

Oil Sands

FACTS

U.S. Edition

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THE OIL SANDS
DEVELOPERS GROUP

Energy From Athabasca

OVERVIEW

- ▶ **Canada is the top supplier of oil to the United States, supplying a total of over 2.4 million barrels per day; of this, more than 1.2 million barrels of crude oil come from Canada's oil sands.**
- ▶ **Canadian oil reserves are the second largest in the world, behind Saudi Arabia.**
- ▶ **Canada's reserves contain 178 billion barrels, and 97 per cent (over 170 billion barrels) are located in the oil sands.**

▶ Economics and Job Creation

- Over the next five years, oil sands production could create an estimated 343,000 new jobs in the United States.
- Modifications to refineries and pipeline construction to transport Canadian crude create jobs and bring tax revenue and additional economic benefits to the U.S.
- Oil sands demand for American companies' goods and services could contribute \$34 billion to the U.S. GDP in 2015 and up to \$42 billion by 2025.
- Canadians buy a wide variety of machinery from the U.S. including the power shovels, backhoes and excavating machinery as well as professional services such as engineering and software development .

ENERGY SUPPLY

- Over the last decade, the share of U.S. crude oil imports coming from Canada has increased from 13 per cent to 22 per cent.
- In the Midwest alone, the demand for Canadian crude is currently 1.2 million barrels per day.
- The Energy Information Agency expects fossil fuels to still supply over three quarters of the energy consumption in the United States in 2035.
- By 2035, Canada could provide up to 40 per cent of total U.S. oil imports.

ISSUE: AIR

► EMISSIONS

- The oil sands currently account for less than 0.1 per cent of total global greenhouse gas emissions.
- The oil sands industry has reduced its greenhouse gas emissions per barrel of oil by an average of 39 per cent since 1990, with some operations achieving reductions as high as 45 per cent.
- On a “wells-to-wheels” basis, life cycle emissions from oil sands crude are comparable to the average imported crude oil consumed in the United States.

ISSUE: AIR

► AIR QUALITY

- Air quality around oil sands operations is better than all North American cities reviewed by the Alberta Clean Air Strategic Alliance.
- Air quality in the oil sands region is monitored around the clock. Results are available at www.wbea.org/content/view/56/1111.
- The province of Alberta has committed \$2 billion toward carbon capture and storage (CCS). This is one of the largest CCS investment in the world and is the per capita equivalent of a \$340-billion investment in the United States.

ISSUE: LAND

► SURFACE DISTURBANCE

- Canada's oil sands are found below the surface of 54,131 square miles of land, an area about the same size as the state of New York or North Carolina.
- The oil sands are located in the Canadian boreal forest. The Canadian boreal forest is as large as 88 per cent of the entire United States land area. Mineable oil sands exist under only 0.1 per cent of this total.
- More than 80 per cent of oil sands reserves will be developed using in-situ technologies (advanced drilling technologies).
- In-situ projects resemble conventional oil development and do not require tailings ponds or mine pits.

ISSUE: LAND

- While disturbance is occurring daily, in more than 40 years oil sands mining has disturbed about .02 per cent of the Canadian boreal forest – some 255 square miles, or a total land area approximately the size of Chicago, Illinois.

▶ LAND RECLAMATION

- As required by law, and included in all project approvals, all lands disturbed by oil sands operations must, and will, be reclaimed.
- Reclamation work is ongoing and continuous in the oil sands – to date, some 28 square miles of land has been reclaimed.
- Industry has planted more than 7.5 million tree seedlings towards reclamation efforts.

ISSUE: WATER

► WATER USE

- More than 85 per cent of the water used by the oil sands mining is recycled and water withdrawals are strictly controlled and capped during low-flow periods.
- Today, oil sands mining projects use less than one per cent of the water that flows in the Athabasca River (the only major river near to oil sands operations).
- Water use is projected to grow to two per cent of the river's flow if all the oil sands mining projects that are currently planned, go ahead.
- In-situ oil sands production primarily uses non-potable or saline ground-water water that is unsuitable for drinking, livestock or irrigation. Up to 95 per cent of this water is recycled.

ISSUE: WATER

▶ WATER QUALITY

- Alberta Environment prohibits the release of any water into the Athabasca River that does not meet water quality requirements.
- Bitumen from exposed oil sands along the riverbanks seeps naturally into the Athabasca River as it cuts its way through the landscape.
- Water monitoring in the region is ongoing. The reports and complete dataset are available online at www.ramp-alberta.org.

► TAILINGS PONDS

- Tailings contain the water, residual bitumen, sand and clay left over from when the bitumen is separated from the sand.
- During and after mining, the tailings ponds are reclaimed. No tailings water is released into the Athabasca River or any other watercourse.
- The first tailings pond was declared reclaimed in September 2010.
- The Alberta Energy Resource and Conservation Board's (ERCB) Directive 74 sets aggressive criteria for managing tailings, which will see all mining operations put into practice plans that eliminate growth in tailings ponds between 2012 and 2016. Companies will reduce tailings and provide target dates for pond closure and reclamation.

For more information, visit:

www.oilsandsdevelopers.ca

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www.canadasoilsands.ca

www.acr-alberta.com

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