Submission to the Review of the National Hydrogen Strategy

Mining and Energy Union, August 2023

The global energy transition will profoundly reshape both Australia's status as a major exporter of energy commodities *and* the local economies of our regions. Members of the Mining and Energy Union (MEU) find themselves at the centre of these changes. Our 21,000 members work across Australia's mining and energy industries, predominantly in the coal sector. Workers in coal-fired power stations, and the mines that supply coal for domestic power generation, are seeing closure dates for their worksites accelerated, with potentially devastating impacts for their local communities.

The Review of Australia's National Hydrogen Strategy provides an opportunity to envision a more promising future for Australia's energy regions. Australia enjoys numerous advantages for the development of a globally competitive hydrogen industry, including skilled and motivated workforces in key energy regions. But governments must act decisively to ensure opportunities do not pass us by.

The MEU welcomes consultation on the National Hydrogen Strategy Review. Our submission focuses on elements of the consultation paper which address key areas of importance to our membership.

Hydrogen opportunities for transitioning energy regions should be pursued.

Australia's energy regions face a challenging future. Most rely heavily on one employer (e.g. one coal-fired power station), and many are hundreds of kilometres from larger industrial centres. Without careful planning and investment, coal power station closures are likely to devastate these communities and force a skilled energy workforce into unemployment. However, the development of Australia's hydrogen industry has the potential to inject the new jobs and economic activity needed to successfully support energy regions through the transition.

Governments should actively incentivise and direct hydrogen investment into regions where coal generation is being phased out. This isn't only about supporting communities who have powered Australia for generations. It's also an eminently smart way to tap into an established energy-literate and experienced blue collar workforce, and exploit existing infrastructure in regions that are long-used to supporting heavy industries.

We wish to draw attention to an existing proposal in the Latrobe Valley in Victoria. Future closures of the Yallourn and Loy Yang Power Stations will see substantial job losses in a region that has already had to face the fallout from the sudden closure of Hazelwood Power Station in 2017. The Hydrogen Energy Supply Chain (HESC) Project successfully completed a pilot phase in the Latrobe Valley in early-2022 and, if progressed to commercialisation, would provide *ongoing* employment in the region somewhere in the realm of 500 jobs, in addition to another 500 ongoing jobs in Hastings.

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This low-emissions hydrogen project utilises the Latrobe Valley's coal resources to produce hydrogen (in a local gasification plant), which would then be liquefied in Hastings and shipped to Japan – this supply chain was successfully demonstrated in the pilot phase. Emissions from the process would be captured and injected into depleted oil and gas reservoirs in Bass Strait for storage, replicating similar, long-proven technology operating for decades in Norway, and providing carbon storage infrastructure that can be utilised by other projects set up in the region. While there are numerous proposals to develop new industries and opportunities for transitioning energy regions, the HESC Project is the only existing large-scale proposal that would create significant and realistic jobs for affected workers in the right location.

Beyond export opportunities, locally-created hydrogen could support our energy security as we reduce our emissions in our own electricity grid. For example, conversion of ageing gas turbines for hydrogen would bolster energy security by providing dispatchable power that can be called upon when needed.

Consultation Question 11: Should Australia develop and support local manufacturing capabilities to secure the hydrogen supply chain?

Australia must pursue the development of local capabilities, including manufacturing, to secure the supply chain any new local hydrogen industry. Beyond supply chain security, the development of local capabilities ensures that any new hydrogen industries provide maximum benefit to the Australian community, in particular regional economies and workforces. It would support a sustainable and strong industrial base for Australia, providing secure blue-collar work even as the high-emitting industries that underpin our economy adapt in response to the energy transition. Where there are opportunities to develop manufacturing industries to support a domestic hydrogen industry, genuine efforts should be made to, whenever appropriate, locate facilities in regions that will be affected by major closures as a result of the energy transition. The Government should investigate ways to incentivise this as, in many instances, manufacturing industries stand to provide a substantially higher number of ongoing, post-construction, jobs than typical renewable energy projects.

The strategy should deliver quality, long-term jobs for workers.

The development of a new hydrogen industry will only fully deliver for Australian communities if the jobs created are well-paid, secure, and offer the protection of strong union representation. Unions have an essential role to play in the development of any nascent industry. In providing various forms of support for a domestic hydrogen industry, the Government should also support project proponents to engage respectfully and constructively with unions.

Consultation Question 13: What is the role of industry and governments to ensure the hydrogen industry has access to an appropriately sized and skilled workforce?

