

Suncor Energy Inc.

About Us

In 1967, we pioneered commercial development of Canada's Athabasca oil sands — one of the world's largest petroleum resource basins. Since then, Suncor has grown to become a globally-competitive, Canadian-based integrated energy company with a balanced portfolio of high quality assets, a strong balance sheet and significant growth prospects.

- Near Fort McMurray, Alberta, Canada, Suncor extracts and upgrades oil sands into high-quality, refinery-ready crude oil products and diesel fuel.
- In Western Canada, Suncor explores for, develops and produces natural gas.
- The international and offshore business focuses on operations in the North Sea (United Kingdom, Netherlands and Norway) and the East Coast of Canada (where we participate in every major oil development project). We are also building material positions in the growth areas of Libya, Syria and Trinidad and Tobago.
- Across Canada and Colorado, Suncor's downstream operations market the company's refined products to industrial, commercial and retail customers. We have refineries in Edmonton, Alberta, Sarnia, Ontario, Montreal, Quebec and Commerce City, Colorado. We also sold about 15% of all petroleum products sold in Canada in 2008. Our Lubricants business is the largest producer of quality lubricant base stocks in Canada.

Suncor is also investing in clean, renewable energy sources:

- Suncor has four wind power farms in operation. With a total capacity of 147 megawatts, these renewable energy sites serve as an alternative to hydrocarbon-fuelled generation. These farms offset the equivalent of approximately 284,000 tonnes of carbon dioxide annually.
- Suncor's ethanol facility located in the township of St. Clair, Ontario has a current production capacity of 200 million litres per year. The ethanol is blended into our Sunoco and Phillips 66-branded gasoline and contributes to CO₂ emission reductions of up to 300,000 tonnes per year.



Oil Sands

- Near Fort McMurray in northern Alberta, Suncor recovers bitumen from oil sands and upgrades it to refinery-ready feedstock and diesel fuel. Suncor was the first company to develop the oil sands, creating an industry that is now a key contributor to Canada's prosperity.
- Suncor is committed to responsible development of the oil sands - generating the crude oil consumers need while improving environmental performance and ensuring the well-being of communities.
- What makes Suncor unique is that we combine our long-term growth strategy with a broad vision of responsible development. While we expand our operations, we are working to minimize our environmental footprint and contribute to the well being of the communities in which we operate.

Process

Oil sand is a mixture of bitumen, sand and water. Because it does not flow like conventional crude oil, it must be mined or heated underground before it can be processed. Our oil sands business recovers bitumen through surface mining and steam injection technologies and upgrades it into refinery-ready crude oil products.

Suncor produces bitumen in two ways:

1. Surface mining. We use large trucks and shovels to extract the oil sands. Only 20% of all oil sands are close enough to the surface to be mined. The reclamation process begins as soon as mining operations are completed.
2. In-situ. Using techniques that are similar to conventional oil production, we inject steam into the reservoir to heat the bitumen so it can be pumped to the surface.

Suncor extracts and upgrades bitumen using the following process:

- Hot water is used to separate the bitumen from the sands. This step is called extraction and is not required for in-situ bitumen.
- Bitumen is heated and sent to drums where excess carbon (in the form of petroleum coke) is removed.
- The superheated hydrocarbon vapours from the coke drums are sent to fractionators where vapour condenses into naphtha, kerosene and gas oil.
- The end product is synthetic crude oil. It is shipped by underground pipelines to refineries across North America to be refined into jet fuels, gasoline and other petroleum products.



Upgrading

- Upgrading operations process bitumen into higher-value synthetic crude oil and diesel fuel. Suncor currently has two complete upgraders at its Fort McMurray operations, as well as upgrading assets at the company's Edmonton refinery.
- Suncor has also received regulatory approval for a third upgrader at its Fort McMurray site. The proposed Voyageur upgrader would add 200,000 barrels per day of synthetic crude oil production capacity.
- With this proposed project, Suncor is investing in new technologies that will enable our business to grow while also minimizing the impacts of our growth on the environment and our communities.

Mining

Mining operations, which are used to develop shallow oil sands deposits, are currently located east of Suncor's main oil sands facility at Steepbank and Millennium.

Voyageur South is a proposed project to extend Suncor's mining operations. Voyageur South will ensure a reliable, long-term energy supply while leveraging technology to minimize environmental and social impacts of resource development in the Athabasca region.

The Voyageur South mine is expected to produce 120,000 barrels per day of bitumen during its estimated 40-year operational life. Project plans include new technologies to reduce environmental impacts:

With the merger of Suncor and Petro-Canada, the Fort Hills Oil Sands Project has been added to Suncor's mineable oil sands assets. The project, in which Suncor has a 60% interest, is estimated to contain more than four billion barrels of bitumen resource.

The sequence and timing of mining expansions will be considered as part of a review of oil sands growth projects.

In Situ

Approximately 85% of Canada's oil sands are too deep to mine and must be tapped using in-situ production, which is similar to conventional oil production. Increased in-situ production is a key part of Suncor's plans to increase bitumen supply while reducing costs and our impact on the environment.

At MacKay River and Firebag (named after the traditional bags Aboriginals once used to carry fire-starting flints), Suncor uses steam-assisted gravity drainage (SAGD):



- Parallel pairs of horizontal wells are drilled: one for steam injection and one for oil recovery.
- Recovered bitumen is sent by pipeline to our upgrading facility.
- MacKay River began producing oil in 2002, while Firebag stages 1 and 2 began producing oil in 2004 and 2006 respectively. The sequence and timing of additional stages of Firebag and a potential expansion of the MacKay River facility will be considered as part of a review of oil sands growth projects.

Website: www.suncor.com

