a workforce that will result in community benefit and good social licence.

Recommendation 1: Ensure ARENA's strategic leadership, advice, culture and resourcing is re-

oriented to provide for a full understanding of the many stakeholders and considerations involved in establishing new areas of industry with strong social licence, and for the development of a skilled workforce. At a minimum this involves developing strong relationship with unions representing project workforces, Safe Work Australia, and the relevant Jobs and Skills Councils, and training providers.

Role of the maritime industry in Low Carbon Liquid Fuels

The government has an ambition to grow Australian shipping, establish an Australian Strategic Fleet, and review and improve the Shipping Registration Act and Coastal Trading Act.² Shipping is key service underpinning the net zero transformation, providing critical transport services to many renewable industries, as well as itself requiring decarbonisation. Shipping also underpins Australia's future economic security and resilience, which is why the government has chosen to invest in both domestic shipping capability and the Future Made in Australia (FMiA) industries.

However, there is room to improve the coordination between these two important areas of government work, particularly as there is already considerable overlap.

All aspects of the FMiA industries should have a maritime component. The FMiA program could complement the Strategic Fleet and revitalisation of the Australian maritime industry by leveraging funding to support the development of Australian maritime industries. FMiA investments, including in low carbon liquid fuels, could support government's shipping ambitions as follows:

- Include as a 'community benefit principle' for FMiA support the strengthening of domestic and international transport resilience and capability, across all modes including shipping.
- Support across FMiA funding streams including low carbon liquid fuels must be conditional on the entity receiving support providing ongoing evidence of:
 - Domestic and international supply chains and exports that maximise the use of Australian registered ships, particularly where public funds are supporting export projects
 - A requirement for Australian employment and training of Australian seafarers on those ships
- A higher level of tax credits could be provided to companies that utilize Australian shipping and/or the strategic fleet network, similar to what is provided in the US Inflation Reduction Act
- The Strategic Fleet could be used to trial and train seafarers and develop capabilities in the use of decarbonised technology, in coordination with the Maritime Emissions Reduction National Action Plan (MERNAP). MERNAP outcomes could also be leveraged through shipping on FMiA funded projects.

If requirements around shipping such as those outlined above are not made explicit in government policy, use of international shipping will be the default. An important opportunity to rebuild Australia's maritime industry will be missed.

² DITRDCA, [Maritime Strategic Fleet](#), accessed July 2024. Minister Catherine King, [Report shows Strategic Fleet can bolster Australia's maritime and freight sectors](#), November 2023. Prime Minister Anthony Albanese, [Labor Will Create a Strategic Fleet to Protect Our National Security and Economic Sovereignty](#), January 2022.

The current liquid fuel industry relies heavily shipping and tankers, for the simple reason that it is far more efficient and safer to carry bulk quantities of hazardous liquids by ship. We anticipate that this strong maritime role will continue in a low carbon liquid fuel industry.

Domestic carriage of liquid fuels has historically been on Medium Range (MR) tankers which carry cargos of approximately 30,000 tonnes of fuel per voyage. In 2010 the ACCC calculated that this was equivalent to the cargo of 1,000 tanker trucks (Figure 1). Since that time, the capacity of petroleum port terminals and wharves around Australia has been increased, with more tankers of 40-45,000 DWT in use. LR1 tankers with capacities of 80,000 DWT are also used for imports to larger wharves.

Figure 1: Volume of a Medium Range Tanker with a petroleum cargo of 30,000 tonnes compared to equivalent cargo carried by tanker truck.



Source: ACCC

Source: ACCC, *Monitoring of the Australian Petroleum Industry*, December 2010. p.68.

