

The Senate

Environment and
Communications References
Committee

Glencore's proposed carbon capture and
storage project

July 2024

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List of recommendations

Recommendation 1

- 2.86 The committee recommends that states and territories consider a legislated ban on CCS activities across the GAB to ensure this important natural asset is uniformly preserved.
- 2.87 The committee recommends updating the water trigger in the EPBC Act to include onshore CCS.

Chapter 1

Introduction

1.1 On 25 March 2024, the Senate referred an inquiry into Glencore’s proposed carbon capture and storage project (the inquiry) to the Senate Environment and Communications References Committee (the committee) to inquire into:

The implications of Glencore’s proposed carbon capture and storage (CCS) project by its subsidiary, Carbon Transport and Storage Corporation (CTSCo), in the Great Artesian Basin, with particular reference to:

(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;

(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 acidification of groundwater and mobilisation of heavy metals such as lead and arsenic;

(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;

(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;

(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;

(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;

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

(h) any other related matters.

1.2 Originally the Senate set the reporting as 1 May 2024. On 14 May 2024, the Senate granted an extension of time to report until 2 July 2024. That date was subsequently extended to 11 July 2024.

Background and context of this inquiry

- 1.3 This inquiry was established to consider the proposed Surat Basin Carbon Capture and Storage Project (the project) by the Carbon Transport and Storage Corporation (CTSCo), which is a wholly owned subsidiary of Glencore.
- 1.4 Glencore is a Swiss multinational natural resources company with a significant presence in Australia through its coal, cobalt, copper, lead nickel, zinc, and agricultural businesses, as well as 25 active mining operations. Its subsidiary CTSCo was established in 2010 with the aim of ‘conducting carbon capture and storage (CCS), initially on a demonstration scale, and if successful, on an industrial scale.’¹
- 1.5 Using CCS technologies, the project proposed to conduct a greenhouse gas (GHG) test injection demonstration (containing at least 98 per cent carbon dioxide) in the Surat Basin region of southern Queensland. The project also involved the construction of a transportation facility, flowline, and associated infrastructure.² An overview of CCS and its role as a climate change mitigation strategy is presented later in this chapter.

Overview of the proposed project

- 1.6 The project’s stated purpose was to ‘evaluate the feasibility of GHG stream storage by GHG storage injection testing of the captured CO₂’, with the proponent arguing that outcomes from the project would ‘assist in determining the long-term feasibility to safely capture and store GHG streams from multiple industrial sources’.³
- 1.7 The GHG stream for the project was to be sourced from Glencore’s existing coal-fired Millmerran Power Station, located approximately 100 km southwest of Toowoomba in southern Queensland, and transported 260 km by truck to the proposed injection site.
- 1.8 The project was set to last a total of seven years, with delivery carried out across five key phases:
 - Exploration and Appraisal
 - Construction
 - Operation
 - Monitoring
 - Rehabilitation
- 1.9 The proposed injection site was the Precipice Sandstone aquifer, located in the Surat Basin — a sub-basin within the Great Artesian Basin (GAB). The aquifer

¹ CTSCo, [CTSCo - About](#), (accessed 9 May 2024).

² CTSCo, [CTSCo Carbon Capture and Storage \(CCS\) Project Factsheet](#), (accessed 11 May 2024).

³ CTSCo, *Environmental Impact Statement Final Amended – 01 Introduction*, 28 March 2024, p. 5.

covers approximately 212,500 km² of the GAB. CTSCo's Environmental Impact Statement (EIS) argued that the Precipice Sandstone aquifer was self-contained and hydrogeologically isolated.⁴

- 1.10 Consequently, the proponent argued that the injected CO₂ would remain stored within between 500 and 600 metres of the injection site at any point, with no risk of leakage and migration to the rest of the aquifer and the wider GAB.⁵
- 1.11 The project would be located within the Western Downs Regional Council local government area in Queensland, approximately 400 km west of Brisbane. The closest population centres would be the town of Moonie and the Westmar township.⁶
- 1.12 As an injection test site, Glencore stated that the project's emissions reduction potential would be 'incidental':

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.⁷

Timeline of key events

- 1.13 Evaluation and appraisal activities for the project commenced in 2021. Since then, the project has undergone regulatory assessment processes at both the Commonwealth and the state level.
- 1.14 On 12 August 2021, CTSCo applied for a decision on whether an EIS would be required for the project under the *Environmental Protection Act 1994* (EP Act) (Qld) and the *Environmental Protection Regulation 2019* (EP Regulation) (Qld). On 10 September 2021, the Queensland Department of Environment, Science and Innovation (DESI) announced that the project would need to undergo an EIS process.⁸
- 1.15 On 7 January 2022, CTSCo referred its proposal to the Australian Government under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (Cth) to determine whether the project would be considered a controlled action.
- 1.16 On 9 February 2022, the Australian Government gave notice of its decision that the proposed project was not a controlled action under the EPBC Act and

⁴ CTSCo, *Environmental Impact Statement Final Amended – 09 Groundwater*, 28 March 2024, pp. 119–130.

⁵ CTSCo, *Environmental Impact Statement Final Amended – 09 Groundwater*, 28 March 2024, pp. 125–127.

⁶ Department of Environment, Science and Innovation (DESI), *EIS assessment report*, May 2024, p. 5.

⁷ Glencore (CTSCo), *Submission 23*, p. 2.

⁸ CTSCo, *Environmental Impact Statement Final Amended – 01A Introduction to Final Terms of Reference*, 28 March 2024, p. 7.

therefore would not require environmental assessment at the Commonwealth level.⁹

- 1.17 On 15 March 2024, Queensland-based peak agricultural body AgForce launched a legal challenge in Federal Court to revoke the decision by the Federal Environment Minister that determined the project not to be a controlled action under national environment law.¹⁰
- 1.18 On 24 May 2024, following a three-year assessment process against the regulatory requirements of Queensland's EP Act and the EP Regulation, DESI announced that it had determined the project is **not suitable** to proceed 'due to potential impacts on groundwater resources in the Great Artesian Basin.'¹¹
- 1.19 Following this decision, the Queensland Government announced on 31 May 2024 plans to legislate a 'blanket ban' on all CCS projects within the Queensland component of the GAB. The state's Minister for the Environment, the Hon Leanne Linard, explained that the proposed legislation will 'ensure that there are no future attempts at this type of storage in this essential water resource.'¹² Further details of this proposal is outlined in Chapter 2.

Approval processes and outcomes

- 1.20 At the Commonwealth level, controlled actions under the EPBC Act are defined as actions which are likely to have a significant impact on matters of national environmental significance (MNES). The Department of Climate Change, Energy, the Environment and Water (DCCEEW) notes that:

...generally, a significant impact is an action that has an important, notable consequence. Whether or not an action is likely to have a significant impact depends upon the sensitivity, value and quality of the environment that is impacted, and upon the intensity, duration, magnitude and geographic extent of the impacts.¹³

⁹ CTSCo, *Environmental Impact Statement Final Amended – 04 Approvals*, 28 March 2024, p. 5.

¹⁰ Georgie Somerset, AgForce General President, '[Saving the Great Artesian Basin](#)', *AgForce*, 19 March 2024. As at the time of writing, AgForce confirmed it was still going ahead with the scheduled federal court dates in August 2024 seeking a judicial review of the Australian Government's decision.

