The Outlook for Canada’s Oil and Gas Sector

Calgary Real Estate Forum
October 21, 2009
• The oil and natural gas continues to drive almost ½ of the Alberta economy
• $1 in investment creates $3 in value for Albertans (2009 CERI Study)
• **What are the Impacts?**

  ▪ Direct
    • Oil and Natural Gas companies
    • Construction of plants and facilities
  
  ▪ Indirect
    • Oil and natural gas drilling
    • Service companies, trucking, pipelines
    • Legal, accounting, business support
  
  ▪ Induced
    • Restaurants, hotels and motels
    • Real Estate, vehicles, consumer goods
The Future of Energy Supplies

- **Global economic growth is going to require more energy - in all forms**

- **Oil and natural gas remain important long term components of the global energy mix**

- In addition to growth in coal, nuclear, hydro and renewable energy

- **Canada’s oil sands resources are a vital part of the global petroleum supply**
  - Canada ranks 2nd only to Saudi Arabia in global oil reserves

---

**World Energy Demand 1990 - 2030**
EIA – International Energy Outlook 2009

[Graph showing energy demand from 1990 to 2030, with quadrillion BTU on the y-axis and years from 1990 to 2030 on the x-axis. The graph compares contributions from renewables, nuclear, coal, natural gas, and oil.]
Crude Oil and Natural Gas prices

Crude Oil Prices
(WTI NYMEX)
$US per barrel

Natural Gas Prices
(AECO Daily Spot Price)
$Cdn/ mcf
Crude Oil
Light and bitumen crude oil prices

Light crude oil price quoted in media (West Texas Intermediate)

Estimated bitumen price netback
OPEC Notional Spare Capacity
[Capacity to Produce - Production]

Source: ARC Financial Corp.
Oil Price Forecasts – Light Oil
NYMEX WTI Near Month US$/bbl

[Graph showing actual vs. forecast oil prices from 2004 to 2011.]

Actual
Forecast

US$/bbl

2004 2005 2006 2007 2008 2009 2010 2011

FirstEnergy
Peters
Co.

GLJ
Global Crude Oil Reserves by Country

Source: Oil & Gas Journal Dec. 2008

World Oil Reserves

State owned or controlled

- Accessible Oil Reserves
  - Canada's Oil Sands: 53%
  - Other Accessible Reserves: 47%

Accessible

billions of barrels

Saudia Arabia 264
Canada 175
Iran 136
Iraq 115
Kuwait 102
Venezuela 99
Abu Dhabi 92
Russia 60
Libya 44
Nigeria 36
Kazakhstan 30
United States 21

Includes 170 billion barrels of oil sands reserves

Source: Oil & Gas Journal Dec. 2008
Natural Gas
Canadian and US Natural Gas prices

September 2009 was the lowest price since August 2002

Source: CAPP Natural Gas Report
Natural Gas in Storage - Western Canada

Estimated Working Gas Capacity: 499 BCF

5-Yr Hi-Lo

Source: FirstEnergy Capital Corp.
Drilling Rigs Active in Western Canada

# of Rigs active

Source: Nickle’s
Alberta Natural Gas Pipeline Receipts

Source: FirstEnergy Capital
US Natural Gas Rigs Drilling

The graph shows the number of natural gas rigs drilling in the US from January 2005 to December 2009. Each year from 2005 to 2009 is represented by a different line on the graph. The number of rigs decreased significantly from 2005 to 2009.
US Natural Gas Production

Source: ARC Financial Corp & Bentek
Natural Gas Price Forecasts
AECO/ NIT Spot

The graph shows actual and forecasted natural gas prices from 2004 to 2011 in Canadian dollars per Mmbtu. The actual prices exhibit a trend of initial increase followed by a peak in 2006, followed by a decrease. The forecast models include Actual, First Energy, GLJ, and Peters & Co., each showing different trends and predictions.
Unconventional Natural Gas Basins

- Technology has unlocked vast supplies of shale gas across North America
- Robust supply outlook for unconventional gas
- Game changing for the natural gas industry
  - Reserves
  - Economics
  - Location
  - Technology
- US shale gas is close to market
Canadian Natural Gas Production Forecast

Sources: CAPP
Total Wells Drilled in Western Canada

Source – CAPP. Based on Rig Release
Industry Capital Spending
Cdn $billions

<table>
<thead>
<tr>
<th>Region</th>
<th>'08</th>
<th>`09F</th>
<th>'10F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern Canada</td>
<td>$0.4</td>
<td>$0.5</td>
<td>$0.5</td>
</tr>
<tr>
<td>Oil Sands</td>
<td>$18</td>
<td>$10</td>
<td>$12</td>
</tr>
<tr>
<td>WCSB</td>
<td>$34</td>
<td>$22</td>
<td>$25</td>
</tr>
<tr>
<td>East Coast Offshore</td>
<td>$1.3</td>
<td>$1.5</td>
<td>$2.5</td>
</tr>
</tbody>
</table>

Oil & Gas Investment Spending:
2008: $54 billion
2009: $34 billion (estimate)
2010: $40 billion (forecast)

Note:
Spending in Canada excludes spending associated with mergers & acquisitions
State of the Alberta oil and gas industry
The outlook is mixed – keys to watch for

• **Crude oil and oil sands**
  - Prices recovering – particularly for heavy oil
  - Costs for new oil sands coming down slowly
    - Projects being re-examined
  - New tight oil resources (Bakken) are attracting attention

• **Natural gas**
  - Prices remain low, supply and storage are strong
  - New unconventional gas (shale) supplies
  - Natural gas drives majority of drilling activity

• **Keys to watch for:**
  - Natural Gas
    - US conventional gas supply - now that drilling has slowed
    - Natural gas storage levels
      - slow drilling reducing supply
      - cold weather increasing demand
  - Competitiveness of Canadian unconventional gas
  - Crude Oil
    - Continued recovery of global oil demand – China/India