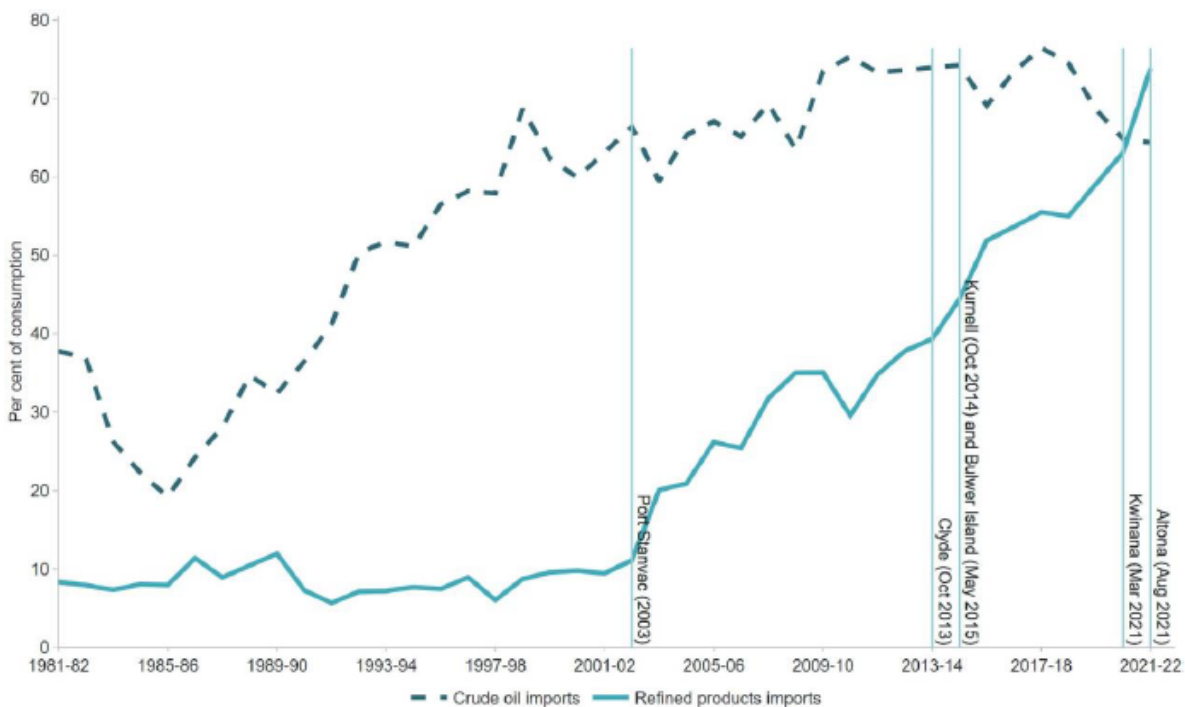
In 2011, there were six Australian-flagged and crewed MR tankers operating full time carrying petroleum from Australian petroleum refineries to petroleum port terminals around the coast. Each one serviced and was controlled by a domestic petroleum refinery, allowing the refinery the flexibility to schedule offtakes when needed to maintain production. These Australian tankers also carried some imports to Australia from Singapore and also voyaged to New Zealand. Each tanker carried an average cargo of about 700,000 tonnes of refined petroleum product each year (total annual volumes depended on distance the petroleum was carried). More than half of the petroleum carried domestically by ship was carried from Kwinana WA to Adelaide and the east coast.

When Australian petroleum refineries began to close in 2012, refinery companies began removing their full-time Australian ships from service. At the same time, government policy undermined the Australian shipping industry. In 2015 the last Australian flagged and crewed petroleum tanker was removed from service. The two remaining domestic refineries sold much more of their product into the local area, and shifted their remaining bulk domestic cargos to international flag ships and crews, using a Temporary Licence to carry cargos domestically.

In 2023, 1.27 million tonnes of clean petroleum was carried domestically on international flag ships using a Temporary Licence, mainly from the Ampol Brisbane refinery and the Viva Geelong refinery to other east coast ports, with a smaller amount going from Kwinana to smaller ports in WA.

Australia's reliance on imported liquid fuels has grown dramatically (Figure 2). All of this imported liquid fuel (41 billion litres in 2021-22) is carried to Australia on international ships.

Figure 2: Share of imports in total Australian consumption of crude petroleum and refined petroleum products.



Note: Refinery closures marked by year.

Source: [Australian Energy Update 2023](#), p.43.

We strongly support the objective of growing domestic capacity for energy and fuel production and decarbonising our transport system. Increased domestic refining and manufacturing will likely result in increased use of domestic shipping as it is generally difficult to co-locate fuel production facilities with all fuel consumers.

For liquid fuels industry, MUA members have historically worked in ports loading and discharging ships, in port services such as tugs and lines, and as seafarers on ships.

The maritime role in fuel production includes:

- Port services in fuel production and receiving ports (eg. tugs, lines, pilots)
- Loading and discharge of fuel to/from ships at specialised port fuel terminals (jointly with the United Workers Union as part of the Bulk Liquids Alliance).
- Ships carrying fuel products domestically and overseas.