¹¹ DESI, *EIS assessment report*, May 2024, p. iii, emphasis in original.

¹² The Hon Steven Miles, Premier of Queensland, the Hon Mark Furner, Queensland's Minister for Agricultural Industry Development and Fisheries and Minister for Rural Communities, the Hon Glenn Butcher, Queensland's Minister for Regional Development and Manufacturing and Minister for Water, and the Hon Leanna Linard, Queensland's Minister for the Environment and the Great Barrier Reef and Minister for Science and Innovation, '[Miles more protections for Great Artesian Basin](#)', *Joint Statement*, 31 May 2024.

¹³ DCCEEW, '[What is a referral, an action and 'significant impact'?](#)' (accessed 9 June 2024).

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- 1.21 The EPBC Act protects a number of MNES, such as nationally threatened flora and fauna species and ecological communities, and world heritage properties.
- 1.22 In the *Statement of Reasons for a Decision on not Controlled Action Under the Environment Protection and Biodiversity Conservation Act 1999* (the statement of reasons), the delegate for the former Minister for the Environment and Water outlined the basis for his decision to classify Glencore’s project as not a controlled action.¹⁴
- 1.23 The Minister’s delegate noted that, in making his decision, he considered ‘all adverse impacts the proposed action will have, or is likely to have, on each matter protected by a provision of Part 3 of the EPBC Act’ [requirements for obtaining environmental approvals], as well as all referral documentation and Commonwealth and State Ministerial comments.¹⁵
- 1.24 The statement of reasons listed four threatened species and ecological communities that may be potentially impacted based on the location of the proposed project, which include the Koala, the Squatter Pigeon, the Brigalow ecological community, and the Poplar Box Grassy Woodland on Alluvial Plains ecological community. After considering the nature of the proposed action, the referral documents and the department’s *Matters of National Environmental Significance Significant Impact Guidelines*, the Minister’s delegate concluded that the proposed project was unlikely to have a significant impact on these species and ecological communities.¹⁶
- 1.25 Lastly, in the statement of reasons, the Minister’s delegate stated that he considered the precautionary principle in making his decisions, as required under the EPBC Act.¹⁷
- 1.26 Once the EPBC Act was determined not to apply, the responsibility for assessing and approving the project rested solely with the Queensland Government.
- 1.27 Under Queensland regulation, CTSCo was authorised to conduct specific GHG storage exploration activities at its EPQ10 tenement—where the injection site would be located—since December 2019. However, this authority ‘does not authorise the carrying out of CO₂ injection tests’.¹⁸

¹⁴ DCCEEW, *Statement of Reasons for a Decision on not Controlled Action Under the Environment Protection and Biodiversity Conservation Act 1999*, 20 February 2024.

¹⁵ DCCEEW, *Statement of Reasons*, 20 February 2024, p. 5.

¹⁶ DCCEEW, *Statement of Reasons*, 20 February 2024, p. 5.

¹⁷ DCCEEW, *Statement of Reasons*, 20 February 2024, p. 7.

¹⁸ CTSCo, *Environmental Impact Statement Final Amended – 01A Introduction to Final Terms of Reference*, 28 March 2024, p. 9.

- 1.28 As a result, the proponent sought to amend the conditions of its existing environmental authority (EA) to the proposed site, which involved the submission of an EIS for the project.
- 1.29 Following the submission of the EIS by CTSCo, DESI was required to prepare an EIS assessment report which specifically addressed the following points relating to the project:
- the adequacy of the EIS in addressing the final Terms of Reference.
 - the adequacy of any environmental management plan.
- 1.30 The assessment report was also required to make recommendations about the suitability of the project and any conditions on which any approval required for the project may be given.¹⁹

'Not suitable to proceed'

- 1.31 As indicated earlier in the chapter, the EIS assessment report by DESI found that the project was not suitable to proceed as it does not meet the requirements of the EP Regulation, which prohibits the release of 'waste' directly into groundwater.²⁰
- 1.32 Most notably, the report determined that the target aquifer for CO₂ injection—the Precipice Sandstone aquifer—is 'not completely self-contained' and injection of CO₂ into the aquifer would 'likely cause a deterioration in...the groundwater within the targeted injection area'.²¹
- 1.33 Among its conclusions, the report found that the injection of CO₂ into the aquifer would 'likely cause an irreversible or long-term change in water quality and aquifer characteristics.'²²

Broader issues raised throughout the inquiry

- 1.34 The committee understands that, whilst the proposed project by Glencore will not proceed in its current form, many of the concerns raised throughout the inquiry remain worthy of closer inspection.
- 1.35 In particular, the committee received substantial evidence on the importance of preserving the integrity and quality of the entire GAB. As the largest groundwater aquifer in the country, the GAB is closely linked to matters of water security across regional Australia, particularly during drought

¹⁹ DESI, *the environmental impact statement process for resource projects under Chapter 3 of the Environmental Protection Act 1994*, 27 February 2024, pp. 28–29.

²⁰ DESI, *EIS assessment report*, May 2024, p. iii.

²¹ DESI, *EIS assessment report*, May 2024, p. 46.

²² DESI, *EIS assessment report*, May 2024, p. 44.

conditions. Evidence detailing the importance of the GAB is discussed in Chapter 2.

- 1.36 Relatedly, the precedent of allowing CCS activities within the GAB, as well as the effectiveness of CCS technologies, was also discussed at length by participants to the inquiry.
- 1.37 The next section provides an overview of CCS, including its risks and effectiveness, and its current regulatory and policy framework in Australia.

What is carbon capture and storage?

- 1.38 Broadly, CCS refers to a suite of processes and technologies which are involved in capturing, transporting, and storing greenhouse gas emissions in the subsurface with the goal of permanently preventing the release of these gases into the atmosphere.²³
- 1.39 The technology involves capturing CO₂ produced by large industrial plants such as steel mills, cement plants, natural gas processing facilities, coal and gas fired-power plants, and other industrial facilities, compressing it for transportation and then injecting it deep underground—at least 800 metres below the surface, and typically 2 km or more.²⁴ Carbon storage sites can be located both onshore and offshore.
- 1.40 The committee received divergent views on the risks and effectiveness of CCS, as well as on the role that CCS technologies should play in Australia’s climate change mitigation framework.

Effectiveness and risks

- 1.41 While CCS as a concept has been around since the 1970s, deployment to date has been relatively slow and limited to a small number of industries. Although there is growing momentum globally, the International Energy Agency (IEA) argues the CCS industry has not yet shown that it can operate at scale.²⁵
- 1.42 Some submitters contended that CCS is costly and ineffective in delivering significant emissions reduction since the capture process itself is energy intensive. The Australian Conservation Foundation (ACF) argued that CCS has

²³ International Energy Agency (IEA), [About CCUS](#), (accessed 21 May 2024). CCS is often jointly referred to alongside carbon capture, utilisation and storage (CCUS). CCUS, while similar to CCS, goes a step further by finding practical applications for the captured carbon. Since the proposed project at the centre of this inquiry will rely on CCS processes, this report will examine CCS in isolation.

