

Facts and Statistics

The responsible development of oil sands is a key driver of Alberta's and Canada's

economy. It creates jobs and tax revenue for government which support the social programs and capital infrastructure projects we rely on.

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Oil sands facts, statistics and indicators are subject to change as new information becomes available. Oil sands sustainability indicators highlight trends across economic, environmental and social topics in Alberta's oil sands areas.

Where applicable, external sources have been noted and linked appropriately.

Sources are the Government of Alberta unless otherwise stated, direct sources have been noted and linked.

Economics

Reserves and Production

- Alberta's oil sands has the third largest oil reserves in the world, after of Venezuela and Saudi Arabia.
- As of 2014, Alberta's oil sands proven reserves were 166 billion Barrels (bbl).
- Total oil sands production (mined and in situ) reached about 2.3 million barrels per day (bbl/d) in 2014. Source: Alberta Energy Regulator (AER) [ST 98](#), [ST39](#) and [ST53](#) reports.
- [Oil Sands Projects map](#), listing all projects and upgraders (announced to operating)
- An inventory of [statistics, major projects and economic highlights](#) is available on the Alberta, Canada site.

Investment

- Between 1999 and 2013, approximately \$201 billion was invested in the oil sands industry.
- Oil sands investment was equal to \$27.2 billion in 2012, the highest investment to date in oil sands history.
- Statistics Canada's preliminary actual data for 2013 show the oil sands investment reaching the new record high of \$32.7 billion. Source: Statistics Canada, Private and Public Investment in Canada

Employment

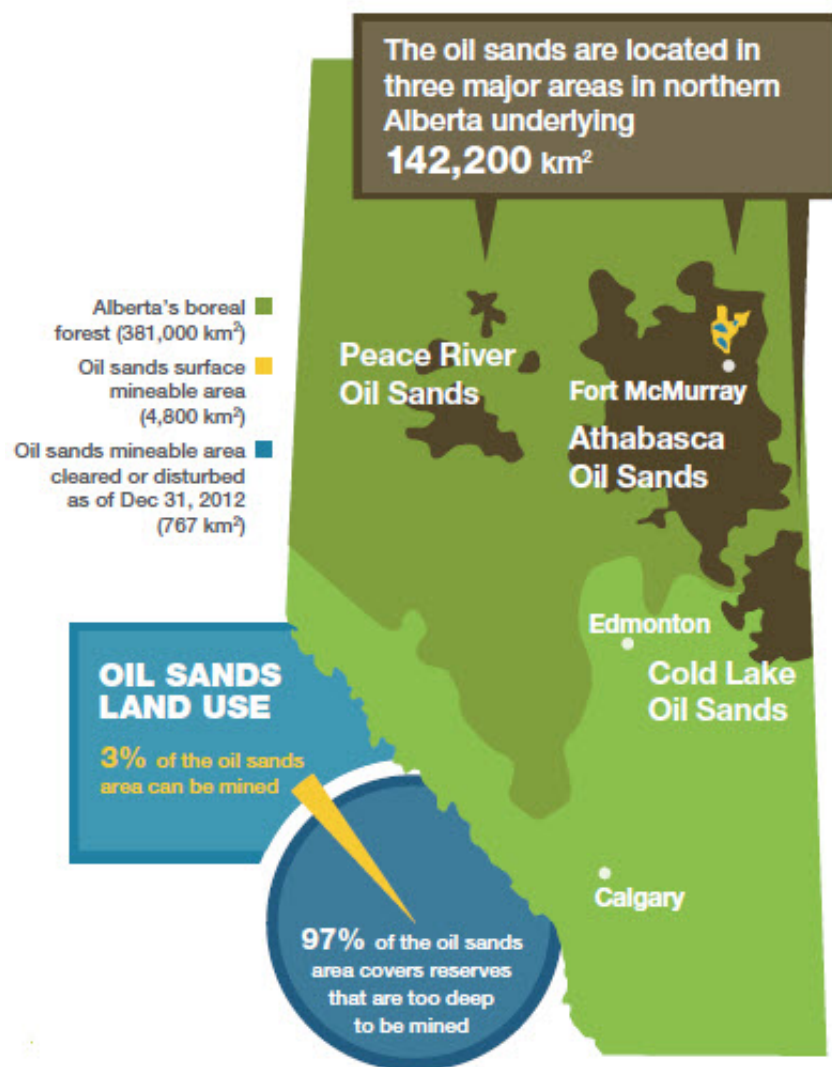
- In 2014, approximately 133,053 people were employed in Alberta's upstream energy sector, which includes oil sands, conventional oil, gas and mining. Source: Statistics Canada, Survey of Employment, Payrolls and Hours.

