QUEENSLAND CONSERVATION COUNCIL

PROTECT CONSERVE SUSTAIN

1 May 2024

Committee Secretary
Senate Standing Committee on Environment and Communications
Department of the Senate
PO Box 6100
Parliament House
CANBERRA ACT 2600

Email: ec.sen@aph.gov.au

Re: Submission to the Senates inquiry into Glencore's proposed Carbon Capture and Storage project

Dear Committee Secretary,

As Queensland's peak Environmental Non-Government Organisation, the Queensland Conservation Council (QCC) welcomes this opportunity to provide the following response to the Senates inquiry into Glencore's proposed Carbon Capture and Storage Project.

1. Responses to inquiry questions

a) The environmental impact assessment process and the adequacy of the project's approval by federal and state regulatory bodies, including the decision not to classify the project as a controlled action under national environment law

Response:

a.1) Australian Government assessment and approval processes

The proponent referred their proposed project under the *Environment Protection and Biodiversity Conservation Act 1994* (the Act) in early 2022. Following its assessment of the information provided by the proponent, the EPBC Department (the Department) determined that the proponent's proposed project was not a controlled action under the Act as it would not cause any adverse impacts to threatened ecological communities and species or other Matters of National Environmental Significance (MNES) listed under the Act.

Key issues regarding the Department's decision that the proponent's proposed project is not a controlled action under the Act includes:

- As the proponent did not provide sufficient details in the information they provided to the Department, both the Department and the public are unlikely to have been fully aware off the high level of connectivity between the Great Artesian Basin (GAB) and the Precipice Sandstone, which is the aquifer the proponent is seeking approval to inject liquified CO2 into

- Given that the proponent's proposed project is essentially a pilot project to test the technical feasibility of storing liquified CO2 in the Precipice Sandstone aquifer, the Department did not assess the potential cumulative impacts that could occur to threatened ecological communities and species or other Matters of National Environmental Significance from other potential underground carbon storage proposals that could occur based on information provided by this proposed project

- As Carbon Capture and Storage projects are not currently within its remit, the proponent's proposed project was not referred to the Independent Expert Scientific Committee (IESC), which provides independent advice to government regulators on the impacts that unconventional gas and large coal mining developments may cause to Australia's water resources despite the high risk of adverse impacts occurring the GAB from the proponents proposed project

Given the abovementioned issues, it's QCC's strong view that the proponent's proposed project was not adequately assessed under the EPBC Act and that the Departments decision the proposed project is not a controlled action under the Act is consequentially flawed.

a.2) Queensland Government assessment and approval processes

As the EPBC Act has been determined to not apply, the proponent's proposed project is being assessed and potentially approved under the Queensland *Environmental Protection Act 1994* and the *Queensland Greenhouse Gas Storage Act 2009.*

As it does not comply with the *Environmental Protection Regulations 2019* (the Regs), the proponents proposed project cannot be approved under the EP Act. In order to gain approval for their proposed project under the EP Act, we are aware that the proponent has lobbied the Queensland Government to amend the Regs to enable their proposed project to be approved.

Along with requiring approval under the EP Act, the proponents proposed project also must be assessed and approved under the *Queensland Greenhouse Gas Storage Act 2009* (the QGHGS Act). As it has never been applied before, there is considerable uncertainty about the criteria and processes by which the various provisions under the QGHGS Act will be operationalised to ensure that underground carbon storage projects are robustly assessed, monitored, safely operated and proponents are held accountable for any adverse socioeconomic and environmental impacts they may cause.

Given the above issues, QCC is gravely concerned about that this and other proposed underground carbon storage projects will not be adequate assessed under existing Queensland legislation.

b) The potential risks and impacts of the project on the groundwater quality within the Great Artesian Basin, especially concerning the findings related to the dification of groundwater and mobilisation of heavy metals such as lead and arsenic;

Response:

On page 58 of the provided Executive Summary, the proponent has acknowledged that injecting liquified CO2 into the Precipice Sandstone will lower the pH of water within the aquifer from its natural level of 8.4 to as low as 4, which will turn water in the Precipice Sandstone acidic.

As it will turn water within the receiving aquifer acidic, there is a significant risk this will cause unintended chemical reactions to occur in the receiving aquifer, which may cause heavy metals and other toxicants to be mobilised from the geology of the Precipice Sandstone.

If heavy metals and other toxicants are mobilised as a result of the acidification of water in the receiving aquifer, there is a significant risk that the quality of water in the Precipice Sandstone aquifer outside of the liquified CO2 plume area will also be contaminated, which will potential cause irreversible adverse impacts to the environmental values of the Precipice Sandstone and adverse economic impacts to property owners reliant on extracting water from the Precipice Sandstone to support primary production.

c) The scientific basis and transparency of the data supporting the project's safety claims, including the robustness of fieldwork, data, and analysis presented by CTSCo and critiques by independent hydrogeologists and aqueous geochemists;

Response:

As underground carbon storage has not been undertaken in Queensland to date, there is no actual data available on the safety of underground carbon storage in Queensland.

In the absence of actual data on the economic and environmental performance of underground carbon storage in Queensland, the proponent for this project has relied on modelling and data from underground carbon storage projects in other parts of world, all of which operate under completely different geological, hydrological, biological and other conditions compared to Queensland.

