Feds fund 8 carbon capture projects in Western Canada

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The Harper government has given the green light to eight projects in Alberta, B.C. and Saskatchewan aimed at developing carbon capture and storage technologies.

Funding was announced last April, but it took the Natural Resources Department a year to choose from almost 40 proposals it received.

"I don't think it's possible to overstate the importance of this technology," Natural Resources Minister Lisa Raitt said Thursday at an announcement in Calgary.

"These companies … will be demonstrating how carbon capture and storage can be used to reduce our emissions associated with projects such as fertilizer production, gas processing and coal-fired electricity generation."

Ottawa will spend between $3 million and $30 million on each of the projects up to a total of $140 million.

"It's very true it is not an inexpensive solution and moving from research to commercialization is very difficult," Raitt said. "However, that's exactly why we have to be here today … the end goal is to make … this technology … utilized and socially acceptable in terms of cost."

The Alberta government has already said it will spend $2 billion to develop a carbon capture system for the oilsands.

U.S. President Barack Obama and Prime Minister Stephen Harper announced after Obama's visit to Canada last month that they would work together to develop new technologies to stem emissions from the coal and oil industries.

Carbon capture and storage is a process in which carbon dioxide is taken from the air and buried. A timeline for when such a technology could actually begin reducing the carbon footprint left by big polluters is unclear.

However, Saskatchewan's minister of Crown corporations pointed to a project already in place in his province as proof that it works.

"We have an operation in Saskatchewan operating right now. It's commercially viable and it's beyond the test stage, and now we're taking it to that next level where we're talking many tonnes of carbon capture and sequestration," said Ken Cheveldayoff, who was at the announcement.

Raitt said it's hoped "rising economic powers" such as India and China will eventually apply the technology to their energy production.

The Heartland Area Redwater Project is one of the eight projects receiving funding and will operate in the Fort Saskatchewan and Redwater areas near Edmonton. Lead proponents are the Alberta Research Council and ARC Energy Trust of Calgary.

"This will allow us to move forward into the next two phases of the project from the geological review to the actual installation of an injection well," said the research council's Brent Lakeman. He hopes the project will be able to handle carbon capture and storage of several million tonnes per year in the long term.

Projects receiving federal funding

Heartland Area Redwater Project — The Alberta Research Council and ARC Energy Trust, leading this Edmonton-area project, will try to demonstrate carbon capture and storage on a commercial scale of several million tonnes per year.

Integrated Carbon Capture and Enhanced Oil Recovery — Lead by Enhance Energy, the project northeast of Edmonton, involves the capture of CO2 emissions from industrial sites.

Fort Nelson Exploratory Project — Spectra Energy Transmission hopes its existing gas processing plant in Fort Nelson, B.C. will be able to inject large volumes of sour gas more than two kilometres underground.

Pioneer Project — Proposed for the Keephills thermal electric power generation plant, TransAlta hopes the plant will perform several functions including capture of chilled ammonia, which could then be used in enhanced oil recovery and stored in saline aquifers.

Belle Plaine Integrated Polygeneration CCS Project — TransCanada's plan involves building a $5-billion electricity power plant in Belle Plaine, Sask.

CO2 Injection in Heavy Oil Reservoirs — Husky Energy Inc., at its oil upgrader and ethanol plant in Lloydminster, Sask., wants to develop new methods for enhanced heavy oil recovery.

Alberta Saline Aquifer Project/Genesee Post-Combustion Demonstration Plant — EPCOR's Genesee project involves a demonstration facility that would capture CO2 from a coal-fired power plant in Alberta, and transport it to the Saline Aquifer Project for storage.