



# ***Construction Best Practices Conference***

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*Construction Owners Association of Alberta*

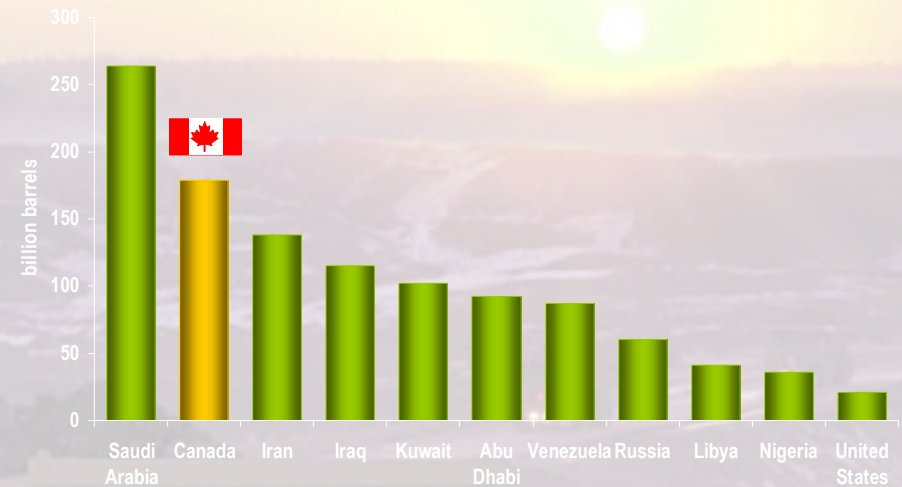
*Presentation by Tom Katinas*

*Syncrude Canada Ltd.*

*19<sup>th</sup> May 2009*

# Energy -- oil sands role

- Canada's total oil reserves 179 billion barrels<sup>1</sup>
- Oil sands represent 45% of Canada's total crude oil supply
- Canada is largest supplier of crude oil to the U.S.
- World energy demand expected to increase 57% from 2002 to 2025<sup>2</sup>
- Canada one of the few countries that can grow crude oil production

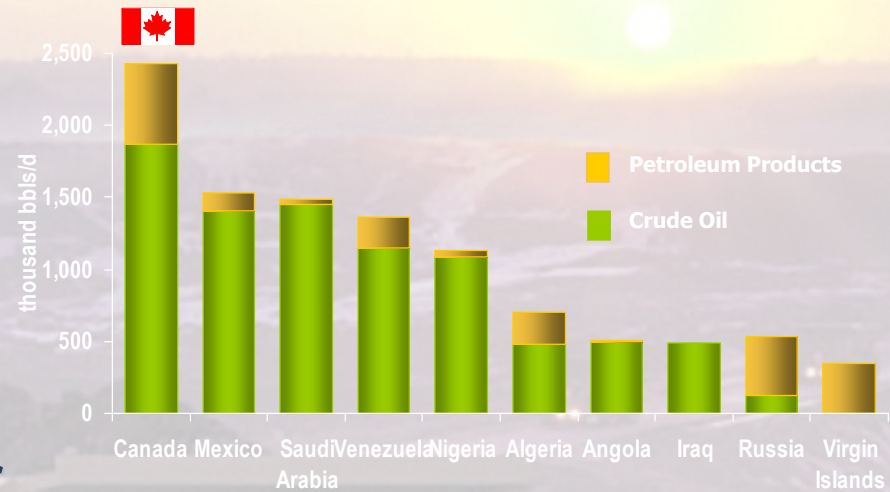


Global Oil Reserves



# ***Economy – oil sands contribution***

- Invests over \$10 billion annually into the Canadian economy
  - Every dollar invested creates \$9 worth of economic activity
- Represents 240,000 jobs directly and indirectly
- Enables Canada to be net exporter of crude oil (U.S. is net consumer)

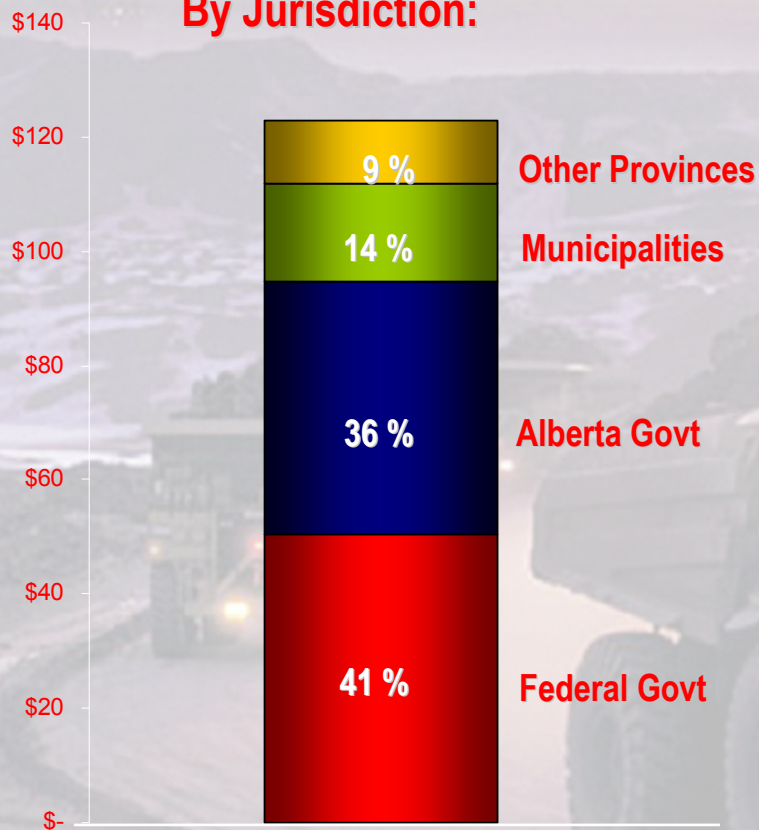


*U.S. Imports by Country of Origin*

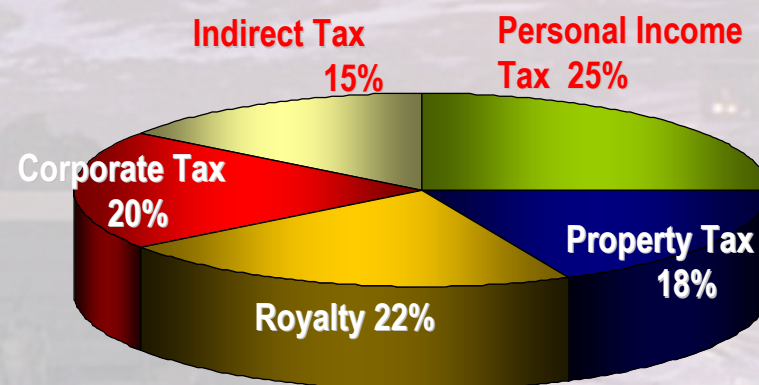
# Government revenue from oil sands (2000 – 2020)

