
Memorandum

Date: September 9, 2024

From: John Storey-Bishoff, Executive Director
Climate Regulation and Carbon Markets
Environment and Protected Areas

To: Alberta Emission Offset Stakeholders

Subject: **Flagging Quantification Protocol for CO₂ Capture and Permanent Storage in Deep Saline Aquifers, Version 1.0**

The purpose of this memorandum is to inform offset stakeholders that the Quantification Protocol for CO₂ Capture and Permanent Storage in Deep Saline Aquifers, Version 1.0 is flagged effective the date of this memo.

Work is underway with an established technical working group to publish a draft of a revised version of this protocol by early November 2024 for a 30-day public comment period, with final publication in December 2024.

The main purpose of the revision will be to enable carbon capture and storage (CCS) projects to generate carbon offsets in the context of changes to the tenure mechanism and storage reservoir eligibility requirements established by Alberta Energy and Minerals.

The department also plans updates to provide certainty to offset project developers on the treatment of unintentional releases during all phases of a CCS project.

- For reversals that occur in the post-closure phase (following issuance of a closure certificate), the planned mechanism to mitigate the risk of releases will be through a discount factor applied to injected CO₂. The use of a discount factor will release the project developer from TIER credit liability following the issuance of a closure certificate.
 - The proposed discount factor would apply to all projects and would be applied throughout the full project is 0.5 per cent.
 - This would apply over all years of injection and proponents would retain full liability until a closure certificate is issued.
 - Government would take the carbon credit liability related to reversals at the time the closure certificate is issued.
 - Discount factor credits would be owned by the Government of Alberta to pool and use to cover any reversals.

- If a proponent also wants to limit the liability related to reversals that occur prior to the issuance of a closure certificate, project developers will have the option, through a flexibility mechanism, to apply: a discount factor of up to 1.5 per cent in year 4 that continues to project closure; and a holdback factor of up to 1.5 per cent beginning in year 4.
 - Liability under this option would be limited to a maximum of not more than a three-year average of annual injection volumes up until issuance of a closure certificate.
 - The rolling holdback factor would be applied beginning in year 4 and will cease to be collected if the project is performing well after year 8. The holdback is returned to the project developer upon the issuance of a closure certificate.

The revisions will also clarify what is considered a reversal. A net geological sequestration must be permanent to be recognized by a carbon offset. It is expected that the goal of carbon sequestration project developers will be to ensure permanent sequestration and avoid release to atmosphere. The department will provide further guidance on how projects will be expected to demonstrate permanence in the forthcoming version of the protocol.

The revision will: align the protocol with other system updates where necessary; provide improved hub accounting guidance; use high-performance benchmarks where appropriate for quantification of emissions associated with electricity and heat; limit eligible sources to opt-in or large final emitter facilities. Other updates may also be identified.

Consideration of additional aspects such as inclusion of direct air capture as an eligible source, as well as inclusion of removal credits and interoperability with voluntary crediting mechanisms will be undertaken, if time permits.

Based on Part 1, section 4(6) of the Standard for Greenhouse Gas Emission Offset Project Developers V3.2, new projects can be initiated using version 1 of the protocol with permission from the Director, Emission Offsets (Roger Armstrong).

Should you have any questions, please direct them to EPA.GHG@gov.ab.ca.

John Storey-Bishoff
Executive Director, Climate Regulation and Carbon Markets
Environment and Protected Areas