The inclusion of shipping would significantly increase the Australian economic return of funded projects. Measures to support Australian shipping would also:

- Build supply chain resilience and sovereign capability;

- Extract economic value from ownership/operating Australian ships – in part to reduce the more than \$10 billion annually spent on purchase of foreign shipping services, a large drain on the nation’s balance of payments;
- Provide a core base load freight capacity in Australian ships so shippers (cargo owners) can secure long term contracts of affreightment (CoA) with Australian ship suppliers, and therefore retain domestic control or influence over matters such as those listed below, which cannot be achieved using a spot market:
 - Crewing quality
 - Safety – crew, ship and cargo
 - Maintenance and dry-docking schedules
 - Creating long term partnerships with service providers e.g. towage, mooring, provisioning, insurers, legal services, financiers; workers’ compensation and RTW providers; training providers, agents, freight forwarders etc
 - Relationships with regulators
 - Decarbonisation strategies
 - Innovation and uptake of technology
 - Ship replacement cycles – long term investment plans
- Building a maritime cluster as an anchor to give confidence for investment in related maritime activities and to encourage the growth of a maritime ecosystem of suppliers and support services – in the case of shipping, for bunkering and other ship provisions suppliers, repair and maintenance provision, crew supply provision, training provision, legal services (charter party) creation; ship chartering services; ship insurance and financing services etc.
- Enhancing maritime security e.g. strengthening Defence maritime capability and flexibility through closer integration with commercial shipping (particularly the strategic fleet) as acknowledged in the Defence Strategic Review, as well as better coordination of marine assets and workforces in Government shipping e.g. civilian crewed Defence, ABF, AMSA, Department of Environment and CSIRO ships; and
- Creation of Australian seafarer employment opportunities and maintenance of suitable ships necessary to maintain a supply of internationally qualified and licenced seafarers for the wider maritime industry, in both on-board and on-shore roles.

Ocean-going ships are a sector that is hard to electrify and will continue to rely on low carbon liquid fuels for some time to come. Increased production of these fuels in Australia is expected to lead to increased bunkering (refuelling) of international ships calling in Australian ports. For example, the Port of Melbourne has signed an MoU with multiple companies to investigate establishing a green methanol bunkering facility. We support this initiative, which will increase our maritime capability.

Australia currently has about five small bunkering tankers operating in ports such as Gladstone, Brisbane, Sydney, Melbourne and Fremantle. If Australian-based bunkering in new fuels increases these bunkering tankers will need to be expanded and upgraded.

