



REQUEST FOR EXPRESSIONS OF INTEREST
For CARBON SEQUESTRATION HUB
PROPOSALS
September 9, 2021

1. Part A—INTRODUCTION AND OVERVIEW

1.1 Introduction

Carbon capture, utilization and storage (CCUS) technologies are recognized as effective tools for reducing emissions and mitigating the effects of climate change. Carbon sequestration, specifically, the permanent disposal of carbon dioxide in dedicated geologic formations, is a strategic opportunity for Alberta to achieve its economic and environmental objectives. It will play a key role for a variety of industries, including a clean hydrogen economy, petrochemical development, and enhancing environmental performance in the oil sands.

The Government of Alberta (“Province”) has received a large number of inquiries and significant interest from entities looking to obtain carbon sequestration tenure and to provide carbon sequestration services.

At this time, the Province is interested in advancing a strategic hub concept as described below. The Province will continue to engage with industry in exploring the potential for other forms of carbon sequestration including the use of mature fields. Equally current practice for enhanced oil recovery and acid gas injection schemes will remain in place.

This request for an expression of interest focuses on carbon sequestration agreements to be granted through a competitive process (“this process”) with the ultimate goal of facilitating the development of carbon sequestration storage hubs. A carbon hub operator will collect, transport, and permanently store captured carbon dioxide from a cluster of industrial emissions sources. This approach serves to protect the integrity of Alberta’s pore space by limiting perforations and development in storage zones. It also enables an efficient and effective system for managing pore space and carbon sequestration operations alongside other resource development activities that, in turn, lead to stronger risk management.

Private industry will be responsible for the development, management, and operation of any carbon sequestration storage hub. Hub operators will be expected to have the technical, financial, and operational capacity to undertake such an important aspect of Alberta’s energy system. In this process, carbon sequestration projects (i.e., permanent disposal of carbon dioxide), must be deeper than 1,000 metres, with no associated hydrocarbon recovery. A successful proponent will be expected to obtain all necessary regulatory approvals, and ensure the safe and effective operation of the hub. This process will not represent the successful achievement by the operator of any regulatory requirements respecting emissions regulations or operation of the hub.

1.2 Purpose

In this process, the Province is first requesting expressions of interest (REOI) from companies interested in building, owning, and operating a carbon sequestration hub in Alberta. Expressions of Interest (EOI) submissions will be voluntary; information submitted through the REOI process will be used to inform the subsequent Request for Full Project Proposals (RFPP).

The RFPP stage will call for comprehensive full project proposals (FPP) from interested parties. FPP submissions will be evaluated by the Province, and proponents who best meet the RFPP criteria will be granted a tenure agreement to facilitate the hub operator role.

This process will ultimately facilitate the establishment of a hub(s) through the granting of a carbon sequestration agreement (“Agreement”) to the successful proponent(s) following the conclusion of the RFPP competition. The intent of this Agreement will be to:

1. grant the successful proponent the right to drill wells, conduct evaluation and testing, and inject captured carbon dioxide into deep subsurface formations within previously defined zones for sequestration, while also:
2. placing requirements on the Agreement holder to:
 - a. ensure open access to the hub,
 - b. provide competitive market service rates,
 - c. address how carbon offsets or future credits will be approached,
 - d. provide opportunity for Albertans, including Indigenous communities, to realize a fair economic benefit as operations advance, and
 - e. other criteria set out in the RFPP and informed by the REOI process and engagement with stakeholders.

All required regulatory approvals are the responsibility of the proponent and will not be granted through this process.

1.3 Eligibility and Exclusions

- This process is only intended to provide access to subsurface formations (i.e., pore space) for the defined project that will undertake carbon sequestration. Carbon sequestration in this document refers to the permanent disposal of carbon dioxide, deeper than 1,000 metres, with no associated hydrocarbon recovery (e.g., injection into a saline aquifer).
- Projects that inject and store carbon dioxide as part of enhanced oil recovery projects (i.e., carbon dioxide EOR) will continue to operate under current mineral rights tenure systems – such rights will not be granted through this process. Further, the Province is not considering issuing carbon sequestration agreements in mature oil and gas reservoirs in this process.
 - While the carbon sequestration regulatory framework envisions using saline aquifers for carbon sequestration with no associated hydrocarbon recovery, the Province is interested in gaining an understanding of the sequestration scenarios currently being considered throughout the marketplace.
- Carbon dioxide must be captured from facilities located within Alberta.
- Positive benefits to the community surrounding a project and extended positive economic, social and environmental regional outcomes associated with the proposed project are an expectation of the Province.