Given the proponent has relied on data from underground carbon storage projects outside of Queensland, there is a significant risk that the assumptions and assurances the proponent has made that their proposed project is safe and will not cause adverse impacts to the Precipice Sandstone outside of the predicted plume area are unlikely to be accurate or reliable.

In addition, as the adverse impacts that could occur to the Precipice Sandstone from the proponents proposed project may not happen for decades into the future, the proponent's proposal to only monitor the effects of its proposed project for a total of 3 years after ceasing to inject liquified CO2 into the Precipice Sandstone is manifestly inadequate.

Without ongoing long-term monitoring, the proponents claim their proposed project will not cause any adverse economic and environmental impacts in the future simply cannot be substantiated.

d) The potential socioeconomic impacts on agriculture and regional communities, relying on the Great Artesian Basin for water, including an assessment of the project's impact on existing and future water use rights;

Response:

As it will degrade the quality of water in the Precipice Sandstone, the proponents proposed project will cause significant adverse economic impacts to landholders that currently rely on extracting water from the Precipice Sandstone to support primary production. As it will permanently degrade water quality in the receiving aquifer, the proponents proposed project will also stifle any future economic development based on extracting additional water from the Precipice Sandstone.

In addition to affecting existing and potential future economic development based on extracting water from the Precipice Sandstone, the proponents proposed project and potentially other underground carbon storage projects facilitated by this particular project could cause significant socioeconomic impacts to regional communities that rely on extracting water from the GAB for their town water supply.

e) The consultation processes undertaken with stakeholders, including farmers, Indigenous landholders, environmental groups, and the broader public, and the adequacy of these processes in addressing stakeholder concerns;

Response:

As documented in their Community and Stakeholders Engagement Report, the proponent has only consulted QCC about their proposed project on two (2) occasions, with the first occasion being in our capacity as a member of the Queensland Great Artesian Basin Advisory Council in March 2021 and the second occasion in April 2022.

Given that they have only consulted with us on two (2) occasions and did not provide any direct response to us outlining how they intended to address our concerns about their proposed project, we strongly consider that the consultation the proponent did undertake with us to be no more than an exercise in "ticking" the required boxes to show they had consulted with the Queensland conservation sector.

In addition, other than QCC and the Upper Dawson Valley WPSQ Branch, the proponents Community and Stakeholder Engagement Report confirms that they failed to identify and consequentially consult with other local, state and national environment NGO's that are concerned about the adverse environmental and other impact's that underground carbon storage projects could potentially cause.

Due to the above, QCC strongly considers that the consultation the proponent undertook with our sector to be grossly inadequate.

f) The potential precedent set by allowing CCS projects within the Great Artesian Basin and its implications for future projects, considering Australia's strategic interests in preserving its largest groundwater system

Response:

According to the proponent's website, the primary objective of their proposed project is to trial underground carbon storage to gain information and data to determine the feasibility of large-scale underground carbon storage in the Surat Basin in Queensland, which according to 2009 National Carbon Storage Taskforce report and the Queensland Government CO2 Storage Atlas has been identified as a key geo-storage area with the potential to permanently store approximately three billion tonnes of liquified CO2, including 1.3 billion tonnes in the Precipice Sandstone.

Given the primary purpose of the proponent's proposed project is to trial underground carbon storage to inform the development of other underground carbon storage projects, by approving this particular project could potentially result in approximately three billion tonnes of liquified CO2 being permanently stored underground in the Surat Basin region of Queensland, which would permanently degrade water quality in the Precipice Sandstone and other GAB aquifers – thereby causing irreversible adverse impacts to the environmental and economic values of the GAB.

***g) The role of CCS technology in Australia's broader climate change mitigation strategy, including an evaluation of its efficacy, risks and alternatives*;**

Response:

Please refer to Attachment 1: QCC's submission to the EIS for the proponents proposed project and Attachment 2: EDO's Fact Sheet on Improving Regulation of Carbon Capture and Storage (CCS) in Queensland for our response to this question.

2. Additional information

2.1 QCC's submission to the proponents EIS for their proposed project

Please see Attachment 1 for QCC's abridged submission to the proponents EIS for additional information regarding our concerns about the proponents proposed project.

2.2 Environmental Defenders Office (EDO) Fact Sheet

Please see Attachment 2. for EDO's Fact Sheet on Improving Regulation of CCS in Queensland for additional information about deficiencies of assessing CCS projects under current Queensland Government legislation.

3. Conclusion

As fresh water resources in Australia and across the world are rapidly diminishing as a result of increased demand, pollution and the effects of climate change, it is greatly concerning that both the Australian and Queensland governments have allowed the proponents proposed project to progress given the adverse impacts that it will cause to the Great Artesian Basin, which is the primary source of water for many primary producers and communities in regional Queensland.

Given the adverse economic and environmental impacts that it will cause to landholders and communities that rely on the GAB, QCC categorically does not support the proponents proposed project and strongly recommends that the proponents application for approval of its proposed project is rejected under relevant Queensland legislation.

If possible, QCC would appreciate the opportunity to appear before the Committee to further discuss the matters mentioned in this submission.

Yours sincerely,

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