Royalties

- In the fiscal year 2013 – 2014, synthetic crude oil and bitumen royalty accounted for about \$5.2 billion or almost 55 per cent of Alberta's \$9.6 billion non-renewable resource revenue. [Historical royalty data](#) is available.

Geography

- Alberta's oil sands underlie 142,200 square kilometres (km²) of land in the Athabasca, Cold Lake and Peace River areas in northern Alberta.
- Reserves shallow enough to mine (up to 75 meters) are found only within the Athabasca oil sands area. Surface Mineable Area (SMA) equals to about 4,800 km² and accounts for about 3.4 per cent of total oil sands area.



- Alberta's three oil sands areas of Athabasca, Cold Lake and Peace River have regulatory boundaries established by the Alberta Energy Regulator. Each region has a [Comprehensive Regional Infrastructure Sustainability Plan](#) (CRISP).

Environment

Greenhouse Gas Emissions (GHG)

- Alberta became the first jurisdiction in North America to legislate greenhouse gas (GHG) emissions reductions for large industrial facilities by passing the [Specified Gas Emitters Regulation \(SGER\)](#).
- The oil sands industry currently accounts for approximately 8.5 per cent of Canada's total GHG emissions and about 0.12 per cent of global GHG emissions. (Environment Canada 2015)
- Between 1990 and 2012, oil sands producers reduced per barrel emissions by an average of 28 per cent. Source: Environment Canada
- [Carbon Capture and Storage \(CCS\)](#) is a technology that can be used in a number of industries to reduce CO₂ emissions. Alberta is investing \$1.3 billion over 15 years in two large scale [CCS projects](#), the Alberta Carbon Trunk Line and the Quest Project.
- [Alberta's current emissions](#) are available under Climate leadership.

Water Usage

- Oil sands projects recycle 80-95 per cent of water used and use saline water where possible.
- [River Management Frameworks](#) from Alberta Environment and Parks impose strict limits on water usage.

Land Management/Reclamation

- Mine operators are required to supply reclamation security bonds to ensure requirements are met. Reclamation certificates are not issued until monitoring through time demonstrates that these particular lands meet the criteria for return to self-sustaining ecosystems. The first successful [reclamation](#) occurred in 2008.
- Disturbed oil sands surface minable area equaled to about 895 km² in 2013 accounting for less than 1 per cent of total oil sands area and about 0.2 per cent of Alberta boreal forest which covers over 381,000 km².
- The total area occupied by oil sands tailings ponds and associated structures (such as dikes) was 220 km² at the end of 2013. Of that, the total liquid surface area of the ponds was 88 km². The total volume of fine fluid tailings reported by the mine operators for 2013 was 975.6 million cubic meters (m³).
- In 2009, the Alberta Energy Regulator issued [Directive 074](#) with aggressive criteria for managing tailings. Work continues on the [Tailings Management Framework](#) which will drive further operator action to reclaim legacy tailings.
- [Oil sands mine reclamation and disturbance tracking by year](#) (OSIP) is a sustainability indicator.
- The [Alberta Land Stewardship Act](#) supports the [Land-use Framework](#), designed to encompass province-wide strategies to manage the province's land and natural resources to achieve Alberta's long-term economic, environmental and social goals.
- The [Oil Sands Sustainable Development Secretariat](#) was created in 2007 to address rapid growth issues in the oil sands regions of Alberta. The Secretariat collaborates with ministries, industry, communities and stakeholders to address the social, infrastructure, environmental and economic impacts of oil sands development.
- The [Oil Sands information portal](#) offers environmental data and information about Alberta's oil sands, featuring an interactive map and searchable data library.