

**Queensland Government – Draft Coal Seam  
Gas (CSG) Brine Management Action Plan  
2022-2032**

**GasFields Commission Queensland Submission**

May 2022



## Background

The GasFields Commission Queensland (the Commission) was established under the [Gasfields Commission Act 2013](#) as an independent statutory body to manage and improve the sustainable coexistence of landholders, regional communities and the onshore gas industry in Queensland.

Brine management is an important environmental and coexistence issue with distinct considerations and trade-offs for landholders, regional communities and the gas industry for the duration of coal seam gas (CSG) development and beyond.

During the EIS phase of the major CSG-LNG projects in Queensland, the disposal of salt was one of the most significant concerns raised by stakeholders. More recently the Queensland Audit Office (QAO) report '[Managing coal seam gas activities](#)' identified public concerns about the long-term management and safe disposal of salt and brine waste. The Commission understands that brine management was one of the key stakeholder concerns which remains unresolved.

The Commission commends the Department of Environment and Science (DES) for progressing this important body of work in a collaboratively way involving engagement with key stakeholders.

The Commission has provided its feedback on the Draft Coal Seam Gas (CSG) Brine Management Action Plan 2022-2032 (draft action plan) in this submission and made several recommendations to enhance the draft action plan for DES to consider.

## Summary

The Commission appreciates the opportunity to be involved in the consultation process which informed the draft action plan, as well as the opportunity to provide feedback via this submission.

The Commission supports the draft action plan and acknowledges that the details of the proposed actions and timeframes for implementation will determine the success of the draft action plan.

The Commission is offering its experience in managing and improving the sustainable coexistence of landholders, regional communities and Queensland's onshore gas industry – together with its extensive knowledge of stakeholder engagement to assist with the implementation phase of the draft action plan.

The Commission acknowledges the issue of long-term management of brine is a complex undertaking. As the coal seam gas to liquefied natural gas (CSG to LNG) industry in Queensland continues to mature, the reality of decommissioning CSG infrastructure, including brine management and salt disposal, requires consideration.

This is especially relevant in the context of the legacy the gas industry will leave behind and the increasing importance of this matter to regional and host communities.

For sustainable coexistence to occur, it is imperative that the benefits which regional communities derive from the gas industry are maximised and the impacts are minimised.

## Feedback

The Commission acknowledges the report ([QUEENSLAND GAS: end-to-end water use, supply and management](#)) prepared by the Australian Petroleum Production and Exploration Association (APPEA) and its subsequent review by the University of Queensland's Centre for Natural Gas.

During the course of DES's consultation and the review of the draft action plan, the Commission has identified some elements of the draft action plan that it believes could be enhanced.

### Increasing transparency and stakeholder engagement

While the Commission understands the industry's intention is to proceed with a decentralised approach to salt encapsulation, the draft action plan is silent on whether APPEA's preferred option of salt encapsulation is based on a centralised or decentralised model. Based on recent media coverage, the Commission believes some stakeholders may have assumed the salt encapsulation option is based on a centralised model.

The limited, high-level information on the feasibility studies provided in the APPEA report is insufficient to assess the trade-offs of centralised versus decentralised salt encapsulation. It is also important to note the studies were undertaken to assess the feasibility of each option for the gas industry. Therefore, the factors highlighted in the report which make an option more favourable from the perspective of the gas industry may not be a more favourable option from the perspective of the regional communities where the salt will be stored long term.

An increased level of transparency is required to ensure there is sufficient information available for regional communities to consider the trade-offs associated with the various options, particularly centralised versus decentralised salt encapsulation.

It is also important for stakeholders to understand how salt encapsulation compares to the standard method(s) of storing and regulating industrial waste.

The Commission strongly supports DES's principle of transparency in relation to sharing information and data regarding the waste volumes and waste facility operations and impacts mentioned in section 2.4 "Stakeholder Engagement" of the draft action plan.

### Brine management options

From reading the APPEA report, the Commission understands that the preferred option for the disposal of salt is by a means of encapsulation and as such APPEA have considered three encapsulation options:

1. multiple regional encapsulation facilities;
2. two shared encapsulation facilities; and
3. a single regional encapsulation facility.

The APPEA report goes on to describe how salt and brine could be transported to centralised locations via either trucks or pipelines. Furthermore, the report describes piping brine to a centralised location would be costly and require the construction of specialised pipelines, in

exceeded of 500km in length (potentially crossing prime agricultural land), however there is limited explanation as to why transporting salt to a centralised facility using trucks is not an option.

The Commission understands there may be commercial-in-confidence constraints associated with the feasibility studies conducted by industry. Therefore independently verified summary information would be appropriate to enable stakeholders to consider the trade-offs associated with the suite of options.

For example, based on the volume of salt produced, the centralised salt encapsulation option may require three truck movements per week from each storage pond over a 20-year period which does not seem like a big imposition.

The potential locations (or type of locations) of salt encapsulation facilities would also be important to regional communities, particularly if the salt is stored at those locations in perpetuity. Considerations such as efficiency of regulation, minimising environmental risk and identifying economies of scale are also central to understanding the appropriateness of centralised storage vs decentralised storage options.

For decentralised salt encapsulation, it is essential to know whether any of these facilities will be located on prime agricultural land, i.e., in Strategic Cropping Areas (SCAs) or in Priority Agricultural Areas (PAAs).

It is important for the Commission and other stakeholders to better understand whether salt encapsulation facilities are compatible with the agricultural practices in their respective locations, i.e., whether they take any land out of agricultural production beyond the life of the CSG industry; additionally how these facilities are noted on land title in perpetuity.

## Recommendations:

- The draft action plan provides greater clarity in terms of consideration of centralised and decentralised storage options as part of the long-term solution.
- The Commission considers it critically important that considerations associated with the [Regional Planning Interests Act 2014](#) are included in the draft action plan, particularly as they relate to PAAs and SCAs and the location of salt encapsulation facilities.
- Further work should be undertaken (as part of Action 2 of the draft action plan) to describe and demonstrate how the encapsulation option would be implemented, where relevant, under both a Prescribed ERA and Resource ERA and the interactions with the relevant legislative frameworks, especially in relation to legacy infrastructure and financial provisioning.
- To ensure that *alternative actions and/or timeframes are considered, developed and implemented in a transparent manner* the draft action plan clearly outlines how this must be demonstrated at specific points, during the planning, construction, or operation of any encapsulation.
- The Commission recommends that an additional action be included in the draft action plan that describes how encapsulation sites will be identified and the level of input the community can expect in determining the final location of encapsulation sites.

- Furthermore, the Commission recommends that DES and the industry stakeholders engage with the community to identify the most appropriate location(s) and method for salt encapsulation, including considerations such as agricultural land and environmental constraints.
- The Commission also recommends that the 'CSG Brine Management Stakeholder Working Group' continue to facilitate ongoing engagement with stakeholders in the broad range of actions contained in the plan, including importantly the most appropriate locations and methods for salt encapsulation.

The Commission would welcome the opportunity to discuss this submission and recommendations further with DES should it be required.