Alberta Carbon Trunk Line (ACTL)

Project type	Large-scale CCS demonstration project
Project proponent	Enhance Energy Inc.
CO_2 sources	Agrium fertilizer plant and North West Sturgeon Refinery
Capture applications	Fertilizer production and bitumen upgrading
CO_2 storage type	Enhanced oil recovery
CO_2 stored	Up to 1.8 megatonnes per year in its initial phase
Exp. start date for storage	2015
Project locations	Capture: Alberta Industrial Heartland area, northeast of Edmonton, Alberta, Canada Storage: near Red Deer, Alberta
Funding	
Government of Canada	$63.2 million
Provincial government	$495 million
Total project cost	$1.2 billion

Project description

This carbon capture and storage (CCS) project involves the capture of CO_2 emissions from industrial sites in Alberta's Industrial Heartland. The captured CO_2 will be transported to mature oil reservoirs in central Alberta, where it will be injected for enhanced oil recovery (EOR) purposes and permanent sequestration. To demonstrate the feasibility of a single network to collect CO_2 from a large number of industrial emitters, the project will capture CO_2 from two initial sources: a large fertilizer plant and an oil sands upgrading operation (awaiting construction). This technology could be applied to similar geological reservoirs throughout Alberta that are capable of sequestering millions of tonnes of CO_2. Within five years, this project has the potential to capture and sequester up to 1.8 megatonnes (Mt) of CO_2 annually – the equivalent of taking 339 000 cars off the road each year. There is a long-term potential for capture and storage of up to 15 Mt of CO_2 annually. The project could also lead to the recovery of significant amounts of oil that cannot be reached by conventional methods.

Expected outcomes

A medium-term outcome would be the construction and development of the first leg of a CO_2 gathering and transmission infrastructure in Alberta. In the long term, the expected outcomes include the recovery of incremental oil reserves not accessible with current secondary enhanced recovery schemes. Overall, the sequestration potential could be up to 19 Mt of CO_2 in the Clive reservoirs, during and subsequent to EOR operations.

Proponent profile

Enhance Energy Inc. is based in Calgary, Alberta, specializing in the optimization of existing oil and gas fields through implementation of secondary and tertiary enhanced recovery. The company's expertise lies in CO_2 miscible flooding, water flooding and polymer flooding. The leadership team has a track record with successful implementation of large-scale, complex enhanced recovery projects.

Proponent Web site

www.enhanceenergy.com

Aussi disponible en français sous le titre :
Projet de l'Alberta Carbon Trunk Line