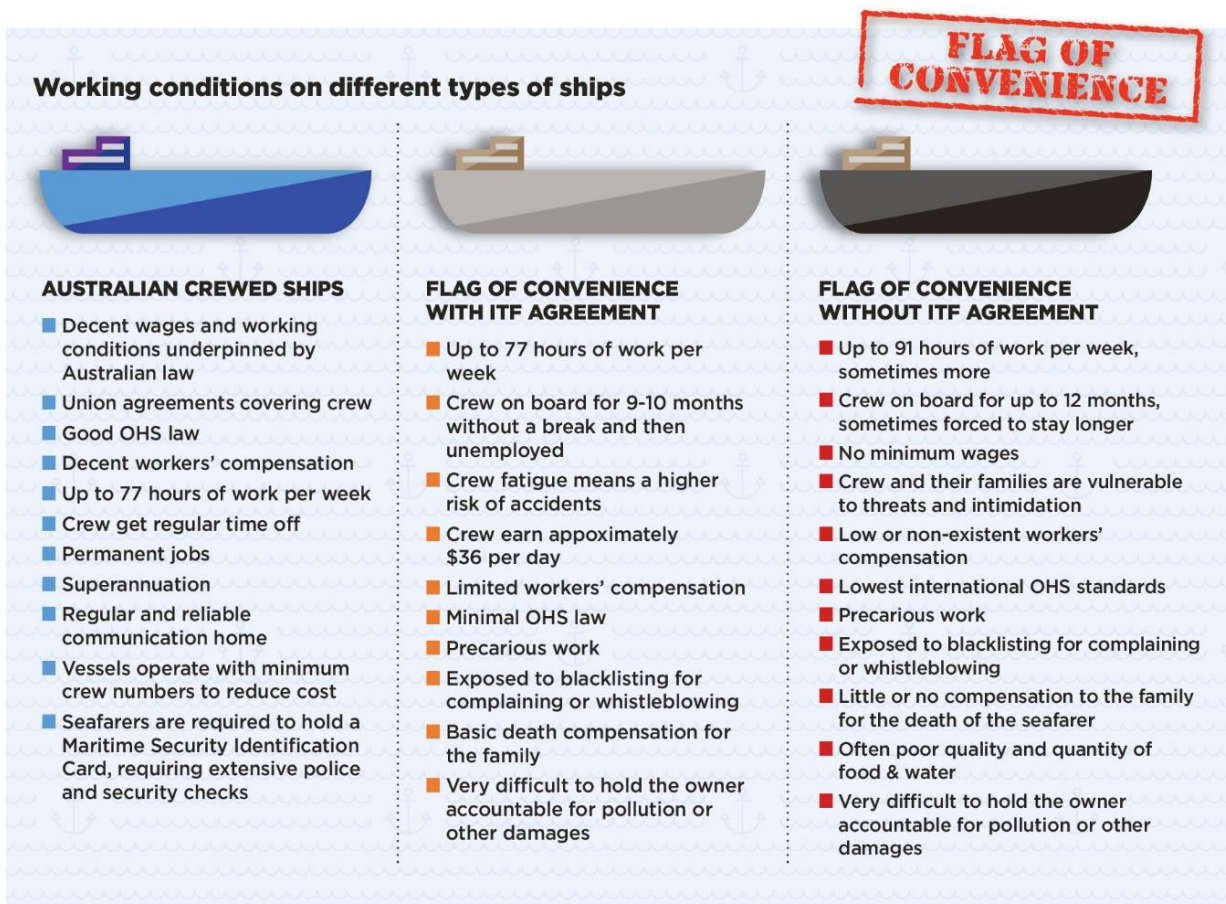
Australian ships were used for LNG exports while that industry was being established, with four Australian-flagged and crewed LNG tankers operated by the North West Shelf Shipping Company exporting LNG from the NW Shelf to Japan and China for 35 years (*Northwest Sandpiper, Northwest Snipe, Northwest Sanderling, Northwest Stormpetrel*).

Having these LNG-fuelled LNG carriers Australian flagged and crewed has significantly increased the

contribution of the North West Shelf project to the Australian economy. Another reason shipping was included in the project is so that the seller could control the timing of offtakes, which was an integral part of managing the process of LNG production. Long-term offtake contracts underpinned the ships being chartered into the project and controlled by the LNG sellers.³

There are significant human rights and ongoing human rights issues on international ships. A recent report found that over 10 years, seafarers on international flag ships in Australian port had \$38 million in stolen wages.⁴ New industries relying on public subsidy should not be seen as supporting or relying on these kinds of practices.

Figure 1: A comparison of working conditions on Australian and international ships. Since the graphic below was made, pay for seafarers on ITF agreements (middle column) has increased to roughly \$50 per day.



Source: Maritime Union of Australia and International Transport Workers Federation

Recommendation 2: Review the opportunities for Future Made in Australia low carbon liquid fuels policy to align with government objectives to grow Australian shipping and contribute to the availability of high-quality, low emissions and fit-for-purpose ships with skilled crews in critical trades.

³ [Negotiating Australia's first LNG export contract](#), Energy Today Magazine, December 2019. Accessed August 2023

⁴ Rod Pickette, Lily Raynes and Jim Stanford, [Robbed at Sea: Endemic Wage Theft from Seafarers in Australian Waters](#), Centre for Future Work, 27 September 2022.

Recommendation 3: Include as a ‘community benefit principle’ for Future Made in Australia support the strengthening of domestic and international transport resilience and capability, across all modes including shipping.

Recommendation 4: Review the opportunities for Future Made in Australia low carbon liquid fuels policy to align with the government’s Maritime Emissions Reduction National Action Plan to grow Australia’s skills and capabilities in decarbonised shipping.

