Pathways Alliance

Carbon capture and storage network

Who we are

We're Canada's largest oil sands companies, working together to provide the energy the world needs while advancing environmental innovation. Our country has long benefitted from a strong energy sector that supports Canada's high standard of living. The sector creates thousands of jobs and generates critical revenue for governments that helps fund essential services, including health care, education and roads.

To ensure our industry can keep providing these benefits for decades to come, Pathways Alliance is focused on advancing environmental innovation and projects, including carbon capture and storage (CCS). We've proposed a CCS network and pipeline that, when operational, would have the capacity to transport captured CO_2 from multiple CCS facilities to a hub in the Cold Lake area of Alberta for permanent underground storage.

Canadian Natural

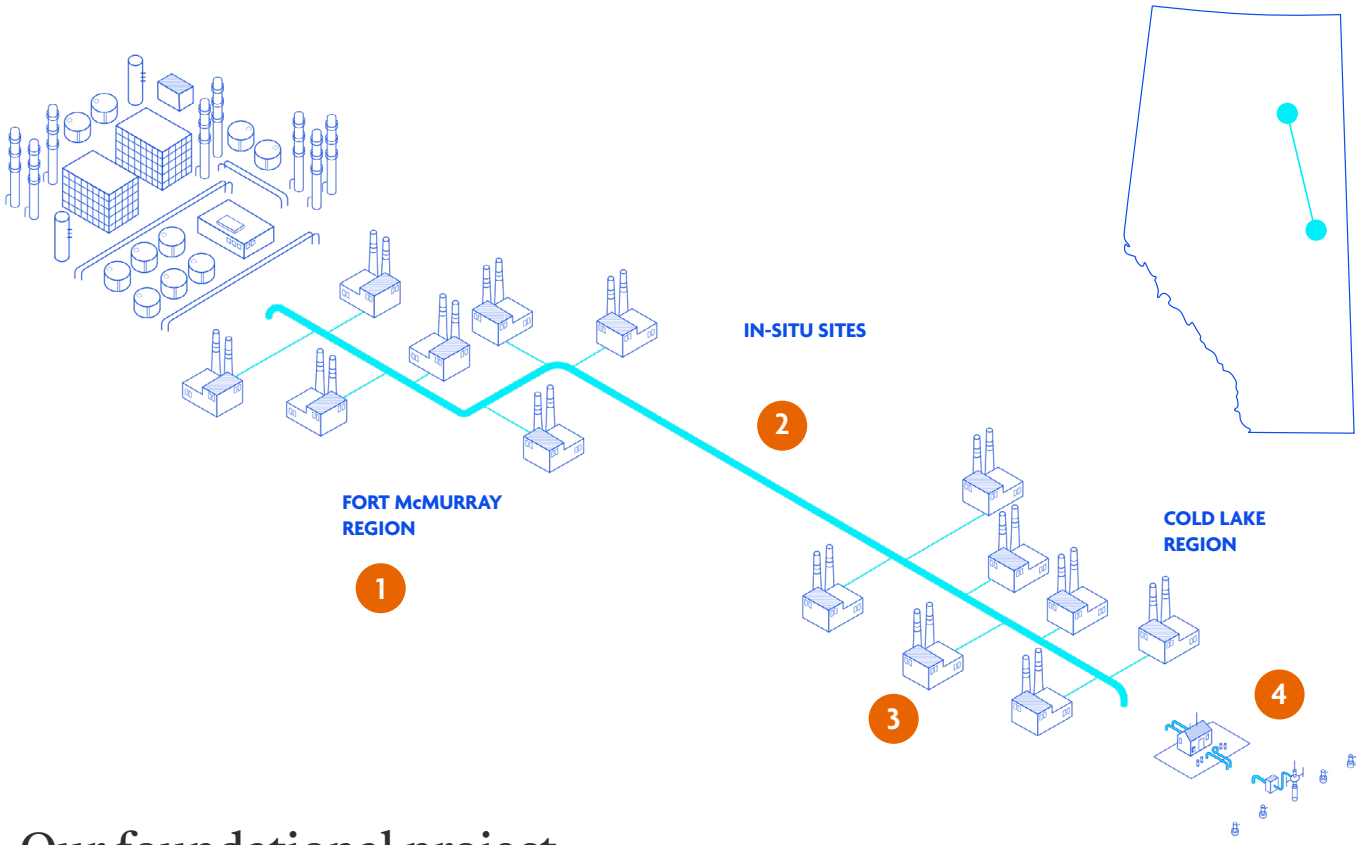
cenovus ENERGY

ConocoPhillips Canada

Imperial

MEG Energy

Suncor



Our foundational project

The proposed foundational project is a carbon capture and storage (CCS) network and pipeline that would have the capacity to transport captured CO_2 from multiple oil sands facilities to a hub in the Cold Lake area of Alberta for permanent underground storage. Building this project is subject to receiving sufficient fiscal support and regulatory approvals from governments.

1. Oil sands upgraders, mining and in-situ area
2. 400+ km CO_2 transportation line
3. Oil sands in-situ recovery area
4. Joint carbon storage hub

Emission source

CO_2 transportation line

Project scope

Once it's operating, the pipeline and hub could be made available to other oil producers and industries in the region interested in underground storage for captured CO_2 emissions.

