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Committee Secretary
Senate Standing Committees on Environment and Communications
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Dear Committee Secretary

Inquiry into Glencore's proposed carbon capture and storage project

The Mining and Energy Union Queensland District (MEU) welcomes the opportunity to provide a submission to the Committee on the inquiry into Glencore's proposed carbon capture and storage project.

The Queensland District of the MEU is the principal union representing workers across all roles in Queensland's coal mining and power generation industries, with a proud history in the state of more than 115 years.

Our members belong to communities in regional Queensland that have powered the nation's economy and prosperity over generations. However, the economic transformation taking place in response to the global energy transition will profoundly impact on our regions. This is why we are strongly supportive of projects which can underpin the wellbeing of impacted communities, protect energy and industrial jobs, and drive development of the industries of the future.

It is widely acknowledged that carbon capture and storage (CCS) technology will need to play a role in the global pathway to net zero emissions. The International Energy Agency's most recent Net Zero Roadmap suggests that around 8 per cent of cumulative emissions reductions globally will come from CCS.[1]

Cost has been the main barrier to development of CCS so far, however the recent reforms to the Safeguard Mechanism are now driving a strong incentive for Australian industries to invest in decarbonisation technologies – including CCS.

[1] IEA. *Net Zero Roadmap 2023 Update*, p. 102.

Industrial-scale CCS has been around for 50 years. There are 29 CCS facilities operating globally, with a capacity of more than 35 million tons per year, and more than 100 planned facilities in the pipeline.[2] These include the Sleipner CCS Project in Norway, which has injected more than 20 million tons of CO_2 captured from natural gas processing since becoming operational in 1996, and the Quest project in Canada, which has captured and stored over 6 million tons of CO_2 from hydrogen production since November 2015.[3]

According to the CSIRO, Australia has the abundant land-resources, geological storage capacity, and vast marine estate needed to translate carbon sequestration opportunities into reality.[4] The CSIRO has also recommended that carbon capture and utilisation form part of a portfolio of decarbonisation solutions for hard-to-abate industries such as cement, steel, plastics, and transport.[5]

Australia is lagging the world in large operational CCS projects. Past demonstration projects include the Callide Oxyfuel Project in Queensland, which saw Callide A Power Station retrofitted with CCS technology and captured carbon dioxide transported to Victoria for injection at the Otway Project site. Before the pilot wrapped up in 2015, the Project had demonstrated more than 5000 hours of carbon capture from Callide A.

Glencore's proposal is a promising step forward in the development of CCS in Australia; and especially for Queensland. The project would capture emissions from Millmerran Power Station, initially on a demonstration scale, for underground sequestration in Queensland's Surat Basin. This will reduce emissions from the power station while also advancing a technology that will prove critical in decarbonising hard-to-abate sectors and key heavy industries. It will help major Australian industries to stay open as the world decarbonises. Glencore's project proposal also sits alongside a number of new CCS projects which have emerged in response to the incentive to decarbonise created by the Safeguard Mechanism Reforms.[6]

New technology takes time, investment and research; and projects which progress the development of critical technologies to underpin our industries of the future should be supported. Opposition to the development of CCS technology, often ideological in nature, prevents Australia from pursuing important opportunities to develop new products and industries for the future.

For example, the development of CCS can support the commercialisation of a hydrogen industry in Australia. The most cost-effective way of producing hydrogen is by using fossil fuels such as coal, oil or gas. When teamed with CCS to prevent carbon dioxide generated from entering the atmosphere, 'blue hydrogen' is created. With our established coal reserves in regional areas, blue hydrogen is a low-emission, cost-effective alternative fuel that can and should play a role in commercialising a domestic and export hydrogen industry in Australia, setting us up to play a leading role in an eventual global export market for renewable hydrogen when that technology reaches commercialisation.

This is an approach supported by some of our key trading partners who rely on Australian energy exports for their energy security. The Japanese Government has committed around $2 billion to support the progression of the Hydrogen Energy Supply Chain project in Victoria's Latrobe Valley

[2] Helferty, H., Kuijper, M. and Allen, M. 2023. 'CCS works technologically, its problem is an economic one', *Carbon Capture Journal*, issue 91, p. ii.
[3] Global CCS Institute Facilities Database.
[4] CSIRO. 2022. *Australia's carbon sequestration potential: A stocktake and analysis of sequestration technologies*, p. 20.
[5] CSIRO. 2021. *CO_2 Utilisation Roadmap*, p. 8.
[6] See, for example, LETA and Cement Australia's PACER project and MCi Carbon's Kooragang Island facility (which recently commenced construction).

to commercialisation. The pilot phase of this project successfully demonstrated the production and transport of blue hydrogen from Victoria to Kobe, Japan.[7]

The successful development of an industrial-scale CCS project in Queensland creates further opportunity for the development of a blue hydrogen industry in Australia. We note that Glencore is also investing in a study using coal from its Wandoan mine as a feedstock to produce hydrogen and ammonia, incorporating CCS technology to capture and store the majority of emissions generated.[8] The hydrogen and ammonia production facilities associated with this project would be located at Wandoan in regional Queensland, underscoring the importance of investing in new technology to support regional jobs of the future.

Every project must meet the appropriate environmental standards. We understand and share concerns about management of our precious water resources. However, we also urge that, where requirements under Queensland and Commonwealth legislation have been met, projects be supported to proceed.

Glencore's project is good news for workers in Queensland's carbon-intensive industries. While the CCS project itself will directly supports 30 full time equivalent jobs, it has the potential to underpin many more across other industries, protecting regional workers' jobs and generating the jobs of the future while reducing emissions. This is especially important for regional Queensland communities who are facing enormous upheaval due to power station closures and the energy transition.

Yours faithfully

MITCH HUGHES
District President

[7] https://www.hydrogenenergysupplychain.com/japan-commits-aud2-35-billion-to-establish-liquefied-hydrogen-supply-chain/
[8] https://research.csiro.au/hyresource/glencore-surat-hydrogen-project/