The consultation paper correctly acknowledges Australia's skilled resource and energy workforce as a strategic advantage for a domestic hydrogen industry. However, a central challenge of

successfully executing the energy transition lies in creating a clear and reliable pathway to support these skilled workers, increasingly affected by facility closures, into new jobs. Government and industry both have a role to play.

Workers displaced by coal-fired power station closures possess high energy literacy and transferable skillsets. Process control operators in coal-fired power stations possess technical and scientific skills relevant to hydrogen production, and would require only minimal skills gap closure to embark on careers in the hydrogen industry. However, if workers are financially disadvantaged for participating in training and reskilling courses, the hydrogen industry will miss out on this valuable workforce. Workers should be supported to access retraining as part of an individually tailored transition plan, and companies operating coal-fired power stations slated for closure must be required to allow employees to participate in training programs during paid work time.

Governments must invest in public vocational education. Without fresh investment, the nation's TAFE system will be unable to provide the training facilities and courses required to skill workers for the hydrogen industry. Similarly, industry would reap benefits from investing in the long-term development of their own workforce, favouring the provision of nationally recognised training over proprietary schemes.

Governments must play a supportive role.

Consultation Question 18: When would it be appropriate to take a 'tech neutral' approach to developing hydrogen, and when would a more directed approach be warranted?

The development of a local hydrogen industry is an important opportunity to secure Australia's place as a key player in a low-emissions global economy. The Government should not impose arbitrary barriers that could hamstring our pursuit of this opportunity. A 'tech neutral' approach is an intelligent, sensible approach that would give a new Australian hydrogen industry the best chance of succeeding.

Taking a tech neutral approach would align us with other countries, including Canada[1] and the US,[2] whose hydrogen policies focus on the emissions intensity of production, rather than the source. Meanwhile, the United Kingdom is not limiting itself to renewable sources of hydrogen production as it develops its own capacities, with their Contracts for Difference Scheme set-up to initially fund an equal amount of renewable and 'blue' (i.e. coal/gas to hydrogen with carbon capture) hydrogen projects.

The consultation paper acknowledges the significant cost-gap between renewable hydrogen and non-renewable alternatives. Australia must not risk waiting and should develop its hydrogen industry where it is affordable now, *and* where there are existing realistic proposals. The

[1] The Clean Hydrogen Investment Tax Credit policy provides tax reimbursement of up to 40% based on emissions intensity. Projects with less than 0.75kg emissions per kilogram of production eligible for the full rate.
[2] The Inflation Reduction Act provides tax credits to hydrogen projects with lifecycle greenhouse gas emissions intensity lower than 0.45kg per kilogram of production.

infrastructure that will be in place as a result can adapt as renewable hydrogen becomes more economic, but it has to be built first.

This does not mean accepting hydrogen projects with high emissions. The Government is building a framework to support emissions reduction in industry, including through its reforms to the Safeguard Mechanism and the development of a Guarantee of Origin Scheme to measure the emissions from hydrogen (and other) production processes in Australia (which enables potential end-users to accurately assess the emissions going into hydrogen products). With these protections in place, there is no need for the Government to take a prescriptive approach to the hydrogen technologies it offers support to. Any condition placed on Government support for hydrogen projects, other than emissions intensity, is superfluous.

We can build on and benefit from strong relationships with our export partners.

Consultation Question 33: How should Australia ensure that the necessary foreign investment in hydrogen industry, and export projects leads to lasting benefits for all Australians?

The HESC Project outlined within our submission has the backing of the Japanese Government, who this year committed $2.35bn to develop the project to commercial scale. This is an enormous investment in the Latrobe Valley community, and offers hope of a more positive future in the face of significant upheaval. The long-term employment opportunities that would result from commercialisation of the project would assist the Latrobe Valley region to execute a successful transition to the low emissions economy envisaged by the Government. The Commonwealth Government can ensure that this significant foreign investment provides lasting benefits to all in the community by continuing to offer a supportive environment for the HESC Project (and others like it), as it did during the pilot phase.

Foreign investment in our hydrogen industry is to be expected as Australia is a key energy exporter for major Asian economies, including Japan and South Korea, that lack our geological and natural advantages for renewable energy production. They have a strong interest in the secure energy supply chain that Australia can continue to provide in a transitioning world. It is in Australia's interests to offer an investment environment that is facilitative and welcoming of foreign investment commitments from our most important export partners.