



ACTL



www.enhanceenergy.com  
www.nwrpartnership.com

# The Alberta Carbon Trunk Line Project Fact Sheet

## The Alberta Carbon Trunk Line Project

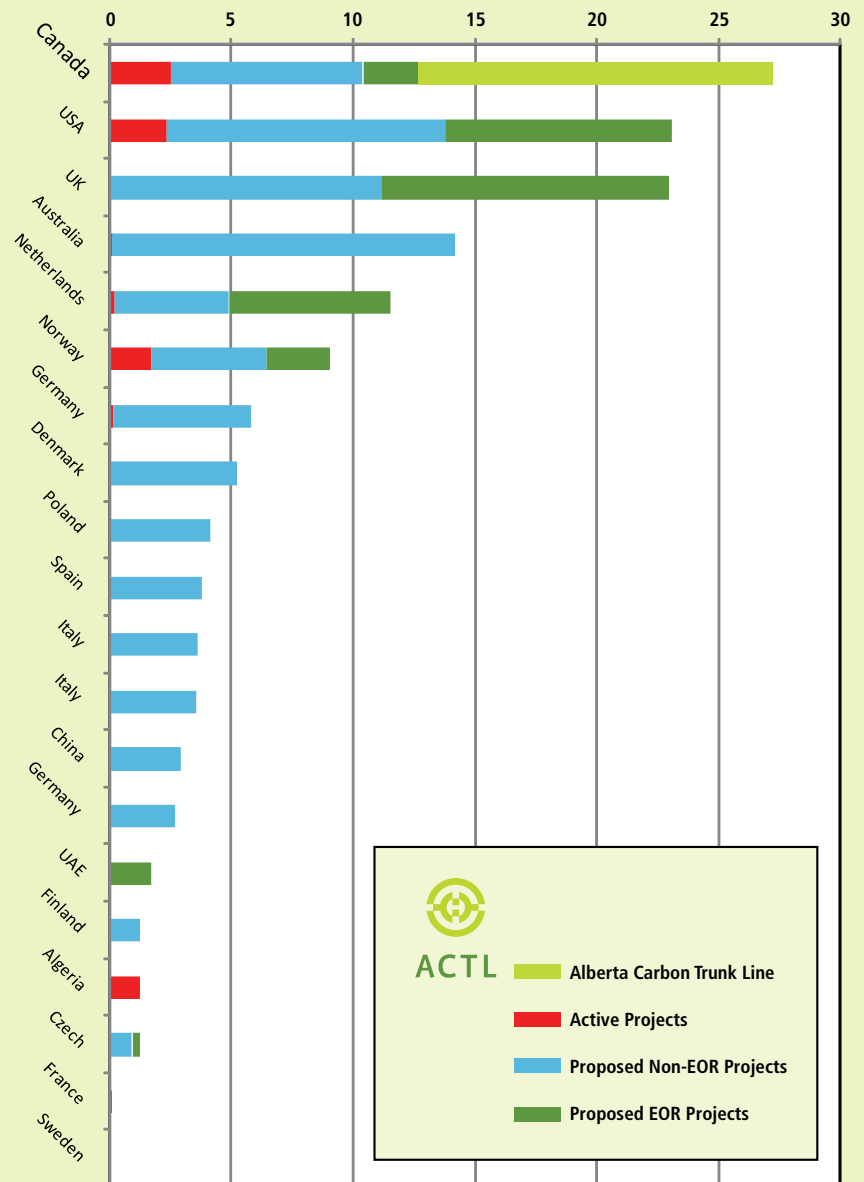
ENHANCE ENERGY INC. ("ENHANCE") will construct and operate the Alberta Carbon Trunk Line (ACTL). The ACTL is a 240 kilometre pipeline that will collect CO<sub>2</sub> from industrial emitters in and around Alberta's Industrial Heartland and transport it to aging reservoirs throughout central and southern Alberta for secure storage in enhanced oil recovery (EOR) projects.

At full capacity the ACTL route will provide access to reservoirs capable of producing an additional one billion barrels of high quality light crude oil. These reservoirs will safely and securely store 14.6 million tonnes of CO<sub>2</sub> per year as the oil is produced. At full capacity this will be equivalent to removing 2.6 million cars from Alberta's roads. The ACTL will be the largest carbon capture and storage (CCS) project in the world. It will store six times more carbon dioxide than the Weyburn project in Saskatchewan.

The ACTL will lay the groundwork for a cost effective industry-wide solution to the management of CO<sub>2</sub> emissions from Alberta's upgrading, refining, power generation and petrochemical operations. The ACTL will form the backbone of a growing CO<sub>2</sub> gathering and transportation infrastructure which encourages and enables wide scale CCS implementation.

### Summary of Worldwide CCS Projects

CO<sub>2</sub> Sequestered: Millions Tonnes per Year



Reference: sequestration.mit.edu/tools/projects/index



**ACTL**

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

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

## How does the ACTL Project benefit Albertans?

### Economic Benefits

The ACTL project will provide immediate economic benefits in the form of thousands of jobs and ultimately generate billions of dollars in additional royalties and taxes. The ACTL route provides CO<sub>2</sub> access to reservoirs capable of producing an additional one billion barrels of high quality light crude oil generating provincial royalties estimated to be at least \$15 billion.