²⁴ CSIRO, [Capturing global attention: Carbon capture, utilisation and storage](#), (accessed 5 May 2024).

²⁵ IEA, *Net Zero Roadmap: A Global Pathway to Keep the 1.5°C Goal in Reach (2023 Update)*, September 2023, p. 132.

been 'fraught with problems, resulting in serious breaches of proponent abatement commitments.'²⁶

1.43 Further, the Institute for Energy Economics and Financial Analysis (IEEFA) observed:

Confronted with numerous technical and financial challenges, CCS projects have consistently encountered difficulties in reaching their targeted capture rates. Furthermore, targeted carbon capture is itself often far less than overall carbon emissions. Installations that see low levels of CO₂ captured cannot be considered 'decarbonised'.²⁷

1.44 On the long-term effectiveness and scalability of CCS, some submitters pointed to a widespread lack of success. The IEEFA, for instance, reported that since 2000 'close to 90% of proposed CCS capacity in the power sector has failed at the implementation stage or was suspended early'.²⁸

1.45 The Queensland Conversation Council similarly noted that, despite decades of development, 'there are very few successful examples of CCS implemented at the scale required to meet international emissions reduction targets.'²⁹

1.46 Several submitters, such as the Environmental Defenders Office (EDO), pointed to risks commonly associated with CCS processes and technologies, including failures, leaks, and ruptures of CO₂ pipelines, adding that:

The injection of CO₂ into subterranean storage (i.e., geosequestration) involves a risk that the gas is not contained adequately and escapes into the atmosphere, defeating the goal of CCS at the final step.³⁰

1.47 Some environmental groups, such as Environmental Justice Australia, also drew the committee's attention to what they deem the "energy penalty" of CCS, namely the increased fuel requirements required to power new or retrofitted carbon capture equipment.³¹

1.48 In addition, environmental groups expressed frustration over CCS projects being used to prolong the life of fossil fuel stations, thereby potentially delaying their retirement and contributing to the continued expansion of coal, oil, and gas extraction sectors.³²

²⁶ Australian Conservation Foundation (ACF), *Submission 24*, p. 8.

²⁷ Institute for Energy Economics and Financial Analysis (IEEFA), *Submission 28*, p. 4.

²⁸ IEEFA, [Carbon capture: a decarbonisation pipe dream](#), 1 September 2022, (accessed 12 May 2024).

²⁹ Queensland Conversation Council, *Submission 6, Attachment 1 (Abridge version of QCC's submission to the proponents EIS for their proposed project)*, p. 6.

³⁰ Environmental Defenders Office (EDO), *Submission 25*, p. 3.

³¹ Environmental Justice Australia, *Submission 22*, p. 8.

³² See, for example, ACF, *Submission 24*, p. 8; Environmental Justice Australia, *Submission 22*, pp. 9–10; and Queensland Conversation Council, *Submission 6, Attachment*, p. 4.

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- 1.49 At the same time, proponents of the technology argued that virtually all pathways to net zero rely on the rollout of CCS, with the technology appearing in at least 27 countries' Nationally Determined Contributions (NDCs) under the Paris Agreement.³³
- 1.50 Advocates also emphasised the unique opportunity that CCS processes present to hard-to-abate, emissions-intensive industries such as steel, cement, and plastics, arguing that CCS provides a tangible and cost-effective roadmap for these heavy industries to start to decarbonise.³⁴
- 1.51 When considering global emissions targets, Low Emission Technology Australia (LETA) submitted that CCS can make a significant contribution in the short-term and enable ongoing energy security whilst other sectors transition to a net zero economy.³⁵
- 1.52 The Global CCS Institute defined the technology as being 'backed by decades of global research, development, and intergovernmental collaboration', arguing that CCS will play an increasingly critical role in public policy across the globe.³⁶
- 1.53 Furthermore, the Mining and Energy Union Queensland District (MEU) also emphasised the need to allow time for investments in innovative technologies to materialise and deliver results, noting that:
- 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.³⁷

CCS in Australia's climate change mitigation strategies

- 1.54 Following the Australian Government's announcement of its net zero by 2050 emissions target, CCS has been increasingly pursued as a pathway for certain high emissions and hard-to-abate sectors to decarbonise. In its submission, DCCEEW noted that:
- The Australian Government's primary focus for CCS is to provide the regulatory and policy settings to enable and create a stable business environment for investment in CCS to occur. CCS needs to be effective, safe, and environmentally responsible.³⁸

³³ Global CCS Institute, *Submission 27*, p. 4.

³⁴ Global CCS Institute, *Submission 27*, pp. 2–3.

³⁵ Low Emission Technology Australia (LETA), *Submission 14*, pp. 9–15.

³⁶ Global CCS Institute, *Submission 27*, p. 7.

³⁷ Mining and Energy Union Queensland District, *Submission 16*, p. 2.

³⁸ DCCEEW, *Submission 3*, p. 3.

- 1.55 Currently, Australia has one operational CCS facility, the Chevron-led Gorgon carbon dioxide injection project, which began operation in August 2019 in Western Australia (WA).
- 1.56 The Gorgon CCS project was cited by a number of submitters, particularly in connection with its inability to meet the project's original sequestration targets. The IEEFA, for example, pointed out that, during its first five years, the project has underperformed on targets by around 50 per cent, capturing less than 4 per cent of the Gorgon LNG plant's total emissions in 2022-2023.³⁹
- 1.57 In addition, the ACF noted that:
- Chevron received AUD\$60m in government funding to support its CCS project, under the Low Emissions Technology Demonstration Fund, yet in the six years since export of LNG commenced from the Gorgon Project, out of the 20.4 million tonnes of CO₂ that was extracted as reservoir emissions only 6.5 million tonnes has been stored under the island.⁴⁰
- 1.58 Proponents of CCS argued that the main barrier to the successful delivery of CCS in Australia so far has been its prohibitive cost. In its submission, the MEU emphasised how recent legislative reforms have diminished such barriers:
- 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.⁴¹
- 1.59 Responsibility for regulation of onshore CCS activities in Australia lies with states and territories. If, however, the proponent believes the proposed CCS activity may have a significant impact on a MNES, they must refer it to the Commonwealth Minister for the Environment under the EPBC Act.⁴²

Scope and structure of the report

- 1.60 This report comprises two chapters:
- This chapter sets out an overview of the proposed project, outlines key regulatory outcomes, and offers background information on CCS.
 - Chapter 2 presents the views of affected stakeholders, including local government representatives, agricultural producers, and First Nations communities. It discusses the possible precedent of allowing CCS projects within the GAB and concludes with the committee's views and recommendations.

³⁹ IEEFA, *Submission 28*, p. 2.

⁴⁰ ACF, *Submission 24*, p. 9.

⁴¹ Mining and Energy Union Queensland District, *Submission 16*, p. 1.

⁴² DCCEEW, [Carbon Capture, Use and Storage](#), (accessed 21 May 2024).

Conduct of the inquiry

- 1.61 Details of the inquiry were advertised on the committee's [website](#), including a call for submissions by 2 May 2024. The committee wrote directly to various stakeholders to invite them to make submissions.
- 1.62 The committee received 77 submissions, which are listed at Appendix 1 and are available on the inquiry's [webpage](#). The committee agreed to conduct the inquiry on the written evidence and did not hold a public hearing.