**\$123 Billion**

**By Jurisdiction:**



**By Source:**

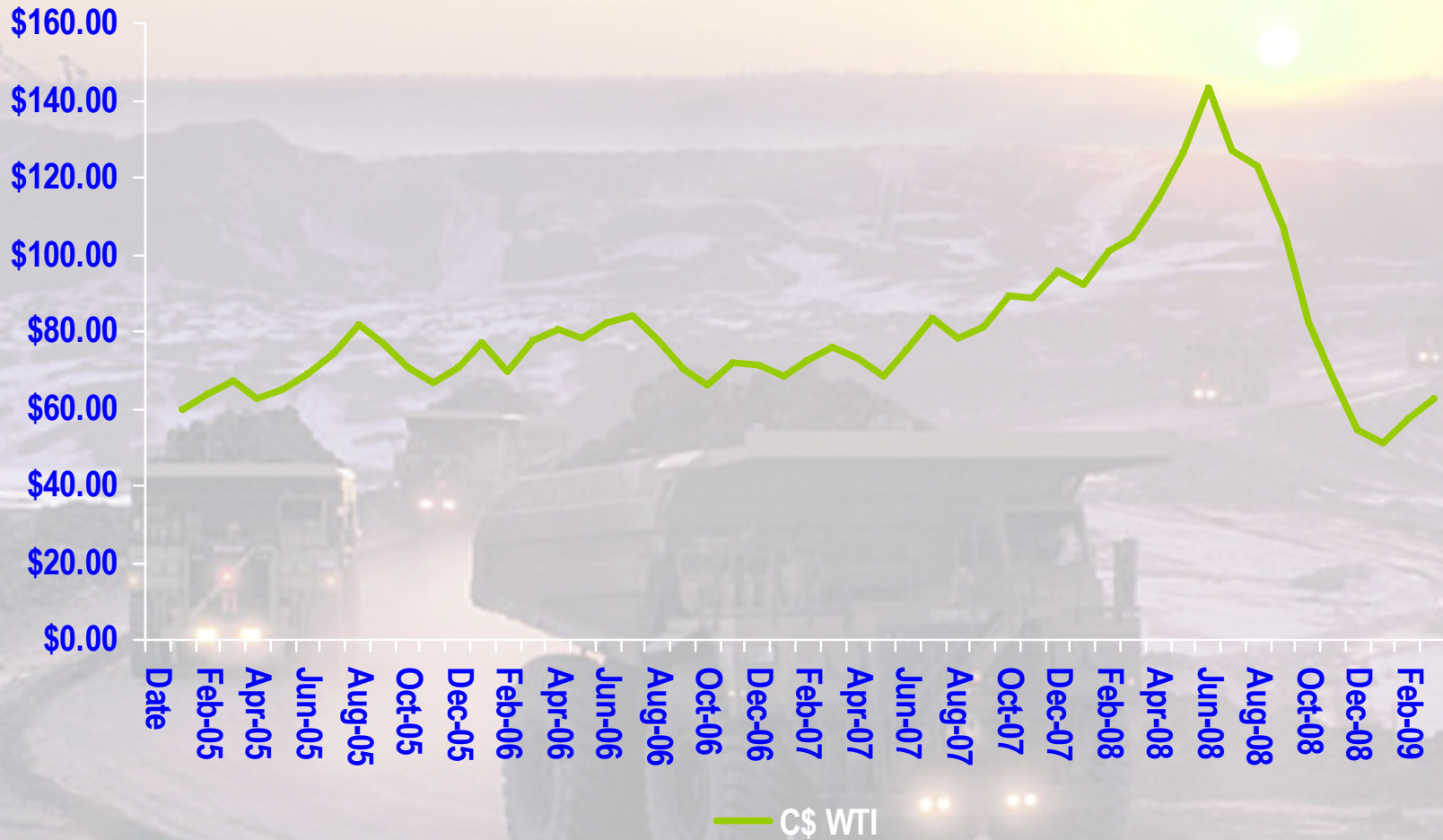


Source: CERI – Economic Impacts of Alberta Oil Sands, Oct 2005

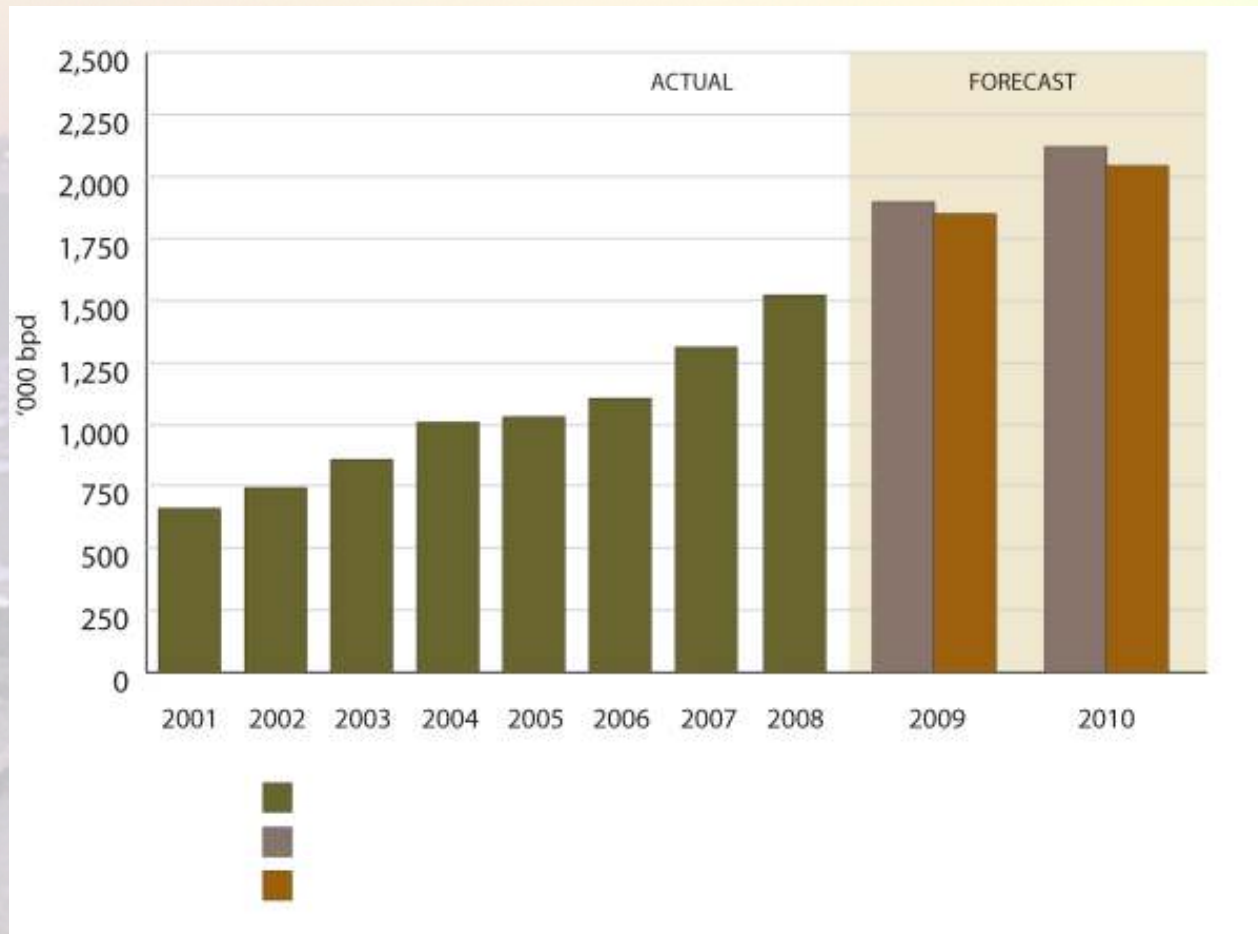


# Crude oil prices

Cdn \$ per barrel



