

9 May 2024

Committee Secretary
Senate Standing Committee on Environment and Communication
Department of the Senate
Submitted via email to seniorclerk.committees.sen@aph.gov.au

SUBMISSION: Inquiry into Glencore's proposed carbon capture and storage project

Glencore in Australia

Glencore is one of Australia's largest producers and marketers of coal, metals, and minerals. We currently operate 22 mines, producing coal, copper, lead-zinc, nickel-cobalt, and metals processing assets.

Our employees and contractors are fundamental to our success, and people are at the centre of everything that we do. Our operations are a significant socio-economic contributor to Australia and in 2023, Glencore Australia contributed more than \$23 billion to the Australian economy and provided work for over 17,000 people.

We work with over 7,000 suppliers and in 2023 spent over \$12 billion on goods and services to support our operations and the communities where they are located, particularly in rural and regional Australia.

Our Approach on Climate Change

Glencore is committed to supporting the transition to a low carbon economy by supplying transition-enabling commodities needed for the energy, transport and infrastructure systems of tomorrow, while continuing to support the energy needs of today.

Under all credible scenarios, fossil fuels will continue to be a part of the global energy mix for years to come. Traditional energy sources including fossil fuels will remain important in supporting sufficient, reliable, and affordable energy supply during the transition to increased electrification and renewable forms of energy.

We support global efforts to reduce emissions and have a robust climate change plan. Glencore will oversee a managed decline of our industrial thermal coal business to support energy needs through the transition.

Our view is that the transition away from fossil fuels in energy systems is unlikely to be linear or uniform across jurisdictions as governments need to balance environmental, economic, and social objectives.

Earlier this year, we published our 2024-2026 Climate Action Transition Plan. We believe the best way for Glencore to make a meaningful contribution to addressing climate change is to take a holistic approach to reducing our industrial emissions.

We have set ourselves the target of reducing our Scope 1, 2 and 3 industrial emissions by 15% by the end of 2026, 25% by the end of 2030 and 50% by the end of 2035. Our ambition is to achieve net zero industrial emissions by the end of 2050, subject to a supportive policy environment. For further information on our strategy, including important details regarding our calculations, refer to our 2024-2026 Climate Action Transition Plan and our latest Annual Report and Basis of Reporting, which are available on our website at glencore.com/publications.

The Importance of Carbon Capture and Storage Technology

Reducing global emissions will require the development and deployment of renewables and a suite of low emission technologies, including carbon capture and storage (CCS).

CCS has been repeatedly recognised by the Intergovernmental Panel on Climate Change (IPCC) and the International Energy Agency (IEA) as a critical technology for mitigating emissions, and necessary for contributing to a global clean energy transition and achievement of Net-Zero by 2050.

The International Energy Agency (IEA) reports that even with concerted action under the Paris Agreement's nationally determined contributions from each country, fossil fuels will still provide an estimated 60%–75% of the world's primary energy by 2040. The IEA has said that CCS will play a 'unique and vital role' in the global reduction of greenhouse gas emissions from using fossil fuels.¹

In 2023, the UNFCCC COP28 meeting in decision statement on the outcome of the first global stocktake recognised the need for

(e) Accelerating zero- and low-emission technologies, including, inter alia, renewables, nuclear, abatement and removal technologies such as carbon capture and utilization and storage, particularly in hard-to-abate sectors, and low-carbon hydrogen production;

Glencore has been a long-time supporter of CCS technology. Given the global transition to a low carbon economy is unlikely to be linear and the Australian Government's need to manage environmental, social and economic aspects of their own pathway to reducing emissions, CCS technology offers a potential pathway or bridge to transition for countries like Australia, who's economic prosperity is derived in large part from the utilisation natural resources sector.

Australia is endowed with significant energy resources, both fossil fuel and renewable.

Fossil fuels have underpinned Australia's standard of living for generations via direct and indirect employment, domestic power generation and export earnings. Building on this prosperity, Australia is well-positioned to further benefit from this energy abundance by using newer technologies, including renewables and hydrogen. However, fossil fuels will continue to play an important part in Australia's energy mix for at least the short to medium term. In addition, the associated CO₂ emissions from energy production and other industrial processes, such as cement, steel and fertiliser production, present a challenge to Australia in meeting its emissions reduction targets.

CCS presents one of the few technologies capable of abating large volumes of CO₂.

If future large-scale CCS is to be available to Australia as an emissions abatement technique, viable geological storage locations must be evaluated, appraised, and developed. Viable geological storage is essential irrespective of whether CO₂ is sourced from fossil fuel emissions or extracted directly from the atmosphere using direct air capture.

The CTSCo Project

The primary purpose of the proposed CTSCo CCS Project in the Surat Basin Project, is to evaluate the feasibility of CO₂ storage by injection testing, to enable the assessment of the region for potential future large-scale CO₂ storage.

The three-year injection Project has been scaled to demonstrate the monitoring and verification technologies that would be required for any future large-scale CO₂ storage project, with only a small volume, limited duration injection test proposed.