Acknowledgements

- 1.63 The committee thanks the organisations and individuals who made submissions for their time and contribution to this inquiry.

Chapter 2

Views of affected stakeholders

- 2.1 Glencore's proposed Surat Basin Carbon Capture and Storage Project (the project) generated significant opposition from the local community and considerable evidence received by the committee reflected these concerns.
- 2.2 This chapter discusses some of the key issues raised by affected stakeholders who rely on the Great Artesian Basin (GAB) for a variety of reasons, including water security, economic development, agricultural production, and cultural heritage.
- 2.3 It also discusses the project's potential to set a precedent for further carbon capture and storage (CCS) across the GAB and considers the implications of the recent decision by the Queensland Government to legislate a ban on all CCS activities within the state's component of the GAB.
- 2.4 It concludes with the committee's views and recommendations.

Protecting the Great Artesian Basin

- 2.5 The GAB is one of the largest underground freshwater resources in the world. It is Australia's largest groundwater basin and lies beneath parts of the Northern Territory, Queensland, South Australia, and New South Wales.
- 2.6 As seen in Figure 2.1, approximately 70 per cent of the GAB lies within Queensland.
- 2.7 According to the Department of Climate Change, Energy, the Environment and Water (DCCEEW), the GAB generates approximately \$33.2 billion per year in economic output. It is a vital resource for 180,000 people, 7,600 businesses and 120 towns.¹
- 2.8 Evidence to this inquiry demonstrated the extent to which regional communities in Queensland rely on the GAB for water. Several water users near the proposed project site submitted that water from the target aquifer, as well as surrounding aquifers, is used for a range of activities, including grazing, irrigation, industry and urban consumption.
- 2.9 Further, a 2016 report commissioned by the Australian Government and the GAB jurisdictions observed:

It is...hard to imagine much of the town/urban water use and domestic water use in GAB regions being possible without access to GAB water.

¹ Department of Climate Change, Energy, the Environment and Water (DCCEEW), [Economic output of groundwater-dependent sectors in the Great Artesian Basin](#) (accessed 23 May 2024).

In many localities, alternative water supplies are prohibitively costly and total reliance on surface water would significantly reduce liveability.²

- 2.10 The Western Queensland Alliance of Councils (WQAC), a collaboration of 24 local councils across Western Queensland, described the GAB as the “lifeblood” of the state’s regional communities, adding that numerous of its aquifers hold significant economic and cultural importance.³
- 2.11 In his submission to the inquiry, the Federal Member for Flynn, Mr Colin Boyce commented:
- The Great Artesian Basin is unique, only one of its kind in the world. It is the world’s largest underground potable water source and covers 22% of the area of Australia, 65% of Queensland, 1.7 million square km, estimated to carry 65,000 cubic kilometres of water.⁴
- 2.12 Across the southern Queensland region, landholders use bores from the GAB’s numerous aquifers to supply fresh water for a variety of purposes. It is also an important source of supply for some towns—including Roma in southwestern Queensland.
- 2.13 According to the Queensland Office of Groundwater Impact Assessment, the Precipice Sandstone aquifer has a ‘moderate level’ of groundwater use—about 2,225 megalitres per year from more than 186 water bores within the area of interest, primarily for town water supply and stock-intensive purposes.⁵
- 2.14 Overwhelmingly, submitters sought to emphasise the value of the receiving groundwater from the target aquifer and bring attention to the major constraints on water availability across the region.
- 2.15 Since Glencore’s proposal would involve the injection of CO₂ into an aquifer which yields usable groundwater for a range of existing water licence holders, there was broadscale concerns over risks of potential contamination and degradation of this water source.
- 2.16 More generally, stakeholders also encouraged the committee to consider the delicate balance between efforts to reduce emissions and long-term risks to the natural environment. Farmers for Climate Action, for example, noted that the

² Frontier Economics, *Economic output of groundwater dependent sectors in the Great Artesian Basin: A report commissioned by the Australian Government and Great Artesian Basin Jurisdictions based on advice from the Great Artesian Basin Coordinating Committee*, August 2016, p. 42.

³ Western Queensland Alliance of Councils (WQAC), *Submission 13*, p. 2.

⁴ Mr Colin Boyce MP, *Submission 72*, p. 9.

⁵ Office of Groundwater Impact Assessment, *Underground Water Impact Report 2021 for the Surat Cumulative Management Area*, December 2021, p. 35.

risks of the project to water security and food production outweigh the benefits of emissions reduction.⁶

- 2.17 Australian Pork Limited (APL) echoed these concerns, commenting that ‘as our climate changes, secure water resources, such as the GAB aquifers are increasing in their significance and importance.’⁷

Figure 2.1 Map of the Great Artesian Basin



Source: Environment Resources Information Network (ERIN), Australian Government, Department of Sustainability, Environment, Water, Population and Communities; May 2011.

⁶ Farmers for Climate Action, *Submission 2*, p. 3.

⁷ Australian Pork Limited, *Submission 30*, p. 5.

CO₂ injection into water resource aquifers

2.18 The committee also received evidence relating to the project's anomalous target site for CO₂ injection. Several submitters noted that the vast majority of onshore CCS projects currently in operation across the globe do not target active water aquifers.

2.19 For example, hydrogeologist Mr Edward Hamer argued that CCS projects conventionally target high salinity formations, not water resource aquifers, and that the proposed location for the project is 'not consistent with global best practice'.⁸

2.20 In a similar vein, Hancock Agriculture, whilst contending that CO₂ sequestration 'can be an appropriate and safe technology', noted that:

[t]he vast majority of CCS projects that are being undertaken around the world are in depleted hydrocarbon reservoirs whose characteristics are well known to the project proponents after long production life. Depleted reservoirs are stable geological structures with known 'seals', which is why the hydrocarbons were trapped there in the first place. Injecting CO₂ into those depleted reservoirs is a known proposition with very limited risk of adverse environmental consequences.⁹

2.21 Conversely, Glencore maintained in its EIS for the project that the target aquifer was a 'confined aquifer' and contended that any CO₂ injected into it would remain entirely contained to the extent of the GHG plume (predicted to be approximately 1,300 to 1,600 meters in diameter).¹⁰

2.22 The Queensland Government's EIS assessment report did not support Glencore's assessment of the aquifer's impermeability. Rather, the report referenced the risk of any CO₂ injected migrating 'outwards (laterally and horizontally) from the injection site.'¹¹

Perspectives from local governments

2.23 A number of local government bodies, including regional councils, water regulatory bodies, and elected officials, submitted to the inquiry.

2.24 Broadly, local governments expressed opposition to the proposed project, relaying concerns from local community members and highlighting an

⁸ Mr Edward Hamer, *Submission 48*, p. 2.

⁹ Hancock Agriculture, *Submission 5*, p. 6.

¹⁰ CTSCo, *Environmental Impact Statement Final Amended – 00 Executive Summary*, 28 March 2024, pp. 53–54. The EIS modelling undertaken by CTSCo to calculate the GHG plume behaviour examined three scenarios. In Scenarios 1 and 2, the GHG plume was predicted to be between 1,300 to 1,500 meters around the West Moonie-1 Injection Well and in Scenario 3 the GHG plume was predicted to be between 1,300 to 1,600 meters around the West Moonie-1 Injection Well.