### Environment Benefits

The ACTL will allow for permanent storage of 14.6 million tonnes of CO<sub>2</sub> per year, equivalent to removing 2.6 million cars from Alberta's roads.

## How does EOR work?

Enhanced oil recovery (EOR) is implemented in a reservoir after conventional production is complete. EOR uses CO<sub>2</sub> to liberate the remaining oil that is trapped in the reservoir. It does this by reducing the viscosity of the oil and causing it to swell. This allows the trapped oil to flow to the surface.

## CO<sub>2</sub> Sources

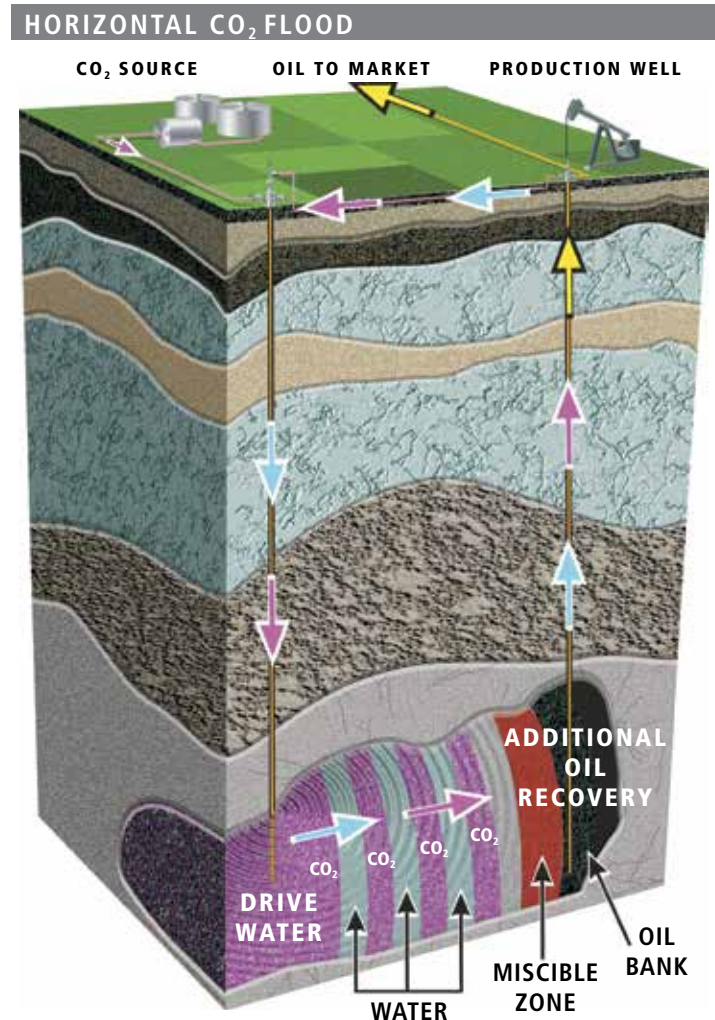
The initial CO<sub>2</sub> suppliers for the ACTL are Agrium Inc. and North West Redwater Partnership.

### Agrium ([www.agrium.com](http://www.agrium.com))

Agrium has an existing fertilizer manufacturing facility located in Redwater, Alberta. This facility is Alberta's second largest nitrogen producing facility and manufactures both nitrogen and phosphate-based fertilizers. Agrium is currently emitting the excess CO<sub>2</sub> from its manufacturing process.

### North West Redwater Partnership ([www.nwrpartnership.com](http://www.nwrpartnership.com))

North West Redwater Partnership is also located in Redwater, Alberta and is pioneering an innovative green strategy to upgrade and refine Alberta's bitumen resources using gasification technology. North West Redwater Partnership is the first bitumen-based refinery in the world to incorporate an integrated CO<sub>2</sub> management plan, resulting in one of the lowest carbon transportation fuels in North America. North West Redwater Partnership will maximize the value of Alberta's resources by converting bitumen into high value end products, primarily ultra low sulphur diesel. Gasification allows North West Redwater Partnership to capture the majority of the carbon



emissions before they reach the atmosphere – pure CO<sub>2</sub> that can be used in EOR. North West Redwater Partnership will supply this CO<sub>2</sub> to the ACTL seeing it stored safely and permanently deep underground.

### Other sources

Enhance designed the ACTL as a solution to both current and future CO<sub>2</sub> emissions in Alberta. Enhance has been working with other industrial emitters and as other sources of CO<sub>2</sub> become available, the ACTL will serve as the catalyst for significant CO<sub>2</sub> EOR development by providing the necessary infrastructure to facilitate these projects.



# ACTL

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

## Where does the CO<sub>2</sub> go?

Routing of the ACTL was carefully selected to maximize access to oil reservoirs amenable to CO<sub>2</sub> EOR and the secure storage of CO<sub>2</sub>. The CO<sub>2</sub> transported on the ACTL will initially be delivered to Clive, Alberta. Enhance purchased the Clive oil field from Santonia Energy Inc. in September 2013.



### FOR MORE INFORMATION, CONTACT:

Enhance Energy Inc.  
Suite 900, 333 5 Avenue SW  
Calgary, Alberta T2P 3B6  
CANADA

Phone: 403.984.0202  
Email: [info@enhanceenergy.com](mailto:info@enhanceenergy.com)  
Website: [www.enhanceenergy.com](http://www.enhanceenergy.com)