# Despite setbacks, oil sands production expected to increase<sup>1</sup>



<sup>1</sup>Bitumen forecast for all Alberta oil sands projects – original estimate (January, 2008) and adjusted estimate per public announcements (January 26, 2009)

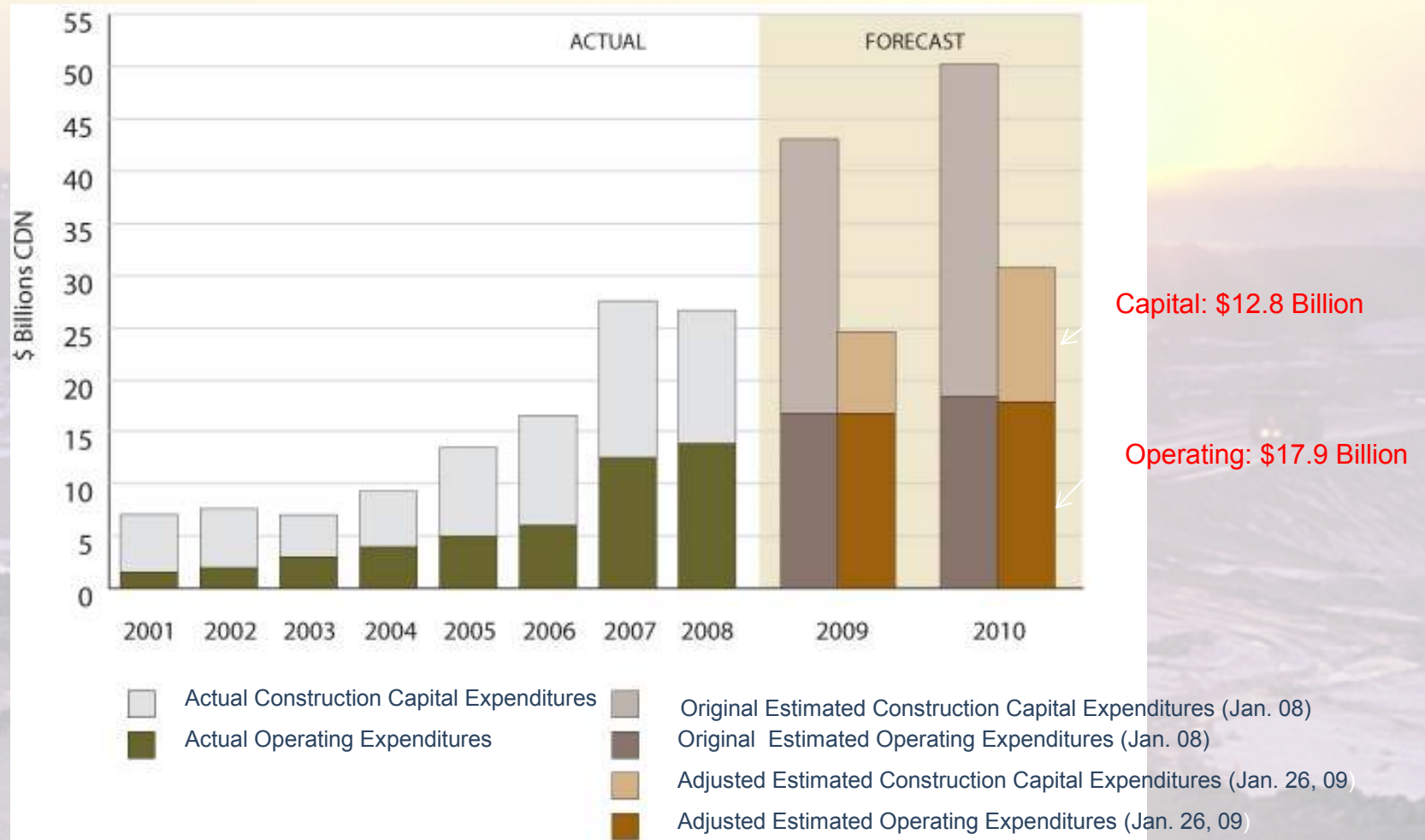
Source: CAPP and Nichols Applied Management



