

December 1, 2009

Project will turn coal into clean burning synthetic gas
Swan Hills project will also reduce land use footprint

Swan Hills... The Alberta Government has signed a Letter of Intent with Swan Hills Synfuels for a carbon capture and storage (CCS) project that will turn coal into low-emissions electricity and capture carbon dioxide (CO₂) for use in enhanced oil recovery.

The in-situ coal gasification project will tap into a deep, unminable coalbed near Swan Hills and turn the coal into a synthetic gas (syngas) to be used to generate clean electricity. The project will also capture up to 1.3 million tonnes per year of CO₂ to enhance the recovery of conventional oil in the area.

“Creating syngas from coal and sequestering CO₂ achieves all three goals in the Provincial Energy Strategy,” said Energy Minister Mel Knight. “The gasification process is clean energy production; turning coal into clean burning syngas is wise energy use; and sequestering CO₂ for enhanced recovery from existing fields will sustain economic prosperity in north-central Alberta while generating new long-term revenues for Albertans.”

The province will invest \$285 million in the Swan Hills project, from its \$2 billion Carbon Capture and Storage Fund. Construction is expected to begin in 2011 with carbon capture scheduled to start by 2015.

Swan Hills Synfuels President Douglas Shaigec says the Swan Hills project has the potential to increase the value of Alberta’s vast coal deposits. “This will position Alberta as a leader in adapting and integrating proven technologies that greatly reduce emissions and minimize environmental impacts on land, air and water, while generating reliable baseload electricity,” said Shaigec.

“This project uses proven processes in an innovative way and will demonstrate how Alberta’s vast coal resources can be used to develop clean power,” added Knight. “Not only is there great potential use for this method of electricity generation elsewhere in Alberta, but the technology could provide positive solutions to many other jurisdictions around the world.”

Building critical infrastructure for future economic growth is a key element of Alberta's plan for a strong economic recovery. *The Way Forward* will bring Alberta back into a surplus position in three years by trimming government spending; using cash reserves to protect key programs; continuing to invest in public infrastructure; and ensuring that our province's industries are competitive and continue to attract investment to provide jobs and prosperity.

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Backgrounder: Swan Hills In-Situ Coal Gasification (ISCG) Project

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Backgrounder

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Carbon Capture and Storage (CCS) project details

Swan Hills In-Situ Coal Gasification (ISCG) Project

The Swan Hills Synfuels project will use an in-situ coal gasification (ISCG) process to access coal seams that have traditionally been considered too deep to mine. The coal seams, located about 1,400 metres beneath the earth's surface, will be accessed through wells that are similar to conventional oil and gas wells. The ISCG wells will be used to convert the coal underground in its original seam into a clean synthetic gas known as "syngas".

The syngas will be piped to the Whitecourt area to fuel new high-efficiency combined cycle power generation for Alberta's electricity market. It will provide 300 MW of clean power generation capacity - enough for about 300,000 homes.

The carbon dioxide (CO₂) created during the gasification process will be captured and used for enhanced oil recovery (EOR) in the Swan Hills area. EOR is a process that uses CO₂ to increase the pressure in depleting conventional oilfields, allowing more oil to be produced.

This project uses proven processes in an innovative way and is expected to serve as a model for clean power development from Alberta's vast coal resources. The potential to

use this method elsewhere in Alberta to provide reliable baseload electricity supply is significant.

CCS project funding details

The Alberta government has committed \$2 billion to advance CCS technology. Projects will be eligible to receive up to a maximum of 75 percent of the total incremental cost to capture, transport and store CO2. A maximum of up to 40 percent of the approved funding will be distributed during the design and construction stage based on achieved milestones and up to an additional 20 percent of the approved funding will be granted upon commercial operation. The remaining 40 percent of the funding will be paid as CO2 is captured and stored over a maximum period of 10 years.

No funds will be dispersed until the companies enter into a funding agreement.

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