Recommendation 5: Eligibility of projects for public support under Future Made in Australia low carbon liquid fuels policies must be conditional on the entity receiving support providing ongoing evidence of:

- Domestic and international supply chains and exports that maximise the use of Australian registered ships, particularly where public funds are supporting export projects
- A requirement for Australian employment and training of Australian seafarers on those ships

A higher level of tax credits could be provided to companies that utilize Australian shipping and/or the strategic fleet network, similar to what is provided in the US Inflation Reduction Act.

Reestablishing Australian capacity for energy production for transport

It is right that the Consultation Paper raises Australia’s very high reliance on imported fuels as a concern. It is right that the Australian government take action to support the domestic production of energy sources for transport, and this must be part of the shift to renewable energy and a decarbonised transport system.

While electrification and better planning and design is the most efficient way to decarbonise most transport systems, there will be areas where liquid fuels are still required. It would be a huge missed opportunity if Australia did not act to re-establish domestic capacity in these areas.

Recommendation 6: The Australian government must act to support and reestablish Australian manufacturing capacity for transport fuels and other transport energy sources.

Deficiencies in current processes for local and First Nations content

In considering community benefit principles, it is important that the Department understand that both Australian Industry Participation Plans, and the Indigenous Procurement Policy (IPP) have not been effective and the community and our unions have no confidence in these measures. However, there are reasonably effective measures developed by state governments. All of these state-based measures have had to negotiate Australia’s international trade obligations.

Australian Industry Participation Plans were established in the Australian Jobs Act 2013, require corporations preparing a tender valued at \$20 million or more to map local industry, communicate with local suppliers, and outline how they will help Australian suppliers to develop their capability and integrate into supply chains. These are loose support requirements and not enforceable. There is no adequate inclusion of sea freight transportation in these Plans.

The Indigenous Procurement Policy (IPP) has targets for government purchasing from Indigenous businesses. The IPP states, however, Indigenous businesses only require 4% Indigenous employment and even this employment requirement can be sub-contracted out. The IPP does not result in secure, well-paid and skilled jobs for Indigenous workers.

In contrast, Australian states and territories have implemented a range of mechanisms to ensure community benefit principles apply to government funding mechanisms, primarily procurement. These have all been driven by the union movement. When it comes to practically implementing community benefits principles, unions are the experts.

Under the Future Made in Australia policy, the government is consulting on Community Benefits Principles to apply across the policy areas. This will be an important step forward. The union movement is advocating that the three best Australian models for instituting these best practice principles are:

1. The ACT's *Secure Local Jobs Code 2020* (SLJC), including the Ethical Treatment of Workers' Evaluation (i.e. two-gate tender process), ensures that tenders are not determined on economic considerations at the expense of ethical considerations, so that ethical businesses are not forced to compete for tenders with businesses that contravene industrial, work health safety and tax law.
 - a. The SLJC places positive obligations on entities that hold an SLJ Certificate, in respect of matters such as freedom of association, recognition of the right to collectively bargain and workplace representative rights. An entity must hold a SLJ Certificate to quote for and perform territory funded work.
 - b. The Ethical Treatment of Workers' Evaluation assesses tenderers across their entire business on SLJC compliance and government reputational risk. A tenderer that passes this first gate proceeds to the second stage for assessment on other factors, such as price and timelines.
 - c. The certificate and ability to tender can be revoked by an independent Registrar if the tenderer does not maintain its positive obligations.
 - d. The Victorian *Fair Jobs Code* applies the same model and has specific policies to facilitate diverse workforces.
2. local content targets, best demonstrated in the NSW *Renewable Energy Sector Board Plan*. This is the best model for navigating Australia's trade obligations while maximising supply chain opportunities in Australia.
3. the Best Practice Industry Conditions (BPIC), outlined in the Queensland *Procurement Policy 2021*. This sets best practice wages and conditions for specific industries, and departments then ensure every procured project meets these standards. The policy also stipulates local content targets.

Recommendation 7: Public funding for low carbon liquid fuels should include merit criteria to require that all projects maximise the contribution of the project to the Australian economy and local communities, including to:

- e) ensure quality jobs through the implementation of a Secure Jobs Code, to be applied across government-funded projects.
- f) maximise the use of locally produced and supplied goods and services, including ships
- g) maximise the employment of suitably qualified local workers, including energy workers, engaged under registered industrial instruments, agreed between relevant unions and employers
- h) provide for training and skills development of local workers, minimum requirements for trainees and apprentices, worker transition opportunities from industries facing closure, and the employment of workers from groups underrepresented in the workforce.

