Oil Markets and Asphalt

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BP Bitumen
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Agenda

- Global and US crude demand
- Crude prices
- Reserves
- Heavy Oil
- Challenges
Global consumption of oil products

Total = 75 Million barrels/day in 2000
(Million Barrels per Day)

* Unfinished oils, other hydrocarbons/hydrogen, and motor gasoline and aviation gasoline blending components.
* Net imports (1.34) and adjustments (-0.03) minus stock change (-0.07) and product supplied (0.03).
* Finished petroleum products, liquefied petroleum gases, and pentanes plus.
* Natural gas plant liquids.

* Production minus refinery input.

Notes: • Data are preliminary. • Values are derived from source data prior to rounding for publication. • Totals may not equal sum of components due to independent rounding.

Energy Information Administration / Annual Energy Review 2006 123
World oil consumption

World Oil Consumption

- Total Consumption
- Annual Growth

Million barrels per day

2001 2002 2003 2004 2005 2006 2007 2008 2009

Forecast

China United States Other Countries

Short-Term Energy Outlook, March 2008
Crude oil prices

Crude Oil Prices

Dollars per barrel

West Texas Intermediate (WTI)
Average Refiner Acquisition Cost (RAC)

Forecast


Short-Term Energy Outlook, March 2008
Crude oil prices – nominal and real

Imported Crude Oil Prices: Nominal and Real

Dollars per barrel

Jan-80 Jan-82 Jan-84 Jan-86 Jan-88 Jan-90 Jan-92 Jan-94 Jan-96 Jan-98 Jan-00 Jan-02 Jan-04 Jan-06 Jan-08

Real Price

Nominal Price

Projections

Short Term Energy Outlook-March 2008

www.eia.doe.gov
Gasoline prices – nominal and real
World oil consumption

Short-Term Energy Outlook, March 2008
OPEC surplus capacity

Note: Shaded area represents 1997-2007 average (2.9 million barrels per day)

Short-Term Energy Outlook, March 2008
USGS estimated reserves
Global Crude Oil Reserves by Country

Includes 175 billion barrels of oil sands reserves

Canada, with 175 billion barrels in Oil Sands reserves, ranks 2\textsuperscript{nd} only to Saudi Arabia in global oil reserves

Source: Oil & Gas Journal Dec. 2004
Western Canadian supply
Delayed coker capacity increase
Canadian oil production

Chart 1: Canadian Crude Oil Production Forecast

- **Actual**
- **Forecast**
- **East Coast**
- **2005 Forecast**
- **In Situ**
- **Mining**
- **Conventional Heavy**
- **Conventional Light**
- **Pentanes**

Summary

- Oil production trends from 2002 to 2020.
- Comparison between actual and forecasted production.
- Highlight of the 2005 forecast.
- Breakdown by type of production (East Coast, In Situ, Mining, Conventional Heavy, Conventional Light, Pentanes).
SAGD production
THAI (Toe-to-Heel Air Injection)

Petrobank Whitesands Project
Challenges

- Oil prices likely to remain high into 2009
- Growth in Canadian heavy oil will continue to displace other imports in the Midwest and beyond
- Delayed Coker builds to compete with heavy residue availability
- Mining and new “in situ” recovery technology may affect bitumen quality as conventional production wanes
Heavy crudes are best for bitumen

- Forties
- CPC Blend
- BCF17
- WTI
- Brent
- ANS
- Arab Light
- Dubai Export
- Urals
- Mars
- LLK
- Maya
- Souedie
- WTS
- Kirkuk
- Arab Light
- Forties
- CPC Blend

Known bitumen crude
Other crude

Crude density, kg/l

Sulphur in crude, %wt