Sand Storm

The U.S. government is changing its environmental policy. Now Canada may have to rethink its policy as well.

By Hyun Young Lee
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(See Corrections & Amplifications below.)

Proposed policy changes in the U.S. are creating new challenges for Canada, the U.S.'s biggest trading partner and No. 1 energy supplier.
President Barack Obama has signaled a much tougher stance on the environment than his predecessor, unveiling a budget blueprint about two weeks ago that included a plan to cut greenhouse-gas emissions via a cap-and-trade system that sets a fixed limit on carbon-dioxide emissions and requires companies to buy and sell the rights to emit those gases. Mr. Obama expects to raise $646 billion by 2020 from auctioning off these permits, beginning in 2012.

Such a system, if approved, would be at odds with a less-stringent approach that Canadian Prime Minister Stephen Harper's government has been backing. Rather than setting a fixed cap on emissions, Canada's plan focuses on reducing emissions intensity, or the ratio of greenhouse gases to industrial output.

The difference in approaches poses a dilemma for Mr. Harper. Analysts say a U.S. cap-and-trade system likely would contain some sort of mechanism for limiting imports from countries with weaker climate-change rules, meaning Canada would need to beef up its emissions rules to avoid being penalized. Doing so, however, could hurt Canada's oil-sands industry, the nation's fastest-growing producer of greenhouse gases, adding future costs to an industry currently reeling from the steep plunge in oil prices.

Mr. Harper "obviously wants to play ball with the U.S. -- he wants to be able to keep sending them oil, and the U.S. isn't really in a position to refuse it," says Robert Johnston, director of energy and natural resources at political-risk research firm Eurasia Group in New York. "There's lots of ways to mitigate the short-term impact [on the oil-sands industry]...but the long-term costs of carbon are going to be very high."

When President Obama visited Ottawa in mid-February, Mr. Harper said he planned to watch U.S. emissions policy "with great interest," searching for ways to link it with Canada's plan. He sought to play down any climate-change tension between the trading partners, telling reporters, "I don't think the differences are as near as stark as you suggest."

Canada's environment minister, Jim Prentice, echoed those thoughts when he met with policy makers in Washington last week, saying the goal is to make sure the two nations' policies are workable together. "Certainly, they cannot be discordant."

While few in the energy industry believe the U.S. can afford to turn away Canada's oil, it is unclear whether oil-sands companies would be awarded any sort of exemption if the nations adopt stricter emissions models.

Susan Povenmire, a senior adviser at the U.S. State Department's Bureau of Oceans, Environment and Science, says it's too soon to be making comments on how the oil sands would be treated.

'Dirty Oil'

With 173 billion barrels of proven oil reserves, the oil sands in Alberta are the world's biggest trove of hydrocarbons outside Saudi Arabia. Over the past decade, oil companies such as Royal Dutch Shell PLC and Exxon Mobil Corp. have flocked to exploit this resource, and the Canadian government has trumpeted it as a source of energy security for the U.S. Indeed, the U.S. gets almost a fifth of its crude imports, or 2.5 million barrels a day, from its northern neighbor, the bulk of which will soon come from the oil sands.

Oil sands are deposits of bitumen, a thick, tarry form of petroleum, buried deep beneath forests in Alberta. The bitumen needs to be extracted from the ground -- usually through strip mining or open-pit techniques -- and then processed to remove impurities before it can be used by refineries to produce gasoline and other fuels.

Because the process emits more greenhouse gas than conventional oil drilling, crude derived from oil sands has drawn the ire of environmentalists, who call it "dirty oil" and are pressuring President Obama to limit its use.

More than 33 million metric tons of greenhouse gases are emitted from oil-sands production each year, according to the most recent government figures, accounting for almost 5% of Canada's overall emissions. That figure would rise to 12% by 2020 if no steps were taken to limit emissions, Canada's Environment Ministry said in a report released early last year.

Higher Costs?

The Canadian government outlined its plan to cut emissions intensity two years ago, replacing its commitments under the Kyoto Protocol with different targets using looser standards. The Harper administration hoped that the plan, which is due to kick in next year, would slice 20% off Canada's 2006 emissions levels by 2020 without the explicit need for fixed caps.

Alberta has had its own intensity-based system in place since July 2007, with targets and standards that differ from those in the federal plan. The provincial and federal governments have pledged to reconcile their emissions plans.