¹¹ Department of Environment, Science and Innovation (DESI), *EIS assessment report*, May 2024, p. 44.

inadequate consultation process with communities directly affected by the project.

2.25 The Western Downs Regional Council (WDRC), which presides over the project's area, argued that while the targeted aquifer was 'generally underutilised', it presented a significant opportunity for future agricultural, industrial, and urban expansion in the region. The WRDC also added that the proposed project is unlikely to generate significant economic activity for the region.¹²

2.26 Similarly, the Goondiwindi Regional Council, which neighbours the WDRC, pointed to potential risks to the road transport network surrounding the proposed site should the project go ahead:

...unless transportation operations are closely managed, additional traffic could utilise Council's network, creating road safety and maintenance risk. Expansion to a full-scale project would clearly increase risk associated with road transport of the compressed gas.¹³

2.27 The WQAC urged the committee to consider the significance of the GAB as a resource for town water supplies across the region, noting that putting it at risk could lead to 'long-term economic, social, and environmental impacts.'¹⁴

2.28 Furthermore, the WQAC went on to state that:

As a nationally significant water resource, successive Governments have rolled out policies, plans and programs coupled with significant funding to protect the sustainability of the GAB. As such, it appears counter intuitive that the Government is not employing the pre-cautionary principle with regard to the CTSCo proposal or at the very minimum subjecting CCS projects to the requirements of the EPBC Act.¹⁵

2.29 The Queensland Water Directorate (qldwater), a central advisory body comprising 69 council water service providers in Queensland, emphasised the critical role the GAB plays in supplying drinking water for more than 35 towns across the state.¹⁶

2.30 Most notably, qldwater indicated that any changes to the temperature, pressure, chemistry, and any other condition of water supplied from the GAB could lead to severe water failures for local communities where there are no alternative potable water sources.¹⁷

¹² Western Downs Regional Council, *Submission 15*, p. 1.

¹³ Goondiwindi Regional Council, *Submission 4*, p. 3.

¹⁴ WQAC, *Submission 13*, p. 7.

¹⁵ WQAC, *Submission 13*, p. 7.

¹⁶ Queensland Water Directorate, *Submission 18*, p. 2.

¹⁷ Queensland Water Directorate, *Submission 18*, p. 3.

- 2.31 Councillor Rebecca Vonhoff, the Deputy Mayor of the Toowoomba Regional Council, pointed to a lack of information and clarity in materials the Council received during CTSCo's community consultation:

Nowhere in the report for Councillors' consideration were the words "Great Artesian Basin" mentioned. Instead, the report euphemistically referred to "injection sites". It was only upon questioning during the Ordinary Meeting that it was discovered that the matter referred to Green House Gas emissions from industrial sources being injected into the Great Artesian Basin.¹⁸

- 2.32 The WQAC echoed these concerns regarding the consultation process with impacted stakeholders. Whilst acknowledging Glencore's community consultation efforts via the EIS Public Notice process, as well as via dedicated public sessions, the group explained that feedback from the community indicated that stakeholders found Glencore's consultation material difficult to understand and questioned whether it presented unbiased scientific information.¹⁹
- 2.33 In its submission, Glencore contended that its community consultation process went 'well beyond' the key stakeholders located close to the project site and included a wide range of neighbouring landowners, indigenous groups, non-governmental organisations, industry peak bodies, and community groups.²⁰

Concerns over impacts to agricultural production

- 2.34 Submitters from the agriculture industry uniformly expressed concerns over potentially losing access to the Surat Basin, and the wider GAB, as a reliable water source underpinning primary production.
- 2.35 Agricultural producers also underscored the considerable socioeconomic consequences that the potential loss of secure water access would bring to regional communities across Queensland and the nation more broadly.
- 2.36 In its submission, APL emphasised the importance of a secure water supply to the agricultural industry, adding that the pork industry requires access to a consistent and well understood supply of water and that its ability to innovate and support the broader move toward emissions reduction is 'reliant on access to water.'²¹
- 2.37 Similarly, the SunPork Group underscored the implications of this groundwater becoming unsuitable for pig consumption:

¹⁸ Councillor Rebecca Vonhoff, *Submission 39*, p. 2.

¹⁹ WQAC, *Submission 13*, p. 5.

²⁰ Glencore (CSTCo), *Submission 23*, pp. 3–4.

²¹ Australian Pork Limited, *Submission 30*, p. 6.

If the SunPork Group water supply from the GAB was compromised, we risk the welfare of 250,000 pigs at any point in time, we potentially render useless more than \$200 million in production infrastructure and the \$170 million Swickers abattoir would not have sufficient volume to operate leaving more than 800 individuals unemployed and a 10% shortfall in national pork supply through all major retailers.²²

- 2.38 The Australian Lot Feeders' Association (ALFA) expressed similar concerns, particularly regarding water access for its 135 accredited feedlots located across the GAB. ALFA stated that the Precipice Sandstone aquifer is currently used in livestock production across a number of businesses, adding that preserving this water source is key to the country's food production, safety, and security.²³
- 2.39 Australian Organic Limited (AOL) echoed these views and emphasised that even the smallest water contamination in the aquifer could undermine the rigorous certification standards in the organics sector.²⁴
- 2.40 Further, AOL noted that, given the project's potential risks to groundwater, the cost of certification and compliance could become costlier and more complex for organic producers to navigate.²⁵
- 2.41 In a similar vein, the Queensland Farmers' Federation (QFF) drew attention to the potential impacts of the project on the local poultry industry. It explained that water for the sector is sourced exclusively from underground in order to mitigate risks of exotic diseases brought by migratory birds. As a result, a loss of access to groundwater in the basin would have significant impacts.²⁶
- 2.42 The National Farmers' Federation (NFF) reiterated the QFF's statements and suggested that potential risks to the groundwater could have impacts well beyond the local community surrounding the injection site:

CTSCo's proposal is novel and significant and has the potential to inflict unacceptable risk to the Australian agriculture sector, public trust and confidence in domestic food production, public health and human security, and the pristine environment of the GAB which spans across several State and Territory jurisdictions.²⁷

- 2.43 OBE Organic, a Queensland-based producer of certified organic beef, argued that its livestock are entirely dependent on water from the GAB and called for

²² Sunpork Group, *Submission 12*, p. 2.

²³ Australian Lot Feeders' Association, *Submission 8*, p. 2.

²⁴ Australian Organic Limited, *Submission 1*, p. 7.

²⁵ Australian Organic Limited, *Submission 1*, p. 7.

²⁶ Queensland Farmers' Federation, *Submission 29*, p. 7.