# ***The oil sands economy: built to last***

- **Operating expenditures will continue to climb:**
  - As long existing facilities continue to be operated and maintained and,
  - recently completed facilities start up and are ramped to full production
- **Growth Capital has been significantly constrained but prudent investments are still projected**
- **The quality and magnitude of Canada's oil sands ensures its continued contribution to secure energy supplies**

# Combined oil sands expenditures: historical and estimated<sup>1</sup>

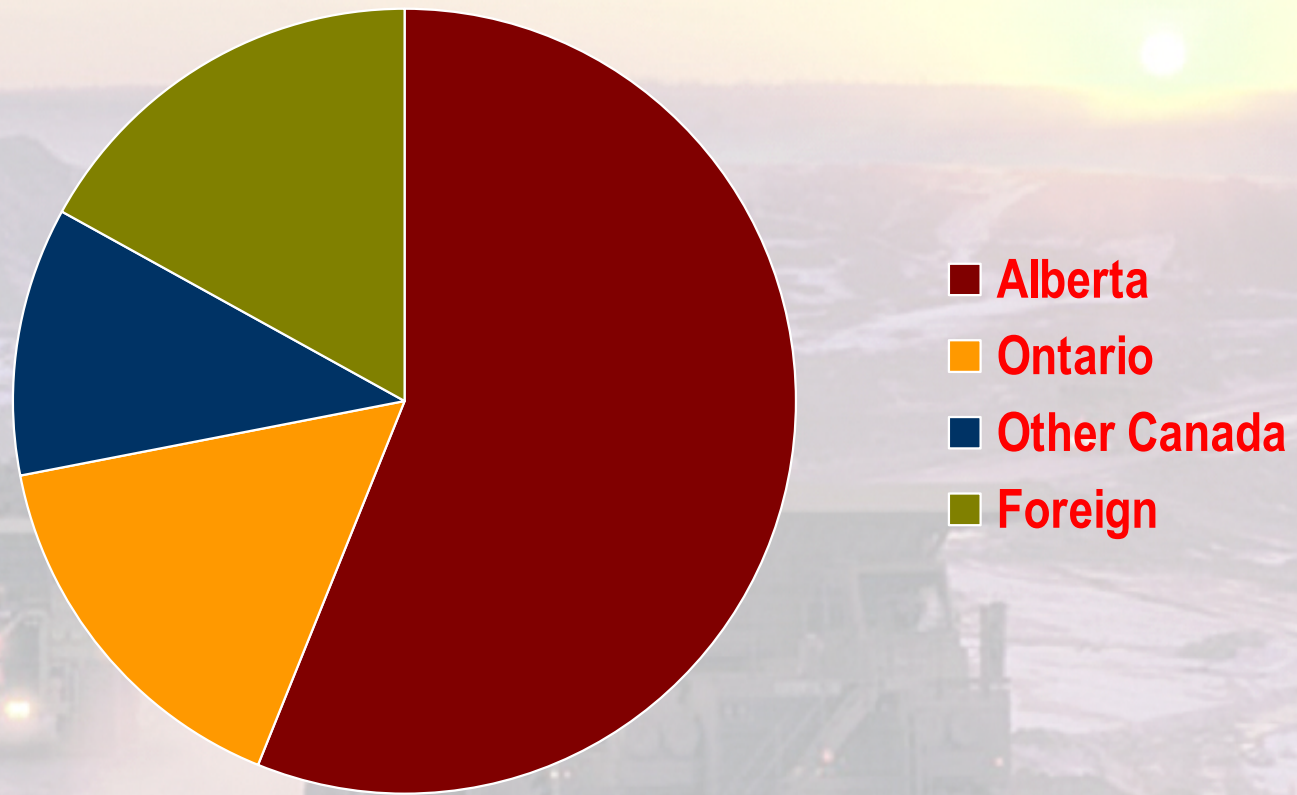


<sup>1</sup>2008 construction capital expenditure estimate for all Alberta oil sands projects, including related pipeline, upgrader and co-generation projects – original estimates (January, 2008) and adjusted (January 26, 2009) per public announcements.

Source: Construction Capital: CAPP and Nichols Applied Management, Operating Expenditure – Nichols Study