First Nations

Our union is proud of our solidarity with First Nations peoples and are participants in the ongoing struggle for self-determination, land rights, constitutional recognition, justice and equality. We are determined to continue to be a leader amongst First Nations allies, and we declare forthrightly that the land we know as Australia always was and always will be Aboriginal and Torres Strait Islander land. We admire the enormous cultural heritage, tradition and legacies that have been built up over 60,000 years of continuous civilisation and independent sovereign nations, and the necessity of repairing the damage done by colonisation.

Our unions participated in establishing and supporting the work of the First Nations Clean Energy Network (FNCEN). The FNCEN is a network of First Nations people, community organisations, land councils, unions, academics, industry groups, technical advisors, legal experts, renewables companies and others, working in partnership to ensure that First Nations communities share in the benefits of the clean energy boom.

The FNCEN has developed Principles and Guidelines for the development of renewable energy, to ensure that country is protected and to make sure First Nations communities share the benefits of Australia's clean energy boom. The principles and guidelines should also be followed by renewable energy industries and the governments that regulate projects. The 10 principles cover such things as ensuring projects provide economic and social benefits, mutual respect, clear communication, cultural and environmental considerations, landcare and employment opportunities.

Low carbon liquid fuels policy should ensure that the Aboriginal and Torres Strait Islander Best Practice Principles for Clean Energy Projects⁵ are required for funded projects.

Recommendation 8: Future Made in Australia low carbon liquid fuels policy must ensure funded projects are aligned with the First Nations Clean Energy Network Best Practice Principles for Clean Energy Projects, including employment and income opportunities. Support, assistance and funding is required from Future Made in Australia to enable First Nations organisations to participate in the industry and properly engage with project proponents.

Best practices and planning to establish successful renewable industries

⁵ First Nations Clean Energy Network, [Aboriginal and Torres Strait Islander Best Practice Principles for Clean Energy Projects](#), November 2022.

The Centre for Future Work has reviewed the unprecedented global investments in climate industrial policy globally. They recommended best practices be implemented in Australia as follows:

- Government coordination and planning
- Securing sovereign capability in key functions
- Performance requirements and monitoring of subsidies
- Public equity and accountability
- Investment in a skilled, inclusive workforce
- Strong labour standards
- Multi-stakeholder policy development and implementation
- Place-based industrial policy considerations
- Sustainable production practices⁶

We strongly support these recommendations and urge the Department to review the Centre for Future Work paper and think carefully about how best to incorporate their recommendations into the Future Made in Australia funding structure.

The ACTU has also developed comprehensive policy to ensure public benefit in spending, which we support.⁷

Delivering the potential economic benefits of a renewable industries and ensuring that projects are built as quickly as possible will require a coordinated national approach that involves industry, unions, and government. The government should establish new tripartite industry governance arrangements, such as a Board or Task Force, to achieve this.

A good example of what such a process can achieve is the NSW Renewable Energy Sector Board (RESB) process. The Board's Plan, has now been [approved by the Minister](#) and was incorporated into NSW onshore renewable energy tenders at the end of 2022, as well as other areas of government decision making and policy. The Plan sets out minimum labour, equity and local content requirements (as well as stretch targets), and sets out priority areas for government and private investment.⁸

The RESB is a tripartite statutory board created under the NSW *Electricity Infrastructure Investment Act 2020*, with representatives from unions, steel manufacturers, metal fabricators, employers in the electricity, manufacturing and construction sectors, energy customers, and energy planners.

The Board went through an initial research and planning process, underpinned by work from the University of Technology Sydney (UTS) Institute for Sustainable Futures, SGS Economics, MBB Group and ACIL Allen.⁹ RESB members were able to participate in the commissioning the required

⁶ Charlie Joyce and Jim Stanford, [Manufacturing the energy revolution: Australia's position in the global race for sustainable manufacturing](#), The Centre for Future Work at the Australian Institute, August 2023. p. 44-58.

⁷ ACTU, [Procurement: Make Good Jobs the Norm](#), June 2024.

⁸ Office of Energy and Climate Change, [NSW Renewable Energy Sector Board's Plan](#), September 2022. The Plan was assessed against Australia's international trade obligations and electricity customers' financial interests (p.18-20), and then separately by the NSW Independent Pricing and Regulatory Tribunal (IPART).