²⁷ National Farmers' Federation, *Submission 7*, p. 4.

the Australian Government to develop new and more stringent regulatory safeguards to manage the GAB, particularly for activities related to CCS.²⁸

2.44 Australian Country Choice (ACC) drew attention to potential impacts of the project to its operations, noting that all three of its feedlots and most of its grazing properties are completely reliant on groundwater supply from the GAB, including the Precipice Sandstone aquifer specifically.²⁹ ACC added that the aquifer is the only viable water source available for future expansion of its operations, and any deterioration of the groundwater would significantly devalue the company's water entitlements.³⁰

2.45 In addition, ACC highlighted the contrast in economic activity for the local community between its operations and the project's operations, arguing that its operations contribute to 41 regional jobs and 677 indirect jobs, compared to only five operational positions projected from Glencore's project.³¹

2.46 Specifically in relation to the target aquifer for the project, the Cameron Pastoral Company observed:

Shallower aquifers of the Great Artesian Basin are already at capacity. As such, the Precipice Sandstone provides the only reliable source of water for the planned growth of livestock industries in Southern Queensland.³²

First Nations perspectives

2.47 First Nations submitters noted that the GAB has long held significant cultural and spiritual significance for their communities.

2.48 In its submission, the Queensland Indigenous Labor Network explained that mound springs, which are natural surface outlets for the waters of the GAB, hold great cultural value for First Nations peoples and present a natural oasis for communities and wildlife in the outback.³³

2.49 The Balkanu Cape York Development Corporation emphasised the interconnectivity of the GAB as a water resource and the importance of protecting it in its entirety.³⁴

2.50 Likewise, the Global Indigenous Elders Alliance (GIEA) called for the protection and preservation of the cultural heritage and environmental sustainability of the

²⁸ OBE Organic, *Submission 21*, p. 2-3.

²⁹ Australian Country Choice, *Submission 31*, p. 2.

³⁰ Australian Country Choice, *Submission 31*, p. 3.

³¹ Australian Country Choice, *Submission 31*, p. 2.

³² Cameron Pastoral Group, *Submission 22*, p. 5.

³³ Queensland Indigenous Labor Network, *Submission 20*, p. 2.

³⁴ Balkanu Cape York Development Corporation, *Submission 17*, p. 1.

country's natural waterways, adding that the destruction of any natural environment disproportionately impacts First Nations peoples and cultures.³⁵

- 2.51 Further, the GIEA added that any assessment of proposed projects should be done in consultation with the relevant Aboriginal Elders in order to ensure their 'questions, grievances and cultural caretaker aspirations and responsibilities are included in the decision-making process and the subsequent outcome.'³⁶

Environmental and ecological concerns

- 2.52 In addition to concerns relating to groundwater contamination, environmental groups also pointed to other cumulative environmental impacts associated with CCS activities within the GAB.

- 2.53 For instance, the Lock the Gate Alliance argued that contamination of the receiving groundwater could lead to potential damage to groundwater-dependent ecosystems along the nearby Moonie River, as well as health impacts to regional communities reliant on the GAB for public water supply.³⁷

- 2.54 Similarly, Environmental Justice Australia called attention to the increased air pollution risks associated with the added infrastructure required for the proposed project, adding that 'CCS capture at a facility does not account for the air pollution from the upstream and downstream processes of facilities with CCS.'³⁸

- 2.55 Most notably, as outlined in Chapter 1, environmental groups uniformly submitted that CCS projects may be used to prolong fossil fuel production and delay the transition to clean energy, thereby exacerbating the climate harms faced by various ecosystems already under threat.

- 2.56 As a result, the Australian Conservation Foundation (ACF) argued that governments should be focusing their efforts on increasing protection for ecosystems that absorb carbon by delivering swift nature positive law reforms.³⁹

Precedent of CCS projects in the GAB

- 2.57 There was widespread concern about the potential precedent set by allowing CCS projects within the GAB and the implications for the long-term integrity of this important groundwater source.

³⁵ Global Indigenous Elders Alliance, *Submission 11*, p. 1.

³⁶ Global Indigenous Elders Alliance, *Submission 11*, p. 2.

³⁷ Lock the Gate Alliance, *Submission 32, Attachment 1 (Submission: CTSCo Surat Basin CCS project – EIS)*, p. 6.

³⁸ Environmental Justice Australia, *Submission 22*, p. 14.

³⁹ Australian Conservation Foundation, *Submission 24*, p. 5.

- 2.58 In its submission, the Goondiwindi Regional Council described the project as a ‘precursor’ to a larger project with significantly greater storage capacity and expressed opposition to any subsequent full-scale sequestration projects in the region.⁴⁰
- 2.59 Similarly, the Queensland Conservation Council cautioned that allowing CCS activities in the GAB could permanently degrade water quality in the aquifer and cause ‘irreversible adverse impacts’ to its environmental and economic values.⁴¹
- 2.60 Further, the Institute for Energy Economics and Financial Analysis (IEEFA) noted that setting the precedent for CCS activities in the GAB could endanger the economy of rural Australia and put the livelihoods of thousands of people at risk.⁴²
- 2.61 The QFF also expressed alarm over the possibility of a large-scale CCS industry in the GAB, noting that the ‘clean and green’ image of Australia’s agricultural exports could be jeopardised.⁴³
- 2.62 Australian Organics summed up these concerns in its submission: ‘the Basin cannot serve as a mere testing ground for experimentation; the stakes are too high to gamble with this crucial water resource’.⁴⁴

‘A missed opportunity for Queensland’

- 2.63 On the other hand, proponents of the project and advocates of CCS argued that the decision by the Queensland Government was ‘a missed opportunity’ and that the state government was ‘sending mixed messages on emissions reduction to industry’.⁴⁵
- 2.64 In his submission, Professor David Close argued that such a black and white approach to CCS technologies is ‘not compatible with the trade-offs required for successful transition to a net zero emissions economy.’⁴⁶

⁴⁰ Goondiwindi Regional Council, *Submission 4*, p. 3

⁴¹ Queensland Conservation Council, *Submission 6*, p. 5.

⁴² Institute for Energy Economics and Financial Analysis, *Submission 28*, p. 3.

⁴³ Queensland Farmers’ Federation, *Submission 29*, p. 7.

⁴⁴ Australian Organic Limited, *Submission 1*, p. 6.

⁴⁵ Glencore, [‘Glencore responds to Queensland Government decision on CTSCo Project’](#), *Media Statement*, 24 May 2024.

⁴⁶ Professor David Close, *Submission 43*, p. 3.

- 2.65 The Mining and Energy Union Queensland District (MEU) submitted that CCS projects in Queensland would ‘help major Australian industries to stay open as the world decarbonises.’⁴⁷
- 2.66 Following the state’s decision not to allow the project to proceed, Glencore argued that ‘the Queensland Government has now effectively banned carbon capture and storage projects in Queensland’ and that the government would now have to explain how it would meet its emissions reduction targets ‘in the absence of CCS technology’.⁴⁸
- 2.67 Speaking in support of the state’s ban of CCS in the GAB, announced after Glencore’s project was blocked, Queensland Premier Steven Miles noted that:
- ...CCS is unlikely to make a substantial contribution to our decarbonisation efforts. We are very confident of our pathway to 75% [carbon reduction emissions] by 2035. And it does not require carbon capture and storage.⁴⁹

Calls for greater clarity around CCS regulations

- 2.68 Some evidence to this inquiry detailed regulatory challenges posed by CCS activities in Australia and called for a more integrated regulatory framework of CCS across the board, not just within the GAB.
- 2.69 Some submitters called for change at the federal level. The WQAC, for instance, argued that the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (Cth) should be amended to ensure CCS projects are considered a controlled action.⁵⁰
- 2.70 The Australian Conservation Foundation (ACF) called on the Australian Government to implement National Environmental Standards that provide ‘clear grounds to reject projects based upon their contributions to climate change’.⁵¹
- 2.71 Other submitters focused more specifically on regulatory frameworks at the state and territory level.⁵²
- 2.72 The Environmental Defenders Office (EDO), for example, put forward several suggestions for the integration of Queensland’s CCS legislation into the state’s wider environmental regulatory framework. Amongst them, there were calls for

⁴⁷ Mining and Energy Union Queensland District, *Submission 16*, p. 2.