The Project also seeks to provide confidence in CO₂ storage technology for both the community and regulators via a successful fixed-duration injection testing, monitoring, and verification program. Although the Project expects to abate CO₂ emissions, the reduction in CO₂ emissions from the injection testing alone would be incidental. The injection testing aims to provide sufficient information to evaluate the feasibility of future CO₂ storage within the Surat Basin and, more broadly, provide a reference case for future onshore Australia CCS.

Any CO₂ storage beyond the proposed injection test project would require its own approval under the relevant legislation.

In 2021, CTSCo commenced the environmental approval process for the proposed Surat Basin CCS Project following successful exploration and appraisal activities within the EPQ10 greenhouse gas storage exploration tenement.

Late in 2021, the Queensland Government's environmental regulator decided that an Environmental Impact Statement (EIS) would be required to examine the impacts of CTSCo's proposed injection testing of CO₂. CTSCo also referred the proposed Project to the Australian Government in early 2022 under the *Environment Protection and Biodiversity Conservation Act 1999 (Cth)* (EPBC Act), to determine if the Project would be deemed a controlled action. The Australian Government subsequently decided that the Project was not a controlled action under the EPBC Act.

The EIS process represents the most rigorous mechanism for project environmental assessment and approval available to the Queensland Government. In addition to thoroughly assessing potential impacts and risks, the EIS process includes multiple public consultation periods to allow government, industry, and community concerns to be considered and adequately addressed.

The final EIS submitted by CTSCo included over 3,000 pages of peer-reviewed project description, impact and risk assessment, and proposed approval conditions prepared by engineers and scientists from CTSCo and external subject matter experts from industry and academia. The complete CTSCo Project EIS is publicly available at <https://www.ctsco.com.au/about#eis>.

During the review and assessment phase of the EIS process, the Queensland Government commissioned independent expert review from the Australian Government's Independent Expert Scientific Committee (IESC), CSIRO and the Queensland Office of Groundwater Impact Assessment (OGIA).

The recommendations made by each of these organisations were accepted by CTSCo and incorporated into the final EIS. Of note, the IESC concluded in their report that "given the small scope of the project and geological stability of the storage complex at the project location, impacts from the project are expected to be minimal and manageable in both the immediate and long term".²

Separately, Geoscience Australia has commented that: "*Due to the basin's immense size and the geology/hydrology of the area identified for the injection, this CO₂ storage project will not threaten the viability of groundwater in the Great Artesian Basin.*" The Queensland Government says: "*Carbon dioxide dissolved in water is not toxic. Naturally occurring dissolved CO₂ is present in high concentrations in certain areas of the Great Artesian Basin. Leaks of CO₂ are extremely unlikely because the geological formations that would be used to store the CO₂ are not open and are sealed by one or more impermeable layers.*"³

The CTSCo Project seeks to evaluate the storage potential of the Precipice Sandstone aquifer located approximately 2.3 km below the surface at the project location. This sandstone aquifer is one of several Great Artesian Basin (GAB) aquifers present at the location and is geologically isolated from overlying freshwater aquifers. A detailed description of how aquifer isolation was verified using both seismic survey and pressure measurements is included in the EIS.

The Precipice Sandstone aquifer at the project location contains brackish water with high fluoride levels, making it unsuitable for human consumption or irrigation and problematic for consumption by some livestock. For spatial context, the GAB covers an area of roughly 1.7 million km² and with this, the Precipice Sandstone aquifer covers approximately 212,500 km².

The expected area of the proposed CTSCo Project CO₂ plume is approximately 1.4 km² or approximately 0.0006% of the Precipice Sandstone aquifer area. Changes to the water quality will be confined within the plume extent, with the water quality outside the CO₂ plume remaining unchanged. The position of the injected plume is expected to remain in place indefinitely due to the near-stagnant nature of the aquifer at the project location. Consequently, no adverse impacts are anticipated for existing or future GAB aquifer users.

CTSCo has consulted well beyond the small number of stakeholders located close to the Project.

The Project's community and stakeholder engagement program included affected and neighbouring landowners, indigenous groups, non-governmental organisations, industry peak bodies, community groups,

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and all levels of government. The program has logged over 1650 engagement interactions across approximately 765 stakeholders. This consultation commenced directly after the grant of the EPQ10 tenement in 2019 through to the formal EIS public consultation programs in 2022 and 2023 and is detailed within the EIS. The EIS public consultation process elicited 84 formal submissions, and issues raised in these submissions were addressed in the final EIS.

CTSCo notes that at the time of this submission, the Project EIS is undergoing final assessment by the Queensland Department of Environment, Science and Innovation.

Yours sincerely,

Darren Greer
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Glencore

¹ International Energy Agency (IEA), Report: Net Zero Roadmap – A Global Pathway to Keep the 1.5oC Goal in Reach

² <https://www.iesc.gov.au/sites/default/files/2023-02/iesc-advice-surat-basin-carbon-capture-storage-project-2022-139.pdf>

³ <https://www.business.qld.gov.au/industries/mining-energy-water/resources/petroleum-energy/authorities-permits/applying/greenhouse-gas/about-capture-storage>