



## Integrated CCS Project

**Project Leader:**  
**Enhance Energy Inc.**

**Project Title:**  
**Enhance Energy CCS  
Project**

**CO<sub>2</sub> Source:**  
**Fertilizer plant and other  
industrial sources**

**CO<sub>2</sub> Storage Type:**  
**Enhanced Oil Recovery  
(EOR)**

**Location:**  
**Source in Industrial Alberta  
Heartland area, northeast  
of Edmonton; storage  
near Red Deer, in central  
Alberta**

### Project Description

This project involves the capture of CO<sub>2</sub> emissions from industrial sites in the Alberta Industrial Heartland. The captured CO<sub>2</sub> will be transported to mature oil reservoirs in central Alberta, where it will be injected for enhanced oil recovery (EOR) purposes and permanent sequestration. The project will capture CO<sub>2</sub> from two initial sources – a large fertilizer plant and an oil sands upgrading operation (awaiting construction) – in order to demonstrate the feasibility of a single network to collect CO<sub>2</sub> from a large number of industrial emitters. This technology could be applied to many similar geological reservoirs throughout Alberta that are each capable of sequestering millions of tonnes of CO<sub>2</sub>. Within five years, this project could capture and sequester up to 1.9 Mt of CO<sub>2</sub> annually, an amount equivalent to taking 358,000 cars off the road each year. There is long-term potential for capture and storage of up to 15 Mt of CO<sub>2</sub> 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<sub>2</sub> gathering and transmission infrastructure in Alberta. In the longer term, the expected outcomes include the recovery of incremental oil reserves not accessible with current secondary enhanced-recovery schemes and the sequestration of up to 15 million tonnes of CO<sub>2</sub> in the Clive and Bashaw reservoirs during and subsequent to EOR operations.

### Company Profile

Enhance Energy Inc. is a Calgary-based company that specializes in the optimization of existing oil and gas fields through the implementation of secondary and tertiary enhanced recovery. The company's expertise lies in CO<sub>2</sub> miscible flooding, water flooding and polymer flooding. The leadership team has a track record with successful implementation of large-scale, complex enhanced recovery projects.

### Project Leader Web Site

[www.enhanceenergy.com](http://www.enhanceenergy.com)



*Aussi disponible en français sous le titre :*  
Projet d'intégration de captage et de stockage de CO<sub>2</sub>

© Her Majesty the Queen in Right of Canada, 2009  
Cat No. M134-8/7-2009E (Print)  
ISBN 978-1-100-13257-0  
Cat No. M134-8/7-2009E-PDF (On-line)  
ISBN 978-1-100-13258-7



Recycled paper