⁴⁸ Glencore, *Media Statement*, 24 May 2024.

⁴⁹ James Hall ‘[Push for wider carbon capture ban in Great Artesian Basin](#)’, *the Australian Financial Review*, 31 May 2024 (accessed 9 June 2024).

⁵⁰ WQAC, *Submission 13*, p. 6.

⁵¹ Australian Conservation Foundation, *Submission 24*, p. 5.

⁵² See, for example, Environmental Defenders Office (EDO), *Submission 25*; Environmental Justice Australia, *Submission 22*.

improved mandatory standards for monitoring and reporting of CCS projects as well as the amendment of the *Water Act 2000* (Qld) to clarify regulations of CCS activities which involve interference with water.⁵³

- 2.73 Likewise, the Lock the Gate Alliance, whilst acknowledging that Queensland was an early player in introducing legislation to regulate CO₂ storage, contended that significant uncertainty on the unique impact of these activities remained, particularly regarding responsibility for the GHG plume after the term of the lease for a CCS activity has ended.⁵⁴

Next steps

- 2.74 As detailed in the previous chapter, the Queensland Government announced on 31 May 2024 plans to legislate a permanent ‘blanket ban’ on all CCS activities within the state’s component of the GAB.⁵⁵
- 2.75 According to the Queensland Government, the ban will clarify that ‘activities involving greenhouse gas storage or the injection of a greenhouse gas stream into underground formations within the Great Artesian Basin are not permissible’.⁵⁶
- 2.76 Further, the state government also announced plans to establish an independent Technical Expert Panel to ‘review the safety aspects of greenhouse gas storage for areas outside the Great Artesian Basin.’⁵⁷
- 2.77 The decision was welcomed by a range of stakeholders who had originally submitted to the inquiry to raise concerns about Glencore’s proposed project. Members of the agricultural industry, such as AgForce, QFF, and ALFA, all issued media statements commending the decision of the Queensland Government.⁵⁸

⁵³ In its submission, the EDO referred the committee to its publication on [Improving Regulation of CCS in Queensland](#).

⁵⁴ Lock the Gate Alliance, *Submission 32, Attachment 1 (Submission: CTSCo Surat Basin CCS project – EIS)*, p. 9.

⁵⁵ The Hon Steven Miles, Premier of Queensland, the Hon Mark Furner, Queensland’s Minister for Agricultural Industry Development and Fisheries and Minister for Rural Communities, the Hon Glenn Butcher, Queensland’s Minister for Regional Development and Manufacturing and Minister for Water, and the Hon Leanna Linard, Queensland’s Minister for the Environment and the Great Barrier Reef and Minister for Science and Innovation, [‘Miles more protections for Great Artesian Basin’](#), *Joint Statement*, 31 May 2024.

⁵⁶ *Joint Statement*, 31 May 2024.

⁵⁷ *Joint Statement*, 31 May 2024.

⁵⁸ AgForce, [‘Over to you Minister Plibersek’](#), *Media Release*, 4 June 2024; Queensland Farmers’ Federation, [‘The Queensland Farmers’ Federation Applauds Premier’s Announcement to Introduce a Ban on Carbon Capture and Storage in Great Artesian Basin’](#), *Media Release*, 31 May 2024;

- 2.78 As at the time of writing, the new laws were expected to be introduced and passed by the Queensland Parliament before the state election in October 2024.⁵⁹
- 2.79 To date, other jurisdictions which preside over other portions of the GAB have not announced plans to follow suit.
- 2.80 Meanwhile, there have been calls for a similar ban of CCS activities within the GAB at the federal level, with the Queensland Premier stating he ‘would welcome the support of the Australian government’.⁶⁰

Committee view

- 2.81 The committee notes the regulatory environmental approval process undertaken by the Queensland Government to assess Glencore’s proposed project and determine it not suitable to proceed.
- 2.82 The committee also recognises the subsequent steps taken by the Queensland Government to prevent any similar proposals from being approved by announcing plans to legislate a CCS ban within the entire Queensland component of the GAB.
- 2.83 The committee notes the important cultural, environmental, economic, and social value that the GAB holds across regional Australia and the many livelihoods and ecosystems that rely on it. More specifically, the committee is aware that as the impacts of climate change intensifies, and drought conditions become more frequent, secure water access to the GAB will become even more critical for the environment, agriculture, and regional development.
- 2.84 Lastly, considering the range of other proven abatement options available, as well as the risks posed by CCS to the long-term integrity and quality of the GAB’s ecosystem, the committee believes that the Australian Government alongside states and territories should collaborate to build on the Queensland Government’s proposed legislation and implement stronger protections of critical water resources.
- 2.85 The committee is of the view that CCS activities are not consistent with the long-term interests of the GAB and other critical water resources and that legislation is accordingly required to preserve water supply and quality for current and future generations.

Australian Lot Feeders’ Association, [‘Feedlot Industry congratulates Miles Government leadership decision to protect GAB from Carbon Capture and Storage’](#), *Media Release*, 31 May 2024.

⁵⁹ Andrew Messenger, [‘Worth protecting’: Queensland government to ban carbon capture and storage in the Great Artesian Basin’](#), *The Guardian*, 30 May 2024 (accessed 12 June 2024).

⁶⁰ Andrew Messenger, [‘Queensland premier calls for federal intervention in Great Artesian Basin’](#), *The Guardian*, 31 May 2024 (accessed 05 June 2024).

Recommendation 1

2.86 The committee recommends that states and territories consider a legislated ban on CCS activities across the GAB to ensure this important natural asset is uniformly preserved.

Recommendation 2

2.87 The committee recommends updating the water trigger in the EPBC Act to include onshore CCS.

**Senator Sarah Hanson-Young
Chair**

Coalition Senators' Additional Comments

Introduction

- 1.1 The Coalition continues to strongly support agricultural producers in Australia – including in relation to the protection of, and continued production in, the Great Artesian Basin (GAB).
- 1.2 Additionally, the Coalition remains supportive of carbon capture and storage (CCS).
- 1.3 In the previous Government, the Coalition supported the development of CCS with over \$300 million in investment into a range of CCS projects.
- 1.4 The Coalition also made multiple acreage releases for offshore greenhouse gas storage.
- 1.5 CCS has a multi-decade history and is a tried and proven method of greenhouse gas abatement. However, it is critical to ensure that a balanced approach is taken to CCS and prospective projects, particularly ensuring long-term risks to water resources or agricultural production are mitigated.

