

Reliance on Oil Sands Grows Despite Risks



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A Devon Energy site near Conklin. More Photos »

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CONKLIN, Alberta — Beneath the subarctic forests of western Canada, deep under the peat bogs and herds of wild caribou, lies the tarry rock that is one of America's top sources of imported oil.

There is no chance of a rig blowout

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here, or a deepwater <u>oil spill</u> like the one from the <u>BP</u> well that is now fouling the Gulf of Mexico. But the oil extracted from Canada's <u>oil sands</u> poses other environmental challenges,

like toxic sludge ponds, greenhouse gas emissions and the destruction of boreal forests.

In addition, critics warn that American regulators have waived a longstanding safety standard for the pipelines that deliver the synthetic crude oil from Canada to refineries in the United States and have not required any specific emergency plans to deal with a spill, which even regulators acknowledge is a possibility.

Oil sands are now getting more scrutiny as the Obama administration reviews a Canadian company's request to build a new 2,000-mile underground pipeline that would run from Alberta to the Texas Gulf Coast and would significantly increase America's access to the oil. In making the decision, due this fall, federal officials are weighing the environmental concerns against the need to secure a reliable supply of oil to help satisfy the nation's insatiable thirst.

The gulf accident adds yet another layer of complexity. Regulators and Congress are weighing new limits on drilling off the coastline after the Deepwater Horizon

catastrophe, increasing the pressure to rely more heavily on Canada's oil sands. At the same time, political consciousness of the risks has grown.

Canadian oil sands are expected to become America's top source of imported oil this year, surpassing conventional Canadian oil imports and roughly equaling the combined imports from Saudi Arabia and Kuwait, according to IHS Cambridge Energy Research Associates, a

consulting firm.

In a new report, it projects that oil sands production could make up as much as 36 percent of United States oil imports by 2030. "The uncertainty and the slowdown in drilling permits in the gulf really underscores the growing importance of Canadian oil sands, which over the last decade have gone from being a fringe energy source to being one of strategic importance," said Daniel Yergin, an oil historian and chairman of IHS CERA. "Looking ahead, its importance is only going to get bigger."

Last week, a phalanx of Canadian diplomats took advantage of a previously planned trip to Washington to promote oil sands as a safer alternative to deepwater drilling because leaks would be easier to detect and control.

In an interview afterward, Alberta's premier, Ed Stelmach, said he was not trying to capitalize on the gulf disaster, but merely promoting "what we have to offer, which is security of supply" and "a safe stable government."

From a supply standpoint, there is much to recommend oil sands, also known as tar sands. Canada has 178 billion barrels of proven oil reserves, virtually all in oil sands. Only Saudi Arabia has more proven oil reserves.

The United States produces about five million barrels of oil a day and imports 10 million more. Canada accounts for about 1.9 million barrels of the daily imports, roughly half of it from oil sands.

"If you need crude to fuel your economy, you'd really better be thinking about Canada," said Chris Seasons, president of the Canadian unit of <u>Devon Energy</u>, an oil company based in Oklahoma City. Devon is already producing 35,000 barrels a day from oil sands around Conklin. It expects to expand its production to 200,000 barrels a day by 2020, in part through a second project, with BP. That would be roughly equivalent to current imports from Kuwait.

To increase delivery of oil sands crude, <u>TransCanada</u> is building the Keystone pipeline system. Two Keystone pipelines have been approved, with the first one delivering oil to Illinois in June. A much longer pipeline to Texas, called Keystone XL, is still under federal

review. If fully developed as proposed, the system would allow Canada to export an additional 1.1 million barrels of oil a day.

In a world in which so many oil-producing nations are far away, unstable or hostile to the United States, Canadian oil sands hold great political appeal.

"It is undeniable that having a large supply of crude oil available by pipeline from a friendly neighbor is extremely valuable to the energy security of the United States," said David L. Goldwyn, coordinator for international energy affairs at the State Department. The department is scheduled to decide this year whether to approve Keystone XL.

Complicating the calculation is the fact that Canada's backup market for its oil is probably China. Plans are already under way for pipelines from Alberta to Canada's western coast for shipments to Asia. Although those could take up to a decade to build because of land considerations, Mr. Stelmach, Alberta's premier, flew to China on Friday on a trade mission to Shanghai, Beijing and Harbin. He said one of his messages was, "We've got energy."

Whatever the advantages, serious environmental problems and risks come with producing oil from oil sands.