Environmentalists criticized both plans, saying they would allow overall greenhouse gases to rise if industrial production expands quickly enough. That's exactly what happened in Alberta's oil sands over the past two decades; it became Canada's fastest-growing source of greenhouse gases, even though the industry made great strides in reducing intensity levels.

If Canada switches to a cap-and-trade model, oil-sands producers could be forced to buy credits costing anywhere from $10 to $75 and beyond per metric ton of carbon dioxide for overshooting their emissions limits, according to various analysts' estimates.

At $10 a metric ton, that could mean an additional $800 million in annual domestic regulatory costs for the industry, based on estimated 2009 output of 1.5 million barrels of oil a day, according to a recent report by FBR Capital Markets Corp. in Arlington, Va.

"It really puts [oil-sands] growth in a difficult position," says ***Sam La Bell***, vice president at Toronto-based ***Veritas Investment Research.*** "The oil sands are really right off the scale versus anything else -- no other Canadian industry [exporting to the U.S.] produces as much greenhouse gas."

Shifting Winds

Tracking Canada's policies on greenhouse-gas emissions

April 1998: Canada's Liberal government signs the Kyoto Protocol—the UN's inaugural climate-change agreement—targeting a 6% cut from 1990 levels by 2012. Canada ratifies Kyoto at the end of 2002.

February 2005: Kyoto formally comes into force in Canada, and two months later, the government pledges C$10 billion toward meeting its commitments. Canada's emissions that year are 31% above its 2012 target.

January 2006: The Conservatives form a minority government, which rejects Canada's Kyoto commitments. Though the new government doesn't formally withdraw from the protocol, it slashes federal support for environmental programs.

April 2007: The government unveils its emissions plan, dubbed "Turning the Corner," aiming to cut 20% from 2006 levels by 2020. But it relies on emissions intensity, targeting the ratio of greenhouse gases to industrial output, and is criticized as pandering to the oil-sands industry.

July 2007: Alberta introduces its emissions plan, under which heavy industry must cut emissions intensity by 12% from 2003-05 levels.

November 2008: After President Obama's election win, Canada's government softens its stance on cap and trade, calling for a North America-wide system and joint climate-change policy with the U.S.

February 2009: President Obama visits Ottawa, striking an agreement with Prime Minister Harper to collaborate on developing clean energy technologies. Mr. Obama sidesteps questions on a broader North American approach to regulating emissions, and little specific mention is made of the oil sands.

Source: WSJ reporting

Greg Stringham, vice-president of markets and fiscal policy for the Canadian Association of Petroleum Producers, an industry lobbying group, says that without details, it is difficult to judge how a cap-and-trade system would affect oil-sands producers. "It's very early to say what that cost is going to be, and if that's going to be unsustainable for the oil sands," he says.

In the meantime, Mr. Stringham says "real progress" has been made on carbon capture and storage, an unproven technology that aims to trap and store carbon-dioxide gases underground.

The federal and provincial governments have set aside a combined three billion Canadian dollars (US$2.3 billion) to promote the technology, and Messrs. Obama and Harper vowed during their meeting to work together to advance carbon-reduction technologies. Enhance Energy Inc., a privately held Calgary company, plans to build Alberta's first carbon-dioxide pipeline, collecting the gas from two industrial facilities in central Alberta and shipping it some 150 miles south, where it will be pumped underground. The company says the pipeline is slated to start up in 2011 and initially carry 5,000 metric tons of carbon-dioxide gas a day.

"What we really need is for a project to happen right now, to show that it isn't all rhetoric and press releases," says Susan Cole, Enhance's president.

Environmentalists say only a limited number of oil-sands operations can be adapted easily for carbon capture, and that capturing and transporting carbon-dioxide gas from less-suitable projects could produce more emissions than the technology saves.

"It comes down to how many dollars you want to throw at something," says Marlo Reynolds, a Calgary-based executive director at the Pembina Institute, an environmental think tank. "There's massive investment required to clean up existing production, and that's even before we start looking at future projects."

—Ms. Lee is a staff reporter for Dow Jones Newswires in Ottawa.

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Corrections & Amplifications

Alberta's oil sands contain 173 billion barrels of proven oil reserves. A previous version of this article about Canada's environmental policy in Monday's Environment report incorrectly gave the figure as 173 million barrels.