

# Energy firms collect \$46 million towards six projects which aim to cut carbon dioxide emissions

BY BILL MAH, EDMONTONJOURNAL.COM JULY 12, 2012



A construction worker walks past the steam generating facility at the Cenovus Foster Creek SAGD oil sands operations south of Fort McMurray this month. The firm received \$10 million Thursday from CCEMC towards its \$62 million project at its other SAGD facility at Christina Lake to pilot a chemical looping steam generator that would greatly reduce carbon dioxide emissions for steam generators.

**Photograph by:** Reuters, file, edmontonjournal.com

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EDMONTON - Alberta's climate-change technology fund announced \$46 million Thursday for six energy companies designing projects to reduce greenhouse gas emissions.

The money comes from the Climate Change and Emissions Management Corp. (CCEMC), a non-profit, arm's-length group created by the Alberta government.

It invests money collected from Alberta firms whose greenhouse emissions total more than 100,000 tonnes of a year who have to buy offsets, reduce emissions or send \$15 per carbon tonne over target to the fund. It has grown to \$312 million, with more than \$167 million paid out to 31 clean energy projects.

Alberta Environment Minister Diana McQueen said the projects show the province is "striking a balance between environmental protection and economic growth and clean-energy development."

Companies receiving money in this fourth round of funding are Cenovus Energy, Husky Energy, Imperial Oil, Inventys Thermal Technologies Inc., MEG Energy Corp., and N-Solv Corp.

Their projects have a combined value of \$327 million and are expected to reduce Alberta's greenhouse gas emissions by about 183,000 tonnes over 10 years, McQueen said.

The projects were chosen from 40 companies who expressed interest in CCEMC's latest call for proposals of carbon capture and storage and clean-energy projects.

While the province stands behind its commitment to carbon capture and storage, McQueen said it is important to develop technology to reduce emissions at the source by improving efficiency.

"For example, three of the projects being recognized today vastly improve the efficiency of in situ oilsands extraction."

CCEMC chairman Eric Newell said the investments may take years to bear fruit.

"Some projects deliver immediate emissions reductions and others have the potential for delivering significant reductions with time for the technology to mature and be deployed into the marketplace," CCEMC chairman Eric Newell.

"We are investing in the possibilities."

Newell acknowledged some observers may ask why energy giants like Imperial need funding for projects that may have proceeded anyways.

Newell said funding the projects helps, "if it's going to be a catalyst for further advancement or if it's going to let the information be open to the public."

Imperial Oil senior vice-president Glenn Scott said the company decided to proceed with its cyclic solvent process pilot project in 2011 prior to applying for CCEMC funding.

"But there are benefits from collaboration from CCEMC and the government," Scott said. "Sharing learning and sharing commitment is a value to us."

Inventys co-founder Brett Henkel said CCEMC funding was crucial for its project.

"Since there's not very good visibility on CO2 regulations yet, industry and investors are hesitant to put up a lot of risk money in that area right now, Henkel said.

"In our case, this project would not go ahead without CCEMC support."

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**Clean technology projects:**

**Imperial Oil** received \$10 million for its Cold Lake in situ bitumen recovery project, called cyclic solvent process, that injects an organic solvent instead of steam, cutting the need for a water source and reducing emissions.

“It takes years to advance this kind of technology,” said Glenn Scott, Imperial’s senior vice-president. “We’ve been working on CSP since 1993 first through modelling and laboratory testing then through small field trials and in 2011, we committed nearly \$100-million to building a large-scale demonstration pilot.

**N-Solv** is getting \$10 million for its \$49-million pilot project at Suncor’s Dover lease northwest of Fort McMurray that injects warm propane or butane vapour into horizontal wells instead of water.

**Cenovus** received \$10 million for a \$62-million project at the Christina Lake oilsands property south of Fort McMurray. It will install a 10-megawatt chemical looping combustion steam generator to generate the steam used to heat and soften underground oil so it can be pumped to the surface.

“We believe this technology could significantly reduce the cost of carbon capture which will help Alberta achieve its greenhouse gas reduction strategy,” said Song P. Sit, Cenovus technical adviser.

**MEG Energy**, which received \$10 million, is developing a “mild-intensity process” in the Alberta Industrial Heartland region to convert bitumen into crude oil that is more easily moved by pipeline without using a diluent. The total project value is \$100 million.

“The goal of this project is to demonstrate a low-intensity approach to adding value to oilsands products here in Alberta,” said MEG spokesman Brad Bellows.

**Husky** will use funding of nearly \$3 million for its \$10-million Lashburn project near Lloydminster that is designed to capture and transport carbon dioxide from a SAGD steam generator and inject it into a partly depleted oil reservoir.

**Inventys** is receiving more than \$3 million to help commercialize technology to capture carbon dioxide from industrial flue gas streams. The \$6-million project proposes to capture emissions from a natural-gas powered steam boiler at Nova Chemical’s petrochemical plant at Joffre. Carbon dioxide from burning natural gas is difficult to capture because of low concentrations in the flue gas.