⁹ Studies commissioned by the NSW RESB are available under the header Renewable Energy Sector Board on [this page](#).

research and providing feedback to researchers as the research progressed.

The study on *Employment, Skills and Supply Chains: Renewable Energy in NSW – Final* produced by the Institute for Sustainable Futures at UTS is a landmark piece of research, for the way it examines supply chain and workforce gaps and opportunities for renewable energy in NSW, and clearly articulates steps forward for policy makers contending with critical planetary deadlines in a challenging environment.¹⁰

A similar piece of national employment, skills and supply chain research is required to guide government decision-making for renewable industries at a national level.

Merit criteria for NSW government spending and contracts in renewable energy established through this process include:

- Minimum requirements and stretch goals for apprentices
- Minimum requirements and stretch goals for First Nations participation
- Minimum requirements and stretch goals for employment of underrepresented groups (women, long-term unemployed, young people, and anyone else covered by the *NSW Anti-Discrimination Act*).
- Minimum requirements and stretch goals for steel products and components using locally milled steel
- A contractually binding investment in local supply chain innovation
- Requirements to ‘have a current certified industrial agreement registered with the Fair Work Commission’¹¹
- The company’s record on work health and safety, payment of employee entitlements, timely payment of small business subcontractors, and compliance with modern slavery legislation is also examined.

Recommendation 8: The government should establish new Future Made in Australia industry governance arrangements, such as a Board or Task Force, that will include oversight of the implementation of the low carbon liquid fuels policy and support. This should cover merit criteria for supply chain and workforce planning and funding requirements to ensure that projects contribute to the Australian economy and community.

Options to support an Australian low carbon liquid fuels industry

Contracts for Difference and Production Tax Incentives

We support the provision of government support to establish capacity for low carbon liquid fuel

¹⁰ Briggs, C., Gill, J., Atherton, A., Langdon, R., Jazbec, M., Walker, T., Youren, M., Tjondro, M., Rutovitz, J., Cunningham, R., Wright, S. and Nagrath, K., 2022. [Employment, Skills and Supply Chains: Renewable Energy in NSW – Final Report](#). Sydney: University of Technology Sydney and SGS Economics and Planning.

¹¹ Office of Energy and Climate Change, [NSW Renewable Energy Sector Board’s Plan](#), September 2022, p.28. AEMO Services, Renewable Energy Sector Board update, 5 July 2022, p. 6 ‘How RESB plan recommendations are considered under MCB’

manufacturing in Australia. Contracts for difference are a viable means to do this, provided there are:

- Clear eligibility requirements and conditionalities to ensure there is public and community benefit in all spending.
- Clear floors and caps on prices.

The concept of production tax incentives are borrowed from the US Inflation Reduction Act. Advantages of this model are:

- the subsidy is not paid unless the production actually occurs, providing a built-in performance standard
- the subsidy can be received by public and private entities
- the US production credits are linked to requirements for prevailing wages to be paid, voluntary recognition of trade unions, pay equity, hiring from disadvantaged communities, and other equality-seeking labour goals. Equivalent measures must be implemented in Australia.¹²

Contracts for Difference could result in a more efficient use of public spending than production tax incentives as taxpayers will not continue to subsidise a company if there is a price spike.

Capital grants and public equity stakes

Capital grants are also likely to be needed. Substantial capital grants should result in public equity stakes, particularly for common user facilities such as port facilities and renewable manufacturing infrastructure.¹³ This would allow the public to benefit from the many billions of public investment in renewable industries. The Centre for Future Work argues:

The public sector's engagement in this industrial strategy should not be limited to simply subsidizing private ventures. Public institutions make critical contributions to the innovation effort required to fulfil the promise of renewable energy, and those contributions should be recognised and rewarded. The public sector should have the opportunity to share in the upside of successful subsidised ventures – not just bear the cost of unsuccessful ones. And in several segments of the overall energy transition, it is most appropriate for the public sector to take a central equity role in owning, planning, and ultimately profiting from the roll-out of renewable energy systems and technologies.¹⁴

First Nations should also be offered equity stakes.

¹² Charlie Joyce and Jim Stanford, [Manufacturing the energy revolution: Australia's position in the global race for sustainable manufacturing](#), The Centre for Future Work at the Australian Institute, August 2023, p.20, 49-51.