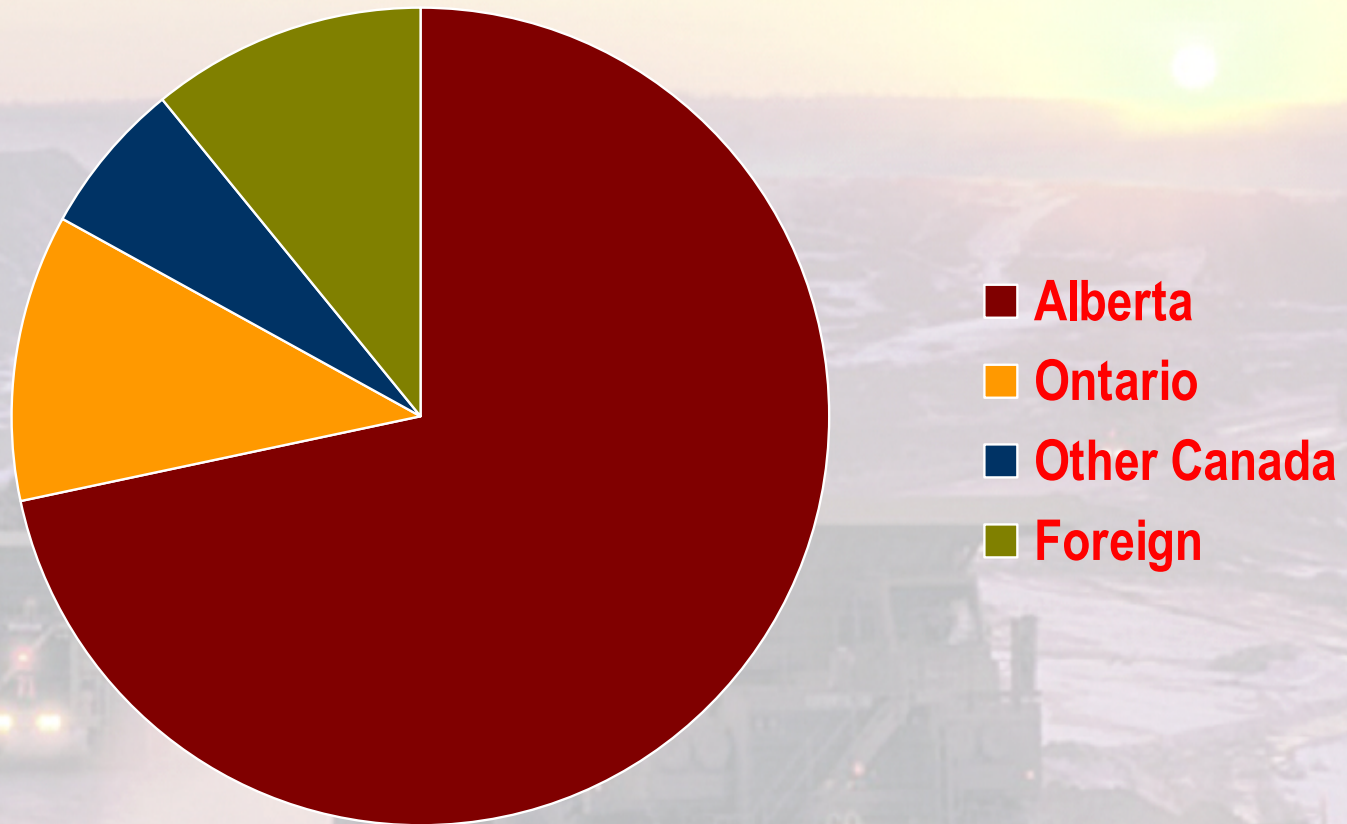
# ***A reliable source of employment***



Source: CERl

(6.6 million person-years)

# ***GDP Activity Contribution = \$ 885 billion***



Source: CERI



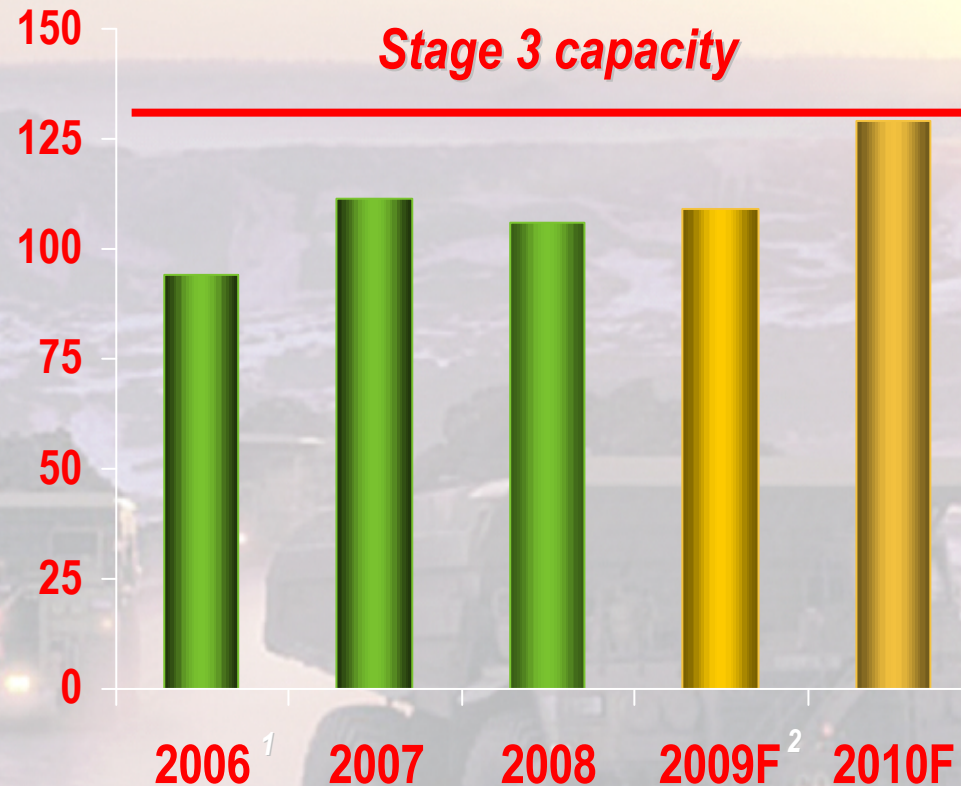
## ***Areas of strategic focus for Syncrude***