1.4 This Process

- Interested parties will submit EOI to the Province using the guidelines in Section 2.1.
- The information from the EOI will be used to shape the process for the RFPP.
- The RFPP stage will solicit definitive proposals with the intent of entering into an agreement with the party, or parties, wishing to develop and operate a carbon sequestration hub.

1.5 Scope for Expressions of Interest

EOI submissions are requested from companies interested in developing and operating a carbon sequestration hub in Alberta that meets the requirements in section 1.3. The Province is seeking information regarding potential carbon sequestration projects to inform the criteria developed to evaluate hub operator proponent submissions in the forthcoming RFPP stage. EOI submissions will not be evaluated, and will have no bearing on the competitive process during the RFPP stage. The purpose of EOI submissions is to ensure the FPP stage is informed by proponents who have industrial experience and expertise pertaining to carbon sequestration. Guidelines for submissions are outlined in Part B.

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Classification: Protected A

2. Part B —GUIDELINES FOR SUBMISSION OF EXPRESSIONS OF INTEREST

Expressions of interest are requested from companies or groups of companies, wishing to apply to be the successful builder, owner and operator of a carbon sequestration hub.

The Province reserves the right to amend, suspend, postpone, or cancel the outlined process and deadlines, or this EOI at its sole discretion.

2.1 Guidelines for Submission of Expressions of Interest

A. Submitting the Expression of Interest

- **Length:** There is no length restriction, however Expressions of Interest are generally not expected to exceed 10 pages. More details can be provided as appendices, if required.
- **Format:** Submissions are to be made electronically. Please submit one electronic submission in PDF format to the e-mail address below. All materials must be received by the Province on October 12, 2021 by 11:59 p.m., MDT, (“Closing Date and Time”). Submissions received after the Closing Date and Time will not be considered.

Email: carboncapture.energy@gov.ab.ca

Subject Line: Carbon Hub Expression of Interest – Company or Project Name

B. Submission Criteria

The headings listed below are the criteria that proponents should consider including in their EOI submission.

1. Title of the Proposed Project.

2. Name, Address, and Affiliation of the Principal Applicant(s).

3. Contact Information: Project Leader and key team members.

4. Project Description:

1. General overview:

- i. Provide an overall description of the project and business plan, including:
 - a. A high level overview of the project configuration and execution strategy: location, scope, schedule, cost estimate, proximity to carbon dioxide sources, project proponents, and financing plan.

2. Business model:

- i. Demonstrate the economic viability of the project.
 - a. Outline assumptions on capital cost, operating cost, maintenance costs, and revenue generation. Include a logical scenario and/or sensitivity analyses.
 - b. Describe the policy environment (e.g., carbon pricing, offsets, or tax credits) that are considered in the economic viability considerations.
- ii. Provide details on your proposed service model:
 - a. Approach to setting reasonable service rates.
 - b. Approach to soliciting and accepting additional volumes of carbon dioxide.

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- c. Approach to management of any carbon credits generated from the project.
- iii. Describe the proposed approach, or opportunities, for direct revenue to the Crown (e.g., revenue sharing, fee per tonne, etc.).
- iv. Provide details of benefits to the community surrounding your project's sites, including communities through which pipelines are built, and describe extended positive economic, social and environmental regional outcomes associated with the proposed project. The Province is interested in understanding the environmental, social and governance metrics associated with the proponent and the business of the project.
- v. Summarize proposed financing arrangements for the project, indicate the status of all such arrangements and the proponent's expectation regarding probability and amount of funding.
- vi. Outline the securities the proponent is willing to extend to the Crown in addition to payments into the Post-Closure Stewardship Fund and/or insurance.

3. Project Configuration and Execution:

- i. Provide a draft project execution plan.
- ii. Please provide a Level 1 schedule with timing of when a Level 2 or 3 schedule would be available.
- iii. Provide a design basis, or similar document.
- iv. Identify, at a high level, the key risks to the project including any known mitigations.
- v. Provide the most recent cost estimate, aligning to the project description as outlined in 3(i). Include the project cost estimate basis along with estimate classification and contingency applied.
- vi. Identify proximity to carbon dioxide sources and projected potential annual feedstock volumes that will be sequestered as part of the project.
- vii. Include current organizational chart outlining roles and planned staffing.

4. Project Location

- i. Describe the location of the project and the advantages and challenges of that location. Detail the proponent's plan for meeting the logistical challenges of the location amongst other components discussed below.
 - a. Outline the surface area of interest.
 - b. Outline the subsurface zone of interest for operations and proposed stratigraphic interval.
 - c. Include current geological understanding, suitability and rationale for the identified zones.
 - d. Describe any integration or conflicts with surface and subsurface operations (existing and potential) in the identified surface and subsurface zone(s) of interest.
 - e. Describe any other relevant factors that went into selecting this location.

