

# Upgraders and Refineries Facts and Stats

## Production

- In 2014, Alberta produced about 2.3 million barrels per day (bbl/d) of crude bitumen with surface mining accounting for 45% and in-situ for 55% of the production.

## Upgrading

- There are five operating upgraders in Alberta with the capacity to handle approximately 1.3 million bbl/d of bitumen.

Project Name	Location	Capacity (bbl/d) Bitumen
Athabasca Oil Sands Project - Shell Scotford	Fort Saskatchewan	255,000
Suncor Base and Millennium	Fort McMurray	440,000
Syncrude Mildred Lake	Fort McMurray	407,000
CNOOC Long Lake	Fort McMurray	72,000
Canadian Natural Resources Ltd Horizon	Fort McMurray	156,000
<b>Total</b>		<b>1,330,000</b>

NOTE: total capacity does not equal total production

- Most upgraders produce synthetic crude oil, but some also produce products such as diesel.
- Upgraders (and refineries) also produce off-gases, gaseous mixtures rich in alkanes and alkenes, which are potential feedstock for Alberta's petrochemical industry.

## Refining

- There are four operating refineries in Alberta with a combined crude processing capacity of over 458,200 bbl/d.

Company	Location	Capacity (bbl/d)
Suncor	Edmonton	142,000
*Imperial Oil	Edmonton	187,200
Shell Canada	Scotford	100,000
**Husky Asphalt Refinery	Lloydminster	29,000
<b>Total</b>		<b>458,200</b>

\*Refining feedstock is conventional oil. The Suncor and Shell refineries are configured to handle feedstock from oil sands.

\*\*The Husky Asphalt Refinery in Lloydminster, AB is integrated with the Husky Upgrader in Lloydminster, Sask. which produces synthetic crude oil from heavy oil in the two provinces. The refinery produces asphalt products which are then transported to market.

## New Projects

Project Name	Scheduled Start-up	Capacity (bbl/d) Products
CNRL Horizon (Expansion)	Phase 2B	2016
	Phase 3	2017
	Total: 125,000	
North West Sturgeon Refinery	Phase 1	2017
	Phase 2	Approved
	Phase 3	Approved
BP plc		
Terre de Grace Pilot	Approved	8,400
<b>Total</b>		<b>283,400</b>

- Alberta also has a number of new projects which are either under construction or approved for development.