- **Operations**
- **Growth**
- **Sustainability**



# ***Syncrude total production vs. design***

***Million barrels annually***

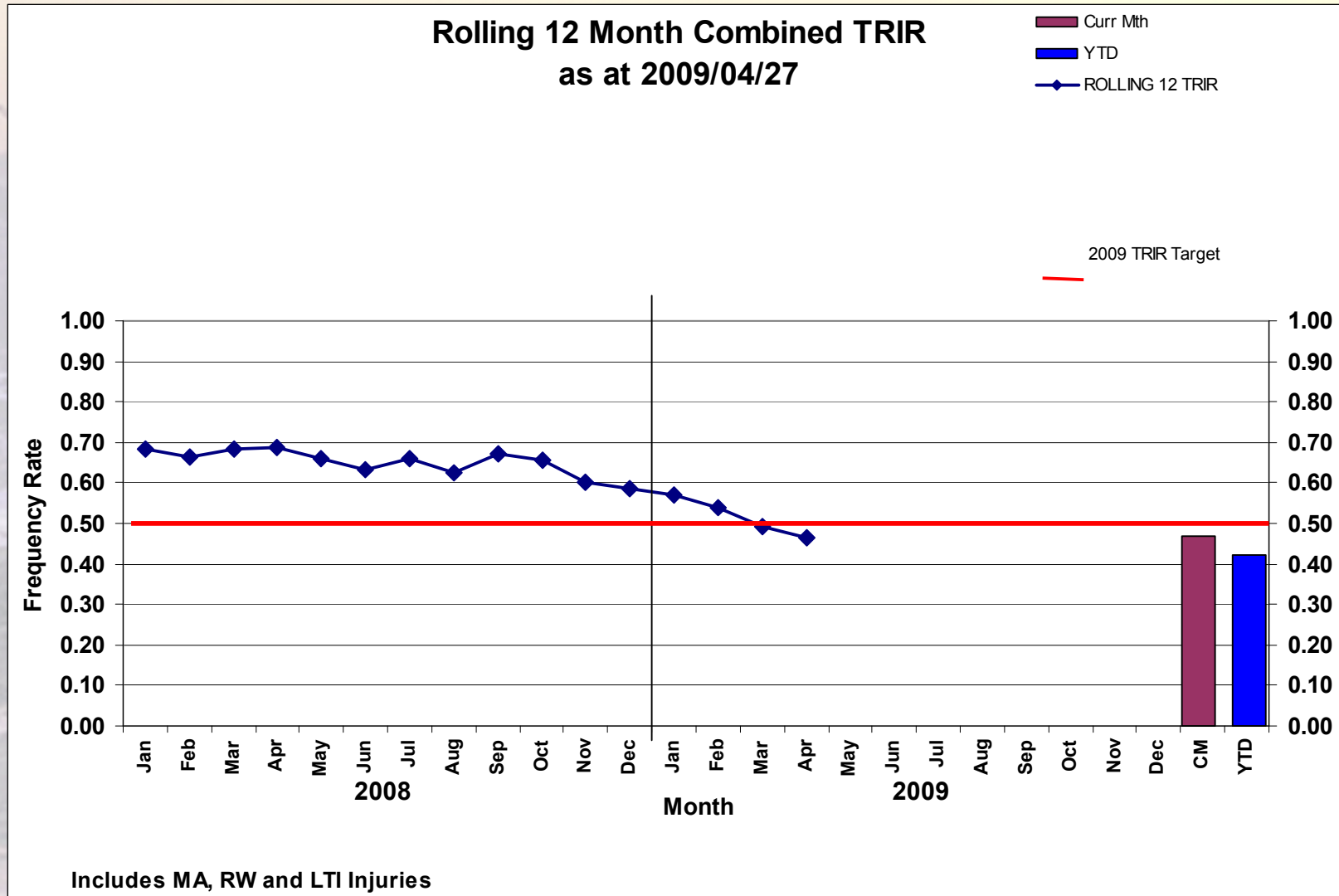


***focus on achieving Stage 3 design***

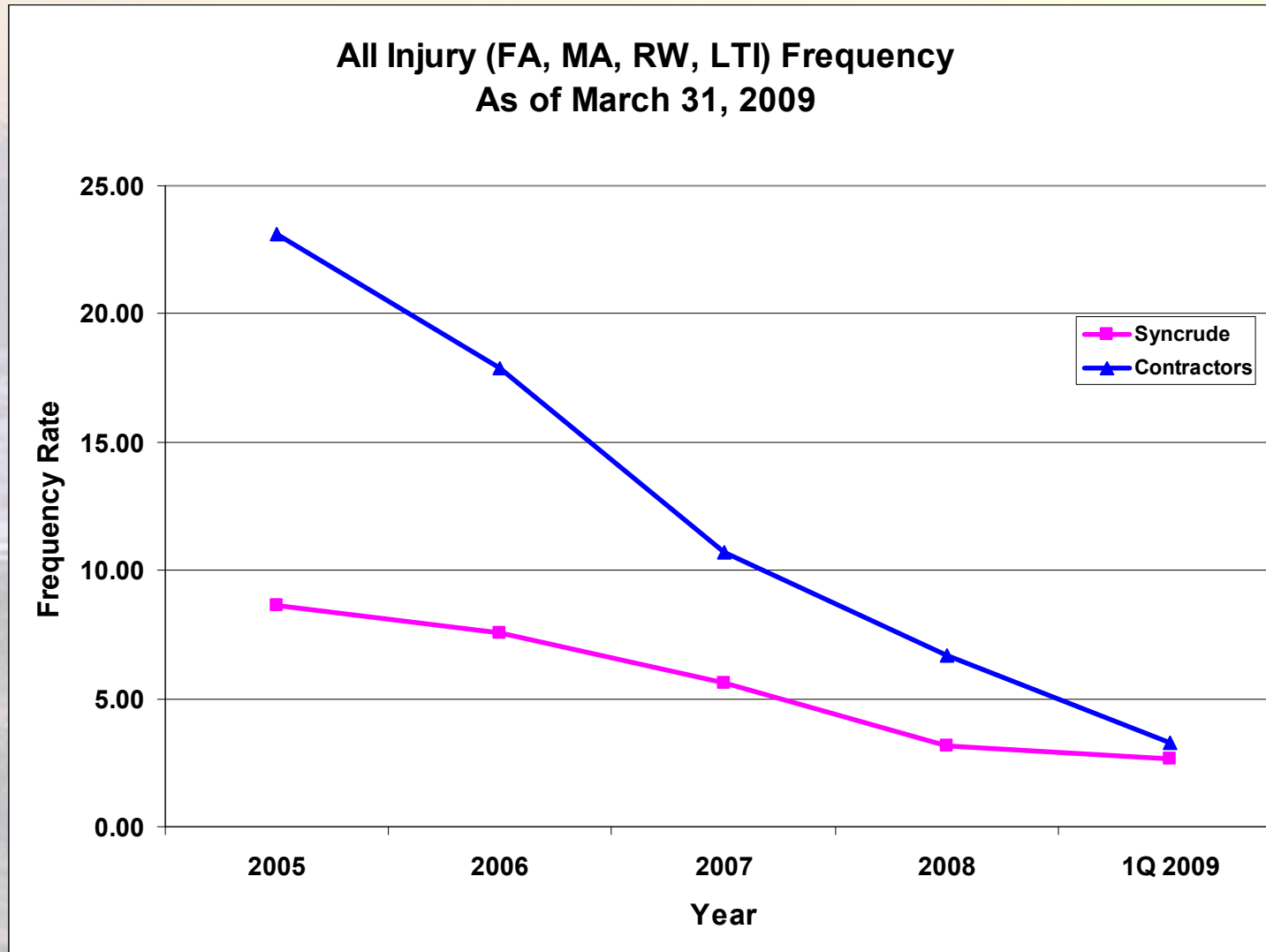
1. Stage 3 production commenced August 2006; 2. Based on April 29/09 guidance