Most of the biggest production sites are huge mine pits, accompanied by ponds of waste that are so toxic that the companies try to frighten birds away with scarecrows and propane cannons.

Extracting oil from the sands produces far more greenhouse gases than drilling, environmental groups say, and the process requires three barrels of water for every barrel of oil produced because the dirt must be washed out. Already, tailing pools cover 50 square miles of land abutting the Athabasca River.

The mines are also carving gashes in the world's largest intact forest, which serves as a vital absorber of carbon dioxide and a stopover point for millions of migrating birds.

Proponents of oil sands acknowledge the dirtiness of the extraction process. But they say that newer projects are using more efficient technologies.

For example, instead of surface mining, the Devon project injects high-pressure steam into the reservoir to enable the heated oil sands to be pumped out of the ground as a fluid, which is less invasive of the forest. Shell is also experimenting with ways to capture some of the carbon emissions, and other companies are trying to use solvents to heat the steam more efficiently.

Some analysts argue that imports from oil sands will replace conventional oil from places like Venezuela and Mexico, where heavy oil requires so much refining that it produces a comparable amount of greenhouse gas emissions. For the United States, "in the grand scheme of things, the actual emissions impact is very small," said Michael A. Levi, a senior fellow at the <u>Council on Foreign Relations</u>.

But environmental groups are unmoved. "Having tar sands in our energy mix is simply inconsistent with the kind of climate and environment promises we've heard the Obama administration make," said Susan Casey-Lefkowitz, who works on the issue at the <u>Natural Resources Defense Council</u>.

The high-pressure pipelines that transport the oil give rise to separate safety and environmental concerns, which have been spotlighted by local ranchers and other opponents during the current comment period on the State Department's environmental impact statement for the proposed pipeline expansion.

One big question is whether TransCanada should get waivers to use thinner pipes on Keystone XL than is normally required in the United States.

The Transportation Department's Pipeline and Hazardous Materials Safety Administration, which oversees oil pipelines, gave such waivers to TransCanada for the first two Keystone pipelines. TransCanada says the thinner pipes have been allowed in Canada for decades and pose no extra risk.

But Cesar de Leon, a former deputy administrator of the pipeline and safety administration who is now an independent pipeline safety engineer, said the thinner standard is appropriate only if pipelines are being aggressively monitored for deterioration. Although the safety administration required such monitoring in the Keystone permits, it "didn't have the people to monitor compliance," he said.

In a report in March on the agency's broader permitting practices, the Transportation Department's inspector general found that, in many cases, the agency had failed to check the safety records of permit applicants and had not checked to verify that permit terms were being followed.

Officials of the safety administration did not respond to interview requests. But in written testimony to a House committee in April, the agency's new administrator, Cynthia L. Quarterman, acknowledged problems and promised to improve. "As you know," she said, "we inherited a program that suffered from almost a decade of neglect and was seriously adrift."

Senator Jon Tester, Democrat of Montana, said the whole situation was alarmingly reminiscent of the permit waivers that were routinely granted to offshore oil wells, including the BP well leaking in the gulf. "I think it is incumbent on myself as a policy maker to say 'hold it,' " Mr. Tester said.

In another sign of concern among policy makers, on April 29 South Dakota's Public Utilities Commission rejected TransCanada's request for an exemption from a state requirement to notify affected landowners about spills of less than five barrels.

The gulf spill haunted local public hearings on the Keystone project last week in Murdo, S.D., and York, Neb.

Some people along the path of the proposed and existing pipelines complained that no one had required TransCanada to produce an emergency plan for a spill, even though the new pipes would traverse pristine territory, including the Ogallala Aquifer, which supplies water to a wide swath of the nation's breadbasket and where even a small spill could have grave consequences.

Others demanded that thicker steel be used. And some asked how the pipeline would be monitored for wear and tear.

At the York hearing on May 10, Jim Condon, an engineer from Lincoln, Neb., said the amount of oil spewing from the leaking BP well was just a small fraction of what would be passing through the Keystone XL pipeline. "A rupture of the pipeline would be a huge

problem," he said.

Clifford Krauss reported from Alberta, and Elisabeth Rosenthal from New York.

This article has been revised to reflect the following correction:

Correction: May 19, 2010

An earlier version of this article misidentified Senator Jon Tester's party affiliation.

A version of this article appeared in print on May 19, 2010, on page B1 of the New York edition.

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