

October 13, 2023

Environmental Registry of Ontario

Re: Proposed regulatory provisions for ‘special projects’ using wells to test or demonstrate new and innovative activities, including carbon storage, and to remove well security caps and exemptions for all types of wells under this legislation going forward

We commend the Government of Ontario for taking action to enable geologic carbon storage as an avenue for Ontario’s hard-to-abate industries to transition to a low-carbon economy. The International CCS Knowledge Centre greatly values the opportunity to contribute our insights on the consultation for the proposed regulatory provisions for ‘special projects’ which include carbon storage.

The deployment of carbon capture, utilization, and storage (CCS/CCUS) technology is vital for Canada and Ontario to achieve a net-zero emissions economy by 2050. Recent projections from the Canadian Energy Regulator indicate that Canada might need to sequester between 60 to 80 million tonnes (Mt) of carbon dioxide (CO₂) annually by 2050 to reach its net-zero greenhouse gas (GHG) emissions goals. Ontario is an industrial powerhouse and CCS is a tool to ensure the sustainability of key industries in Ontario including steel, cement, manufacturing, and petrochemical refining through the transition to a low-carbon economy. An effective regulatory framework for carbon storage will act not only as a necessity to retain jobs but also as a potential attractant for new economic development opportunities.

There is an urgency to implement the regulatory provisions as soon as possible, particularly for large-scale CCS projects. A sufficient framework is required for Ontario to be considered a ‘designated jurisdiction’ for carbon storage by the Government of Canada, which is required for Ontario’s businesses to access the federal Investment Tax Credit for CCUS (CCUS-ITC) the value of which is set to halve in 2031. CCS projects, in an aggressive scenario, require more than six years to complete, from pre-feasibility to the start of operations. Ontario should ensure that the framework is in full alignment with Environment and Climate Change Canada’s requirements to become a designated jurisdiction by applying lessons learned in creating approved regulatory frameworks in other provinces (Alberta, British Columbia, and Saskatchewan).

Ontario has taken a multi-step approach to regulating carbon storage by first proposing regulations for demonstrative projects on private land before extending policies that would dictate commercial-scale project development on both private and public land. As such, recommended changes to the ERO require considerations for both projects at a smaller ‘pilot-scale’ and a full ‘commercial-scale’ operational stage. Below is a list of key considerations and their potential implications for potential CCS project proponents in Ontario.

Pore Space Tenure: Pore space, or the void of space underground that can be filled with CO₂, is a resource, and understanding the rights to that pore space is essential to enable CCS projects. Jurisdictions in Canada and the United States have taken varying approaches to determine who the rights holders are of this space. Surface rights holders may have rights to the pore space beneath them or it may sit with mineral rights holders, and various contexts and conditions may impact that ownership. The proposed regulatory provisions are not clear about where the ownership of geologic pore space

rests. Rather than leave any ambiguity on the matter, Alberta passed legislation declaring that all pore space belongs to the Crown, and a process was established to acquire the rights to that pore space. It is recommended that Ontario take this approach to create a clear path to commercial-scale projects and open a path towards providing access to pore space under public lands.

After pore space tenure ownership questions have been answered, Ontario will need to consider options for equitable distribution and processes to access pore space. Some jurisdictions (e.g. Alberta and the United Kingdom) are requiring the development of carbon storage hubs where permit holders must act as utilities in taking in multiple sources of CO₂ and storing them in shared locations. With lesser available pore space and several major emitters that may require substantial quantities of pore space and multiple well-sites, it is not clear if this approach will best meet Ontario's needs. However, the development of clear application processes and potential competitions based on project readiness, need for storage, etc., will help Ontario manage its pore space as a resource.

Long-term Liability: The purpose of CCS is to store carbon dioxide emissions underground permanently. Safe storage has been demonstrated for over two decades in Southern Saskatchewan where over 40Mt of CO₂ has been stored today in the Weyburn-Midale area and at the Aquistore project. Ontario is proposing that third-party insurance is required for any special projects to cover any associated liabilities associated with the long-term storage of CO₂. This may be a reasonable (though potentially unnecessary) solution for pilot-scale projects on private land, however, at a commercial-scale it is likely that insurance would be costly and a barrier to CCS project investments. It is recommended that Ontario develop a process that allows for the transfer of long-term liability of stored carbon to the province, provided that any CCS project sufficiently mitigates any potential storage risks before a transfer of liability to the government.

Measuring, Monitoring, and Verification (MMV) and Regulatory Permitting: For full-scale CCS projects, MMV is required to track, measure movement, and quantify stored carbon, while permitting processes ensure that projects have conducted sufficient due diligence in meeting environmental and consultation requirements and in mitigating any project risks. Ontario is proposing a full-scale project application including a full lifecycle MMV plan for all special projects. For a pilot or demonstrative project designed to test and monitor stored carbon at a small scale, this may be overly burdensome and may disincentivize 'special projects.' It is recommended that Ontario develop a two-stage permit application process, similar to the evaluation and sequestration permit processes in Alberta. The first stage of permitting would allow projects to assess the suitability of a proposed CO₂ storage reservoir and reduce the initial administrative burden. The second stage, which would approve a commercial-scale project, would consist of the fulsome MMV plan and build on the knowledge and data gained through the evaluation stage.

Consultation: Ontario's proposed requirements for 'special projects' will require developers to acquire rights or obtain consent from all rights holders (surface or subsurface) before applying for well licenses. Public acceptance and understanding are critical for the development of CCS projects. However, for pilot-scale projects, the proposed consultation requirements seem excessive and may hinder the development of pilot-scale projects. At a commercial scale, further clarity is required to determine the extent to which

consent versus consultation is required. The province asserting ownership of pore space may also clarify this issue.

Crediting Opportunities: Carbon credit generation, or the monetization of net GHG emission reductions, is a critical form of revenue for CCS projects. Ontario's industrial facilities can generate Emission Performance Units by reducing GHG emissions below set limits. CCS is a chain of events where the capturing, transporting, and storing of CO₂ can be completed by different organizations at different locations. Ensuring that participants in each part of this chain can monetize the value of the emission reduction benefits will require attention to adequately incentivize commercial-scale projects.

We welcome the opportunity to share these considerations and would welcome any further engagement or discussions on this important topic.

Sincerely,

A handwritten signature in blue ink, appearing to read 'C. Beth (Hardy) Valiaho', written in a cursive style.

C. Beth (Hardy) Valiaho
Vice-President, Policy, Regulatory & Stakeholder Relations