



Carbon Capture and Storage

As North America's largest energy infrastructure company, Enbridge is an industry leader in the transition to a sustainable, lower-carbon future in which Carbon Capture and Storage (CCS) will be a key enabler. Collaborative solutions will be needed to kickstart this emerging industry and Enbridge is committed to working with industry, governments, and Indigenous communities to provide cost-competitive solutions that meet emissions reduction goals while supporting economic development and the long-term health of the Canadian energy sector.

As industry and governments work to reduce Canada's carbon footprint and meet ambitious emissions reduction targets, CCS infrastructure is emerging as a key decarbonization solution. CCS infrastructure technology will create jobs, lower emissions and support economic transition and growth.

In fact, a recent International Energy Agency analysis says, globally, reaching net zero greenhouse gas (GHG) emissions will be "virtually impossible" without CCS.

That's why Enbridge is working with industry and governments to advance cost-efficient, customer-driven CCS solutions in Western Canada and across North America.

What is CCS?

Carbon dioxide (CO₂) is emitted naturally and through human activities such as power generation and oil and natural gas production and refining. CO₂ accounts for approximately 80% of all GHG emitted through human activities, so reducing its impact is critical.

CO₂ can be stored in geological formations like oil and gas reservoirs, unmineable coal seams, and deep saline aquifers. These are structures that have naturally stored crude oil, natural gas and brine over millions of years.

In an integrated CCS solution, instead of emitting CO₂ into the atmosphere, it is captured as a gas at source and compressed. It is then transported via pipeline to a strategically located storage hub, where it is injected and safely and permanently sequestered within deep underground geological formations.

Carbon capture, transportation and storage has been in use for some 50 years in North America. Projects like Quest and the Alberta Carbon Trunk Line are among many other CCS projects operating around the world, from Australia to Norway.



Enbridge is actively seeking Indigenous partnerships to advance our CO₂ storage and transportation plans.

The Open Access Wabamun Carbon Hub

One CCS project under development is our Open Access Wabamun Carbon Hub (the Hub) to be located west of Edmonton, Alberta, Canada.

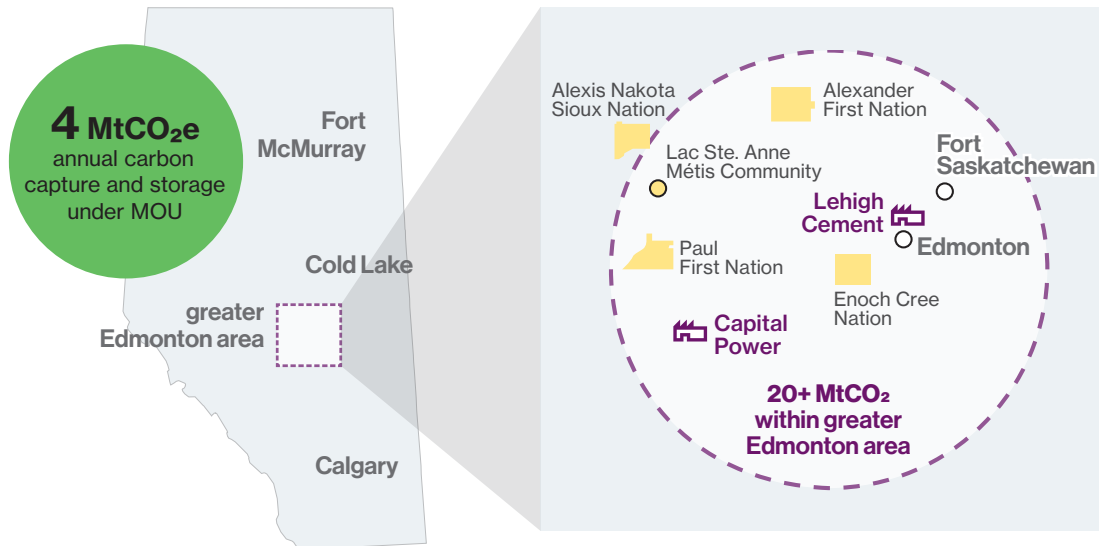
The Wabamun hub would support recently announced carbon capture projects by Capital Power Corporation and Lehigh Cement, and represents an opportunity to avoid nearly 4 million tonnes of atmospheric CO₂ emissions – the equivalent of taking more than 1.2 million cars off the road annually.

The Hub will remain open access for other nearby capture projects. Once built, the Hub will be a key part of one of the world's largest integrated carbon capture, transportation and storage projects.

In February 2022, Enbridge and the First Nation Capital Investment Partnership (FNCIP) announced an agreement to advance the Hub. Enbridge committed to offering our Indigenous partners, including Alexander First Nation, Alexis Nakota Sioux Nation, Enoch Cree Nation, Paul First Nation and the Lac Ste. Anne Métis Community, a significant equity interest in associated carbon transportation and storage infrastructure.

With the support of Indigenous partners, Capital Power and Lehigh Cement, Enbridge applied to develop the Hub through the Alberta provincial government's competitive carbon hub selection process. In late March 2022, the government of Alberta announced that Enbridge has been awarded the right to advance development of the Hub. Phased in-service dates for projects within the Hub are expected to begin as early as 2026.

Collaborative solutions like the Hub are needed across North America to decarbonize industries like power generation, cement and steel manufacturing, petrochemicals, and oil and gas production and refining. Enbridge is committed to working with communities, Indigenous partners, multiple industrial sectors, governments, and CCS experts to provide safe, cost-competitive low-carbon solutions that support the achievement of climate goals, create jobs and economic activity, and ensure the long-term sustainability and competitiveness of North America's industrial and energy sectors.



> Central Alberta will be a focal point for carbon capture and storage in Canada.

What is CO₂? Is it dangerous?

Carbon dioxide is a naturally occurring greenhouse gas made up of carbon and oxygen. An increase in the amount of CO₂ in the earth's atmosphere creates an overabundance of GHGs that trap additional heat, leading to climate change. CO₂ is emitted through natural carbon cycles and human activities, including oil and gas production and refining, power generation, transportation and other industrial means.

CO₂ accounts for approximately 80% of all greenhouse gases that result from human activity, which is why capturing and storing carbon is so important toward achieving the goal of net-zero GHG emissions by 2050.

Is it safe to inject CO₂ in the ground?

CO₂ can be stored in geological formations like oil and gas reservoirs, unmineable coal seams, and deep saline aquifers. These are structures that have stored crude oil, natural gas, brine and CO₂ over millions of years.

The technology required for CCS infrastructure is well understood and has been in use for some 50 years in North America.

Projects like Quest and the Alberta Carbon Trunk Line are already operating and there are many other CCS projects around the world, from Australia to Norway.