# A Reliable Operation is a Safe Operation



# Safety Performance: Syncrude vs Contractors





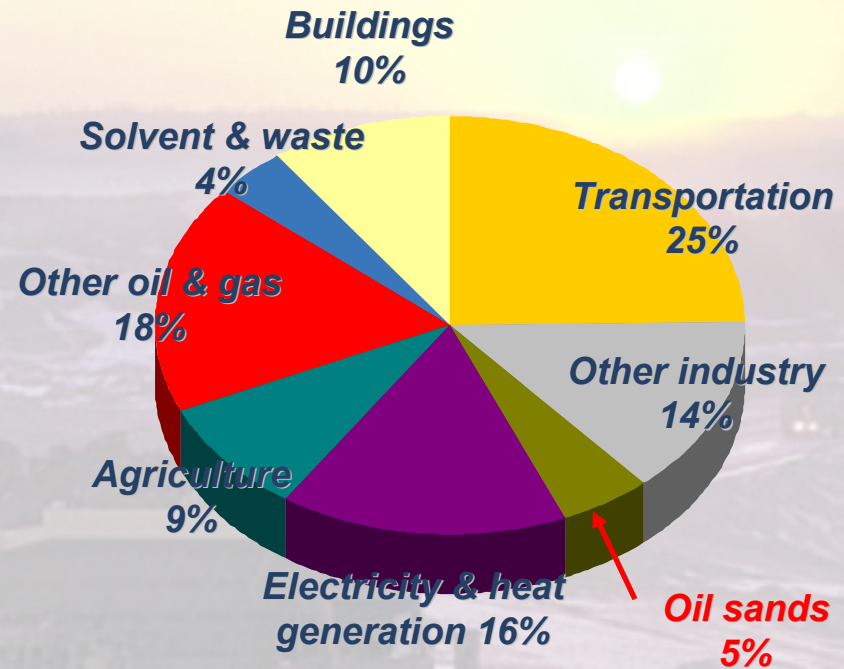
## ***Syncrude – industry leader in reclamation***



- Reclaimed 22% of disturbed land (4,500 hectares)
- Planted 5 million trees and shrubs
- Received Alberta government's first reclamation certificate
- Researching new tailings technologies – 2 methods currently being implemented

# Environment – impact on air, GHG emissions

- Oil sands industry focused on reducing GHG emissions
  - reduced energy intensity by 27% since 1990
- Oil sands industry accounts for:
  - 5% of GHG emissions in Canada
  - 0.1% of global energy-related GHGs