5. Proponent's Capability

- i. Outline the proponent's relevant experience and expertise of the respective entities comprising the proponent within the EOI, related to:
 - a. Constructing and operating projects of similar magnitude and type (specifically subsurface expertise);
 - b. Constructing, operating, and maintaining pipeline infrastructure and injection facilities;
 - c. Monitoring, measurement, and verification (MMV) activities similar to those required for carbon sequestration projects; and
 - d. Securing financing and insurance for projects of similar magnitude.
- ii. Provide an overview of all current ongoing business activities of entities comprising the proponent that may be relevant for the successful execution of its project.
- iii. If the proponent is a consortium or joint venture or partnership, outline the legal structure of the arrangement, indicate which corporate entities will comprise the proponent and outline the respective roles of all such entities will contribute.
- iv. Outline an understanding of the regulatory process and approvals required by the successful proponent after the carbon sequestration agreement is granted.
 - a. Demonstrate understanding of consultation requirements associated with regulatory approvals and how to safeguard public confidence in carbon capture and storage moving forward.

2.2 Issuance of Request for Full Project Proposals

Despite the above, the issuance of this REOI does not in any way obligate the Province to proceed to request full project proposals or enter into a carbon sequestration agreement at any future time, and neither the Province nor the parties participating in the REOI process are bound in any way. Without limiting the generality of the preceding statement and for the sake of clarity, the issuance of this REOI does not obligate or otherwise bind the Province to retain or vary the content of the documents or full project proposals that may ultimately be issued, should the Province choose to request full project proposals.

2.3 Communications with the Province

During the REOI process, comments or requests for information by proponents to the Province with respect to this process, excluding usual government business meetings with proponents, can be made through the email address carboncapture.energy@gov.ab.ca.

2.4 Enquiries

Interested parties may address questions of clarification on this REOI to the Province in writing by email to the following email address: carboncapture.energy@gov.ab.ca.

The proponent has the responsibility to notify the Province, in writing, of any ambiguity, divergence, error, omission, oversight, contradiction, or item subject to more than one interpretation in this REOI, as it is discovered, and to request any instruction, decision, or direction necessary to prepare their proposal.

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Verbal responses to enquiries are not binding on any party.

2.5 Response to Submissions

The Province does not intend to issue specific responses to questions or comments contained in proponents' submissions. Comments and questions will be reviewed and may be considered in finalizing any subsequent full project proposals.

2.6 Clarification of Submissions

Following the closing date, the Province may, but shall not be obligated to, contact or meet with any or all proponents for the purpose of seeking clarification relative to their submissions.

2.7 Conflict of Interest

On or before the Closing Date and Time of this REOI, proponents must fully disclose to the Province, in writing, the circumstances of any actual, possible or perceived conflict of interest in relation to the proponent, all team members or any employee, sub-contractor or agent, if the proponent were to become the successful proponent. The Province shall review any submissions by proponents under this provision and may reject any proposal where, in the opinion of the Province, the proponent, any team member, employee, sub-contractor or agent is, could be, or could be perceived to be in a conflict of interest if the proponent were to become the successful proponent.

2.8 Confidentiality

All applications, and communications related to the applications submitted in the REOI process are confidential and shall be maintained in confidence and kept secure by the Province. Information may be shared within departments of the Province, with Cabinet, and others supporting the process (e.g. consultants in the review process under confidentiality agreements).

2.9 Freedom of Information and Protection of Privacy Act (Alberta) (FOIP)

Proponents acknowledge that:

- a) FOIP applies to all information and records relating to, or obtained, generated, created, collected or provided under, the REOI, any EOI, and which are in the custody or under the control of the Province. FOIP allows any person a right of access to records in the Province's custody or control, subject to limited and specific exceptions as set out in FOIP.
- b) A proponent, if it considers portions of its proposal to be confidential, shall identify those parts of its proposal to the Province considered to be confidential and what harm could reasonably be expected from disclosure. The Province does not warrant that this identification will preclude disclosure under FOIP.
- c) In the event of a request for access under FOIP, the Province will provide any affected proponent notice and an opportunity to object to disclosure of information that may be confidential.

2.10 Claims for Damages or Compensation

Notwithstanding any other provision in this REOI, a proponent who responds to this REOI agrees that any claim for damages or compensation of any kind related directly or indirectly to a breach of contract or other cause of action arising from:

- the REOI process;
- the evaluation of proposals; or
- a decision by the Province not to proceed with the RFPP stage

shall be limited to the proponent's actual EOI preparation costs. "EOI preparation costs" are the actual costs borne by a proponent to prepare and submit its EOI. By submitting an EOI a proponent acknowledges and accepts this limitation.

2.11 Expression of Interest Acceptance/Rejection

The Province is not required to accept any EOI, and may reject any or all EOI.