



# talk about upgrading and refining

September 2009

## Production

- Alberta currently has production capacity of approximately 1.71 million barrels per day (bpd) of bitumen from three oil sands regions – Athabasca, Cold Lake and Peace River, with surface mining accounting for 60% and in-situ for 40% of the production.

## Upgrading

- Current upgrading capacity in Alberta is approximately 1.21 million bpd of bitumen with synthetic crude oil (SCO) output of approximately 1.04 million bpd.

Project Name	Scheduled Start-up	Capacity (bpd)	
		Bitumen	SCO
CNRL Horizon (Expansion)	2013	135,000	118,000
Suncor Voyageur	2013	234,000	190,000
AOSP (Shell) Scotford	2010	90,000	91,000
North West Upgrading Sturgeon	On Hold	150,000	195,000
Fort Hills (Petro-Canada) Sturgeon	On Hold	340,000	290,000
OPTI/Nexen Long Lake (Expansion)	On Hold	72,000	58,500
Shell Scotford Upgrader 2	On Hold	400,000	391,000
Total Strathcona	2015	235,000	200,000
Value Creation Terre de Grace	On Hold	10,000	8,400
<b>Total</b>		<b>1,666,000</b>	<b>1,541,900</b>

- Alberta has 6 new upgrader projects and 3 project expansions either approved or under application. If all the projects were to proceed, additional upgrading capacity of 1.66 million bpd of bitumen would result by 2015.

## Refining

- There are five refineries in Alberta with a combined crude processing capacity of approximately 460,000 bpd.

\*Refining operations suspended in 2001; facility currently used for oilfield processing and fuel storage.

Company	Location	Capacity (bpd)
Petro-Canada	Edmonton	135,000
Imperial Oil	Edmonton	187,200
Shell Canada	Scotford	110,000
Husky Oil	Lloydminster	25,000
*Parkland Refining	Bowden	3,500
<b>Total</b>		<b>460,700</b>

Project Name	Location	Capacity (bpd)	
		Bitumen	SCO
AOSP (Shell) Scotford	Fort Saskatchewan	155,000	158,000
Suncor Base and Millennium	Fort McMurray	440,000	357,000
Syncrude Mildred Lake	Fort McMurray	407,000	350,000
Opti/Nexen Long Lake	Fort McMurray	72,000	58,500
CNRL Horizon	Fort McMurray	135,000	114,000
<b>Total</b>		<b>1,209,000</b>	<b>1,037,500</b>

- Approximately 70% of oil sands production is currently upgraded to SCO within Alberta.
- According to the Energy Resources Conservation Board (ERCB) (*Alberta's Energy Reserves 2007 and Supply/Demand Outlook 2008-2017*), over 70% of total bitumen production will be upgraded in Alberta by 2017, yielding more than 2 million bpd of SCO.