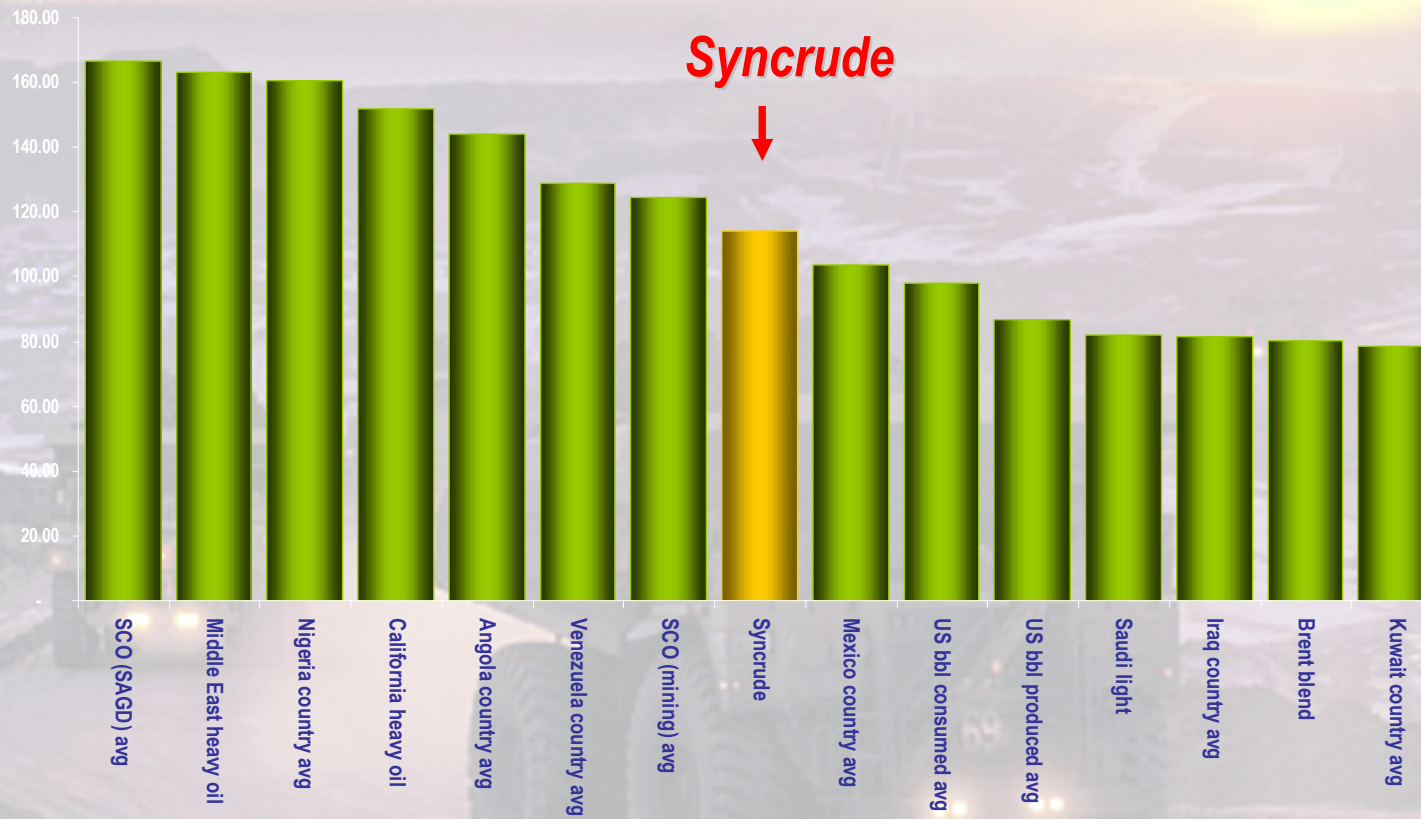


Canada's GHG emissions by sector

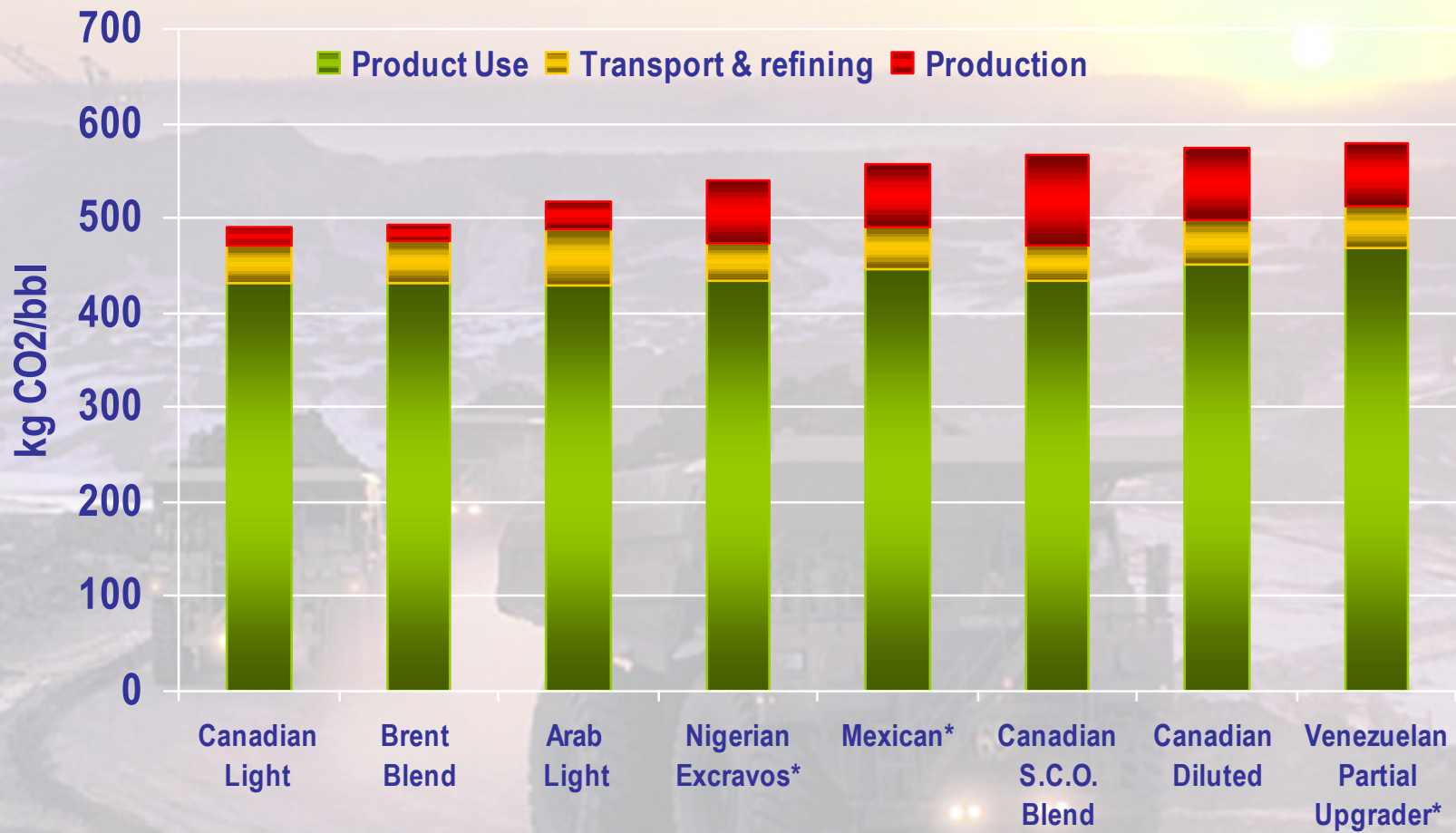


# Syncrude CO<sub>2</sub> emissions vs other sources of crude oil

Kg CO<sub>2</sub>e emitted for every bbl of crude oil



# Wells to wheels: where are the emissions?



Source: CAPP, study by Tom McCann, 2001

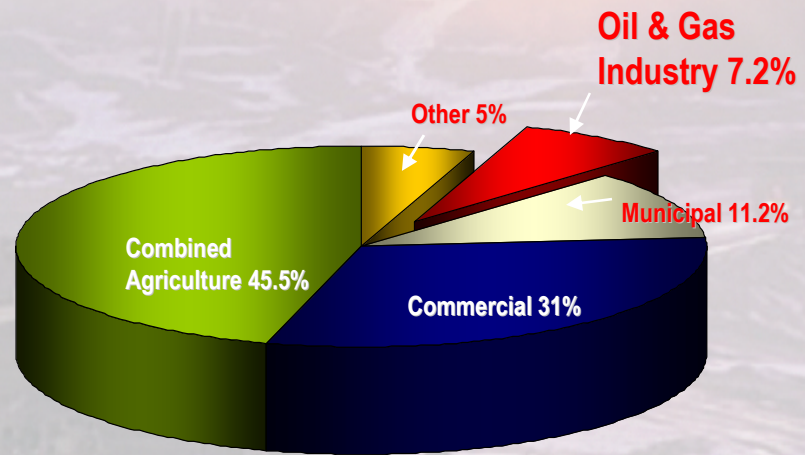


## ***Syncrude performance –GHG emissions, air quality***

- **Focus: improve operational efficiency to reduce CO<sub>2</sub>**
- **Reduced flaring by 50% in 2007 vs 2006**
- **Member of Integrated CO<sub>2</sub> Network (ICON)**
  - **Explore the viability of carbon capture, transportation and storage**
- **Syncrude Emissions Reduction project designed to reduce:**
  - **Sulphur emissions by 60%; and**
  - **Particulate emissions by 50%**

## ***Environment – impact on water***

- Athabasca River one of least used river basins in Alberta
- Strict limits placed on usage
  - Less than 3% of average annual flow of the river
- Oil sands industry uses less than 1% of average annual flow
- Extensively monitored since the early 1970s, no detectable change in water quality



***Total water allocation in Alberta  
(includes surface and ground water)***



## ***Responsibly Contributing to the Economy***

- **The oil sands will be a reliable economic generator if we lower our cost structure, improve operational and safety performance, and progress on environmental challenges**
- **Much progress has been through four decades. Much more remains to be done**
- **All those who have a stake in the oil sands can contribute, and all will benefit**



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