



Small-scale and remote carbon sequestration tenure

Application guidelines

Small-scale and remote carbon sequestration tenure – Application guidelines | Energy and Minerals

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SMALL-SCALE AND REMOTE CARBON SEQUESTRATION TENURE

APPLICATION GUIDELINES

Introduction

Proponents will be asked to provide information on the proposed activity and the requested lands and sequestration formation (the Location), which may include saline aquifers and/or depleted reservoirs. They will also be required to identify and address overlapping interests and activities in the Location. Ultimately, this process will facilitate the granting of two agreements, namely:

- a Pore Space Lease that grants the right to the pore space, and
- a Pore Space Unit Agreement that addresses the varying interests and activities within the Location, including Crown interests.

Eligibility and Exclusions

- The requested lands cannot overlap with an existing carbon sequestration agreement or grant of pore space. This would include Subsurface Reservoir Leases, and carbon sequestration agreements (e.g., evaluation permits, leases, or carbon sequestration hub agreements).
- Carbon sequestration tenure is not required for projects that inject carbon dioxide (CO₂) as part of enhanced recovery (for example, CO₂EOR) and will continue to operate under current mineral rights tenure systems. Such rights will not be granted through this process.
- Existing acid gas disposal (AGD) operations do not need to apply for carbon sequestration tenure for ongoing operations.
 - However, AGD operators may wish to supplement their acid gas volumes with captured CO₂ from their facility operations. Should these additional volumes require a change to the associated Directive 065 scheme approval, the proponent will be required to apply for a grant of pore space (i.e., carbon sequestration tenure, not a Crown authorization).
 - All new AGD operations will be required to apply for a grant of pore space from Alberta Energy and Minerals.
- The application must be accompanied by a completed carbon sequestration unit agreement addressing carbon sequestration and all overlapping rights (refer to Unit guidelines below).
- Additional information may be requested from the applicant in some circumstances, including proposals:
 - seeking to sequester over 200,000 tonnes of CO₂ per year,
 - requesting over one quarter township in area, or
 - with proposed operations that fall within or is near a current or forthcoming carbon sequestration hub.

Application Requirements

An application for small-scale and remote carbon sequestration tenure will only be considered if the following information is provided in a form satisfactory to the Minister and must identify an authorized party for the unit and pore space agreement.

Incomplete application submissions will be returned to the applicant as rejected, without further consideration. Should this occur, the applicant will need to re-apply.

Business Case

This process is intended for proponents that can demonstrate a carbon sequestration hub will not address their carbon sequestration ambitions. Include a business case that addresses the reason for the sequestration tenure request, along with the following supporting information:

- Describe the need for the carbon sequestration operation.
- Specify the source(s) of the CO₂ to be sequestered and the estimated quantity in tonnes per year and over the lifetime of the project.
- Provide an estimated project timeline (e.g., regulatory approval, project start date, and injection timeline).

- Provide rationale for why carbon sequestration through a current or forthcoming carbon sequestration hub is not viable. To support the rationale please provide information which can include, but is not limited to:
 - an assessment of sequestration options and potential sequestration capacity in the region, and
 - an economic analysis and justification.

Requested Lands and Sequestration Formation

Provide a detail of the proposed lands including:

- complete formation description(s), and
- complete legal land description(s) of the lands requested (section, township, range, meridian).

Required Technical Information on Sequestration Location (the Location)

The applicant must confirm the intended formation:

- has no recoverable resources, or ensure that any recoverable resources have been addressed in a unit application; and
- does not have active disposal wells (that are not addressed within the unit application).

Provide sufficient technical evidence in an acceptable data format (spatial or otherwise), authenticated by the applicant's APEGA Responsible Member on the application form, to demonstrate the suitability of the Location for sequestering CO₂ and that the area requested in the application is congruent with the ultimate sequestration pore volume required to meet project needs.

Examples of supporting information include but are not limited to:

- cross-sections;
- logs with marked formation tops;
- core analysis;
- brine analysis;
- directional survey;
- injectivity tests;
- injection forecasts,
- pressure transient analyses;
- fluid compatibility testing report;
- seismic (with suitable well tie);
- pertinent geological and sequestration mapping (net reservoir isopach, CO₂ available pore volume isopach including parameters used in pore volume calculations);
- projected area of influence (AOI) of CO₂ fluid and pressure plumes including a dynamic reservoir simulation model of the pressure influence of the plume AOI;
- areas of resource interest or activity overlap including existing disposal wells within current and projected area of influence identified on the pore volume isopach;
- mineral reserve(s) calculations in the sequestration zone, area of influence, and available pore volume for carbon sequestration – including any material balance and volumetric calculations; and
 - the data must include calculations about remaining recoverable resources so that Alberta Energy and Minerals can generate an amortization schedule.
- disposal records (recent volumes/charts/tables, etc.).

The above represents examples of key information to support the application. Other information, specific to the proposal or information supporting it, may be required once Alberta Energy and Minerals has had an opportunity to review the information initially submitted.

Pore Space Unit Agreement (Unit Agreement)

Proponents must submit a completed [Pore Space Unit Agreement](#) and cover letter that:

- identifies the subsurface reservoir (pore space) within which captured CO₂ will be permanently sequestered; and
- reflects the varying interests within the Location.
 - Interests include Crown mineral agreement and authorization holders, and Mineral owners (including the Crown).

The treatment of remaining recoverable resources will be outlined in the Unit Agreement. The Unit Agreement provides for the payment of Crown resource considerations on remaining resources in the reservoir over a base amortization period. This amount will be indicated in the Unit Agreement, which provides the methodology for the payment of considerations.

Proponents will use the data provided above to illustrate the Location and demonstrate how the value of the overlapping interests within the Location's AOI have been determined.

In the completed Unit Agreement, only the unitized substance (i.e., pore space) will be accounted for in the working interest tract factor calculations (Exhibit A).

Exhibit D will reflect how the other interests are valued and addressed, including Crown Royalty interests.

Other Requirements

Alberta Energy and Mineral's decision process includes a review of both the technical information and supporting business case.

Tenure and Unit issuance do not constitute Alberta Energy Regulator (AER) approval. Operators must still obtain approval from the AER for a carbon sequestration scheme. Issuance of a Crown carbon sequestration agreement in no way influences AER decisions regarding carbon sequestration approvals nor does it predetermine the outcome of any such application to the AER. Operators must meet and maintain regulatory approvals and conditions.

Questions regarding application requirements can be directed to carboncapture.energy@gov.ab.ca.