¹³ Charlie Joyce and Jim Stanford, [Manufacturing the energy revolution: Australia's position in the global race for sustainable manufacturing](#), The Centre for Future Work at the Australian Institute, August 2023, p. 50.

¹⁴ Joyce and Stanford p.50.

Regulating fuel emissions

It is inconceivable that Australia and the world can make the energy transition required to address the climate crisis without the use of clear mandates to reduce emissions from fuels and regulation of fuel emissions. When designing mandates and emissions regulation, the priorities must be:

- meeting emissions reduction targets
- ensuring that targets are achieved in an equitable way to achieve a just transition.

Appendix A: NSW renewable energy procurement requirements

Baseline requirements and stretch targets for NSW government renewable energy tenders, 2022. From AEMO Services, [NSW Electricity Infrastructure Tenders](#), Guidelines Round 1 September 2022, p.67

Table 9: Baseline requirements and stretch goals related to MC8³⁶

Supply chain inputs criteria <i>% for supply chain inputs refers to goods and services procured from, or value added in Australia & New Zealand as a percentage of total Project contract value</i>	Baseline requirements			
	Wind	Solar	Pumped hydro	Battery storage
Development phase (everything before COD)	40%	49%	66%	23%
Operation and maintenance phase	51%	71%	61%	35%
Steel product and components using locally milled steel <i>(excludes steel components integral to a component or products not available locally at the time of the Bid)</i>	10%	95%	30%	95%
Supply chain inputs criteria	Stretch goals			
	Wind	Solar	Pumped hydro	Battery storage
Development phase (everything before COD)	72%	81%	86%	78%
Operation and maintenance phase	76%	81%	82%	79%
Steel product and components using locally milled steel	95%			
Investment and innovation in the supply chain	Baseline requirement and stretch goal			
Commitment related to one or combination of: % of Project value in new/local facilities, % of Project value invested in innovation of supply chain, contributions to or participation in pooled investment.	For Tender Round 1, Proponents to make a voluntary but contractually binding commitment to investment and innovation. These commitments should form the basis for baseline requirement and stretch goals in future years.			
Employment, skills and knowledge transfer criteria	Baseline requirement		Stretch goal	
Learning workers³⁷ (% of total Project workforce)	20%		40%	
Apprentices (% of all trades positions on a Project)	20%		30%	
First Nations participation criteria	Baseline requirement		Stretch goal	
First Nations participation	1.5%		10%, or the goal in the region-specific protocol under the First Nations Guidelines.	
Fair and ethical practice criteria	Baseline requirement		Stretch goal	
Employment of underrepresented groups³⁸	15%		25%	
Environmentally sustainable procurement criteria	<p>Numerical minimum requirements do not apply. Proponents are required to respond to evidence requirements to demonstrate environmentally sustainable procurement. This includes:</p> <ul style="list-style-type: none"> • Alignment with NSW Net Zero Plan. • Alignment with NSW Circular Economy Policy Statement. • Sourcing materials according to EN15804, Green Building Council's or other appropriate sustainability framework. 			

³⁶ This section is based on the considerations in the NSW Renewable Energy Sector Board Plan.

³⁷ Note: as defined in the NSW Renewable Energy Sector Board Plan, a 'learning worker' is a worker without qualifications or who needs to update their qualifications or skills to meet the needs of the infrastructure project. This includes trainees and apprentices. Once defined as a learning worker, the worker maintains this status for the duration of the project. All workers on a project who undertake accredited training count towards the learning worker requirement, not just construction workers. The project workforce includes all people who contribute to the project. This includes people such as managers, engineers, finance team, environmental team, safety team, construction employees consisting of supervisors, those in leadership roles, tradespeople and operators. People who undertake training organised by the contractor prior to employment are counted as learning workers only if they are employed on the project. Training must be accredited vocational education and training (VET) or nationally recognised professional qualifications that meet the needs of the project and can be full or part qualifications (such as one or more units of competency). It may be subsidised by government funding or through a fee-for-service arrangement. Participants in the NSW Government Trade Pathways Program are to be included as learning workers and count towards achievement of this outcome.

³⁸ Underrepresented groups include people with characteristics defined in the Anti-discrimination Act 1977 (NSW) and people who are long-term unemployed in addition to young people and women.