

First large-scale carbon capture goes online in Canada

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Coal harvested from a strip mine sits behind a pair of coupled coal cars on June 3, 2014 in Printer, Kentucky

The world's first large-scale carbon capture and storage—built into a SaskPower coal-fired power plant in the Canadian prairies—will be inaugurated Thursday.

If successful, the Can\$1.4 billion (\$1.25 billion) pilot project could

renew interest in cheap coal for use in [power](#) generation, at a time when several countries are looking to decommission coal-fired power generating stations, a top source of greenhouse gas emissions linked to global warming.

The launch of the plant, in Estevan, Saskatchewan, is "a momentous point" in the history of the development of carbon capture and storage technologies, International Energy Agency chief Maria van der Hoeven said in a statement.

These nascent technologies allow the capture of [carbon dioxide](#), or CO₂, from fuel combustion or industrial processes, and enable its storage underground.

"The experience from this project will be critically important," van der Hoeven said.

"I wish the plant operator every success in showing the world that large-scale capture of CO₂ from a power station is indeed not science fiction, but today's reality."

The IEA predicts that [carbon capture](#) and storage will account for one-sixth of global emissions reductions by 2050.

Without the technology, the agency said two-thirds of proven oil reserves cannot be commercialized if the rise in global temperatures is to remain below two degrees Celsius.

Non-renewable coal is used to generate 40 percent of the world's electricity, according to SaskPower.

The utility has three coal power plants that generate nearly half of the Canadian province's electricity, as well as 70 percent of its [greenhouse](#)

[gas emissions.](#)

SaskPower refitted its aging Boundary Dam to produce more than 110 megawatts of "clean base load electricity" while capturing one million tonnes of carbon dioxide per year.

It was brought online in September.

Most of the carbon it produces is pumped into nearby oil fields to help in the extraction of petroleum.

The remainder is stored in deep saline aquifers, where it is believed it will remain trapped for thousands of years.

Similar projects are currently under construction elsewhere in Canada, in the United States, Saudi Arabia and Australia.

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