Agricultural production and the Great Artesian Basin

- 1.6 However, the Coalition does not support actions which unnecessarily threaten or impede agricultural development.
- 1.7 Australia has a long and proud history of agricultural production, for both domestic and international consumers. Australia's farmers have fed the world with their production, and we will remain an important agricultural producing nation in the future.
- 1.8 Our agriculture and resources sectors have worked cooperatively for decades, and these two sets of industries both deliver extraordinary benefits to the Australian economy.
- 1.9 The GAB is one of the largest underground freshwater resources in the world. It supports agricultural production across Queensland, and into New South Wales, the Northern Territory, and South Australia.
- 1.10 According to the Department of Climate Change, Energy, the Environment, and Water (DCCEEW), the GAB generates approximately \$33.2 billion in economic benefits to Australia per year. It is a vital resource for 180,000 people, 7,600 businesses and 120 towns.¹

¹ Department of Climate Change, Energy, the Environment, and Water (DCCEEW), [Great Artesian Basin](#) (accessed 10 July 2024).

- 1.11 Particularly in Queensland, it is clear that the GAB is a vital source of water for agricultural production, and is susceptible to drought and other events that can impact its water resources.
- 1.12 This is why the Leader of the Nationals, the Hon David Littleproud MP, on behalf of the Coalition, proposed an amendment to the Nature Repair (Consequential Amendments) Bill 2023, in December 2023.
- 1.13 When moving the amendment, Mr Littleproud said that ‘this is the opportunity for this parliament today to give that confidence and greater investment confidence for carbon capture storage into the future, and to do that in harmony with Australian agriculture, our environment and particularly our communities.’²
- 1.14 Unfortunately, this amendment was not supported by either the Government or the Greens.

Carbon capture and storage

- 1.15 As noted in a number of submissions, CCS provides a practical pathway for hard-to-abate industries like steel, cement and plastics to offset their emissions.
- 1.16 As the International Energy Agency states, ‘momentum has grown substantially in recent years, with over 500 projects in various stages of development across the CCUS [carbon capture, utilisation and storage] value chain.’³
- 1.17 Further, with the passage of the Environment Protection (Sea Dumping) Amendment (Using New Technologies to Fight Climate Change) Bill 2023, Australia now has the opportunity to support its strategic partners in continuing to develop CCS projects as they attempt to offset emissions.
- 1.18 As Australia continues to explore the benefits of emerging and existing technologies in the pathway to net zero 2050, all technologies and policy options should be explored and progressed.
- 1.19 As the Mining and Energy Union Queensland District stated in its submission, ‘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.’⁴
- 1.20 The Coalition believes all emission reduction technologies, including CCS, should be properly considered.

² The Hon David Littleproud MP, Leader of the Nationals, *House of Representatives Hansard*, 7 December 2023, p. 9219.

³ International Energy Agency (IEA), [Carbon Capture, Utilisation and Storage](#) (accessed 10 July 2024).

⁴ Mining and Energy Union Queensland District, *Submission 16*, p. 2.

- 1.21 All proposals and their potential impacts should be carefully explored in conjunction with the local communities, particularly in our great agricultural-producing regions.

Conclusion

- 1.22 The Coalition accepts, and agrees with, the majority of the content of the main report.
- 1.23 We also understand the reasoning behind the main report's recommendations.
- 1.24 In addition, we acknowledge that the Queensland State Government has now ruled that the Glencore project is not suitable to proceed, and that further CCS projects in the GAB in Queensland should be prohibited.
- 1.25 The Coalition therefore supports-in-principle Recommendation 1, whilst acknowledging that it is a State and Territory issue to work together on consistent policy approaches to the GAB.
- 1.26 The Coalition supports-in-principle Recommendation 2. We believe that the GAB is a unique and critically-important national resource and that Glencore's proposed project has therefore necessitated a special level of attention and scrutiny.
- 1.27 However, in framing any amendment to the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), we do not agree that there should be any blanket and/or mandatory requirements for a Federal water trigger assessment (including an override of State and Territory decisions) in relation to all CCS projects across the country.
- 1.28 As we observe in the section on 'Carbon capture and storage' above, we believe that each CCS project should be assessed on its individual merits. In almost all cases, these assessments are also best made (and best informed) at the State and Territory level. This approach is consistent with the findings of multiple past reviews – including the Samuel Review of the EPBC Act – that strongly caution against increased duplication of Federal, State and Territory responsibilities for the environment.

Senator Ross Cadell
Member

Senator the Hon Jonathon Duniam
Member

Senator Dave Sharma
Member

Senator Susan McDonald
Participating Member

Appendix 1

Submissions

- 1 Australian Organic Limited
- 2 Farmers for Climate Action
- 3 Department of Climate Change, Environment, Energy and Water
 - Attachment 1
- 4 Goondiwindi Regional Council
- 5 Hancock Agriculture
- 6 Queensland Conservation Council
 - Attachment 1
 - Attachment 2
- 7 National Farmers' Federation
- 8 Australian Lot Feeders' Association
- 9 AgForce
 - Attachment 1
- 10 CO2CRC
- 11 Global Indigenous Elders Alliance
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- 15 Western Downs Regional Council
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- 21 OBE Organic
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- 23 Glencore (CTSCo)
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- 24 Australian Conservation Foundation
- 25 Environmental Defenders Office
- 26 Beyond Gas Network
- 27 Global CCS Institute
- 28 Institute for Energy Economics and Financial Analysis
- 29 Queensland Farmers Federation
- 30 Australian Pork Ltd
- 31 Australian Country Choice

- 32 Lock the Gate Alliance
 - Attachment 1
- 33 Cameron Group
 - Attachment 1
- 34 Professor Ian Plimer
- 35 Ms Helen Harris
- 36 Mrs Julia Harpham
- 37 Mr George Mack
- 38 Mrs Theresa Curr
- 39 Councillor Rebecca Vonhoff
- 40 Mr Anthony Struss
- 41 Mr Theo Poulos
- 42 Ms Isabel Tarrago
- 43 Professor David Close
- 44 Mr Kenneth Scott
- 45 Mr Wayne Karlen
- 46 Ms Inga Gibson
- 47 Mr Tim Durre
- 48 Mr Edward Hamer
- 49 Mr Ian Hansen
- 50 Ms Lyn Callaghan
- 51 Mrs Rachel Greig
- 52 Mr Brian Parkes
- 53 Miss Ruth Bethel
- 54 Mrs Megan Ansley
- 55 Mr Josiah Addison
- 56 Dr Robyn Stephenson
- 57 Name Withheld
- 58 Mr Luke Emery
- 59 Dr Evelyn Jansen
- 60 Mr Robert Davis
- 61 Mr Wayne Birchmore
- 62 Mr David Birchmore
- 63 Mr Paul Bambrick
- 64 Mr Bruce Currie
- 65 Ms Celia Karp
- 66 Mr Ian Fraser
- 67 Mr Mark Kajewski
- 68 Mrs Hayley Titmarsh
- 69 Name Withheld
- 70 Mr Rob Nowlan
- 71 Confidential
- 72 Mr Colin Boyce MP

- 73 Mrs Christina Leishman
- 74 Mr Wulf von der Decken
- 75 Ms Anne Dalton
- 76 Mr Cameron Greig
- 77 Ms Frances Pietroboni