The CCS network

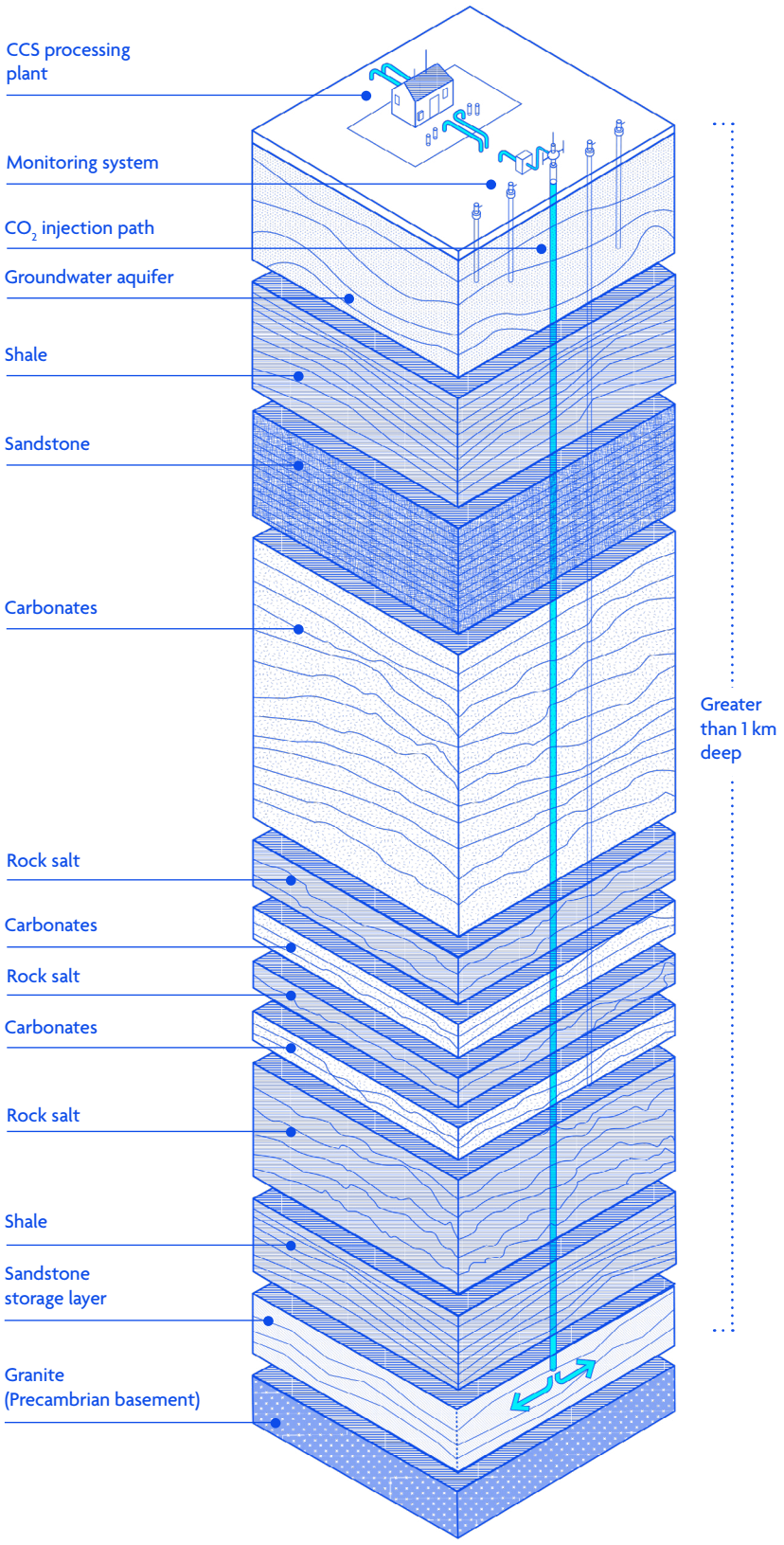
Project overview

The proposed project involves careful site selection. Located in the Western Canadian Sedimentary Basin, the Basal Cambrian Sandstone geologic formation underlies large parts of Alberta. It has great depth and multiple overlying layers of salt formations that act as seals to keep the CO_2 stored underground.

Captured CO_2 will be stored deep below the Earth's surface, typically between 1,000 and 2,000 metres. By comparison, freshwater aquifers in this area are typically around 150 metres below surface. The depth of stored CO_2 is well below any freshwater sources.

The proposed Pathways Alliance CO_2 transportation network and storage hub will have a multi-layered safety system based on decades of technical experience and scientific research. It will also follow regulations set out by the Canadian Standards Association.

This storage hub will also be assessed and approved by the Alberta Energy Regulatory (AER) and will follow its Monitoring, Measurement and Verification (MMV) principles.



RIGHT: Captured CO_2 will be stored deep below the Earth's surface, typically between 1,000 and 2,000 metres. The depth of stored CO_2 is well below any freshwater sources. (Visual for illustrative purposes only.)

Learn more at
PathwaysAlliance.ca or reach us at
contact@pathwaysalliance.ca.

Timelines

Engineers and technical experts from Pathways Alliance companies are advancing engineering and environmental work for the project application, refining carbon capture technology, and engaging Indigenous communities and other communities along the proposed pipeline route.

In fall of 2022, the Government of Alberta granted us the rights to evaluate the geological formation for our proposed carbon storage hub.

Detailed work to evaluate the proposed storage hub began in the first half of 2023, to better understand the geology in the hub region.

On behalf of Pathways Alliance, Canadian Natural began filing regulatory submissions for the transportation network at the end of March 2024.

We're working with governments to obtain sufficient levels of fiscal support and the regulatory approvals required to make this project a reality.

Construction of the proposed CCS network would provide substantial economic benefits in the form of direct, indirect and induced economic activity. (Source: Nichols Applied Management, April 2023)

- $16.5B in GDP
- $12.2B in labour income
- More than 129,000 full-time jobs (18,500–43,000 annually)