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Oil Sands

FACTS

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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.**
 - ▶ **Our oil reserves are the second largest in the world, behind only Saudi Arabia.**
 - ▶ **Canada's reserves contain 170 billion barrels, and 97 per cent are located in the oil sands.**
 - ▶ **In 2007, Canada exported nearly 2.5 million barrels of crude oil and petroleum products per day to the United States.**
- ▶ **Economics**
 - From 2000-2020, oil sands production could create enough work outside of Canada to employ nearly 37,000 people for 30 years.
 - American companies supply roughly 87 per cent of the import market in the Canadian oil sands sector.
 - Alberta, the province in which the majority of Canada's oil sands are located, exports 62 per cent of its GDP. The United States receives three quarters of Alberta's energy exports.

CONCERNS, CHALLENGES AND RESPONSES

ISSUE: AIR

- The oil sands currently account for less than five per cent of Canada's greenhouse gas emissions. This is less than 0.1 per cent of total global emissions.
- In the United States, coal is the energy source for nearly half of the country's electricity generation. Coal-related carbon dioxide emissions alone account for 32.8 per cent of America's greenhouse gas emissions.
- Alberta was the first jurisdiction in North America to legislate industrial greenhouse gas emission reductions.
- Producers have made great strides in reducing the amount of emissions per barrel of bitumen extracted from the oil sands. The equivalent of 2.6 million tonnes of reductions have been made – the same as taking more than all of the cars in Hawaii off the road.

ISSUE: AIR

- Air quality around oil sands operations is monitored regularly and consistently ranks better than major American cities such as Los Angeles, New York, Seattle and Dallas.
- The Province of Alberta has committed \$4 billion toward climate change initiatives, including \$2 billion for public transit and \$2 billion for carbon capture and storage (CCS). This is the largest CCS investment in the world and is the per capita equivalent of a \$340-billion investment in the United States.

ISSUE: LAND

- Canada's oil sands are found below the surface of 54,054 square miles of land, an area smaller than the State of Illinois.
- 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.
- The oil sands encompass only 4.5 per cent of Canada's total boreal forest. Of this, only 2.5 per cent of the area is minable.
- More than 80 per cent of oil sands reserves will be developed using in-situ technologies. In-situ projects resemble conventional oil development and do not require tailings ponds or mine pits.
- In more than 40 years, oil sands mining has disturbed about one hundredth of one per cent of the Canadian boreal forest – some 193 square miles, or a total land area 35 square miles smaller than the City of Chicago.

► RECLAMATION

- Oil sands producers are required by law to reclaim any land disturbed by oil sands development. Companies must have reclamation plans in place and approved prior to receiving approval to disturb any land.
- Of the 193 miles of land that are under disturbance by oil sands activities, 25 square miles are currently under active reclamation.
- In March 2008, the first oil sands mining reclamation certificate was issued.
- Tailings contain the water, residual bitumen, sands and clay that are left over when the bitumen is separated from the sand.
- During and after mining, the tailings ponds are reclaimed. No tailings water is released into rivers or any other watercourse.
- By the end of 2010, the first tailings pond will be completely reclaimed.

► WATER ALLOCATION

- Oil sands producers are regulated by provincial legislation and are subject to the same conditions as any other licensed water user.
- Today, oil sands mining projects use less than one per cent of the water that flows into the Athabasca River.
- That figure 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.
- More than 80 per cent of fresh water drawn is recycled and water allocations are strictly controlled during low-flow periods.

ISSUE: WATER

- Coal mining in the United States consumes roughly 31 per cent (84 million cubic meters) more water yearly than all oil sands production.
- In-situ oil sands operations will produce 80 per cent of the resource without drawing water from the Athabasca River and primarily using non-potable ground water.

► WATER QUALITY

- It is prohibited to release any water into the Athabasca River that does not meet water quality requirements.
- A multi-stakeholder body, made up of local and Aboriginal communities, government agencies, industry, and other independent stakeholders, conducts ongoing monitoring of water quality and the health of fish species and other aquatic organisms in the Athabasca River.
- Water quality and ecosystem health in the oil sands have been monitored by this stakeholder group for 11 years and reports are available at: www.ramp-alberta.org.
- Monitoring has concluded that water quality remains the same as it was 100 years ago when the river flowed through naturally occurring oil sands deposits that eroded into the river. These bitumen seeps were how the oil sands were originally discovered.