



Regulating Commercial-Scale Geologic Carbon Storage Projects in Ontario

About Linde

- Globally, Linde is one of the world's largest producers of industrial gases as well as a leader in innovation and engineering.
- Linde Canada employs around 2,000 people across Canada and is headquartered in Mississauga, Ontario, having recently been a part of the global merger between Linde AG and Praxair Inc.
- Today, Linde provides a variety of industrial gases including oxygen, nitrogen, hydrogen carbon dioxide, and argon for use in health care, manufacturing, energy production, batteries for electric vehicles, and semiconductor production.

Linde's Investments in Carbon Capture

- Global warming and climate change concerns are intensifying global efforts to reduce the concentration of greenhouse gases such as CO₂ in our atmosphere. Increasingly, attention is focusing on the need to remove CO₂ from the flue gases released by several processes in countless industries including power, chemicals and steel. Carbon capture is a key strategy in meeting today's CO₂ emission reduction targets.
- With Linde's full breadth of carbon management technologies, we are well positioned to help with carbon emission reductions.
- Given Canada's interest at both the federal and provincial levels of government to make Canada a global leader in clean energy, Linde is a natural partner for both governments and the private sector.
- Linde's work across Canada certainly fits within these priorities, especially given the announcement by Dow that it selected Linde in April 2023 as its industrial gas partner for the supply of clean hydrogen and nitrogen for its net-zero integrated ethylene cracker site in Fort Saskatchewan, Alberta.
- The proposed production process in Alberta will convert methane into hydrogen as a clean fuel to be used in the ethylene production process and carbon dioxide will be captured onsite to be transported and stored by adjacent third-party carbon storage infrastructure partners.

Need to Move Quickly

- Ontario is behind the curve in terms of developing the legal and economic framework that would accelerate the expansion of carbon storage projects in the province.
- Due to the recently passed Carbon Capture, Utilization, and Storage tax credits, potential projects are becoming economically viable, and Linde is evaluating with business partners on how to investment across Canada in this decarbonization technology.
- We encourage the Ministry to move quickly and finalize the required legislation and regulations to support carbon storage in Ontario.

- The federal government tax credits are set to expire, and proponents must make final investment in the near term in order to access the full value of the incentives to support carbon capture and storage projects.

Long Term Liability

- Currently in Ontario, potential participants in a carbon storage project run the risk of taking on the perpetual liability for a carbon storage site. To facilitate the development of this industry, we encourage the Ministry to take on the approach where following the issuance of a closure certificate, the Crown assumes long-term liability for the CO₂, the site, and the well that make up the carbon storage.
- We encourage the Crown to take on long term liability after any geologic carbon storage project is completed and closed in a satisfactory manner that meets the stringent safety and security requirements of the government.
- As carbon storage industry is just getting started, the risk is too high and it is not economically viable for proponents to provide financial assurance and assume long-term liability for commercial scale storage projects following their regulated closure.
- Without long-term support from the government, geologic carbon storage could be untenable.

Pore Space

- Due to the extent that underground geologic formations don't follow the boundaries of land ownership, the operator must be able to control the entire formation in order to develop a successful carbon storage project. There could be dozens, even hundreds of surface owners involved in any project, depending on the proposed location.
- It is fundamental to the success of carbon storage in Ontario that the Crown assume responsibility for both the vesting and the allocation of pore space under both private and Crown lands to support viable carbon storage projects.
- This is an imperative step in protecting the viability of projects and ensuring that carbon storage proceeds in Ontario.
- This approach also eliminates the risk of land speculators and/or land owners from effectively blocking viable projects so that project proponents are able to secure the necessary rights for a commercial scale project in a timely manner.

Conclusion

- We appreciate the government's partnership and commitment to move forward on a carbon storage regulatory framework. We are eager to work hand in hand with you to ensure the successful implementation of these much-needed projects.
- We would welcome the opportunity to discuss our comments and potential investments if you are interested in learning more about Linde.