



**MUSE  
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# **FINANCIAL ASSESSMENT OF THE IMPACT OF THE ALASKA GAS PIPELINE**

**PREPARED FOR**

**Legislative Budget and Audit Committee  
of the Alaska Legislature  
Representative Ralph Samuels, Chair**

**June 2008**

**..... *Real World Expertise***

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# KEY STUDY ASPECTS

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- **Financial Analysis of the Alaska Gas Pipeline Project from the perspective of TransCanada and Producer Project**
- **Assessment of the future performance of TransCanada's Canadian gas assets in two cases, With and Without Alaska Gas Supply**
- **High-level overview other TransCanada assets**
- **Evaluation of supply and demand/competition issues in North America that may impact the TransCanada pipeline assets**
- **Evaluation of impact of the Alaska gas on TransCanada's future earnings**

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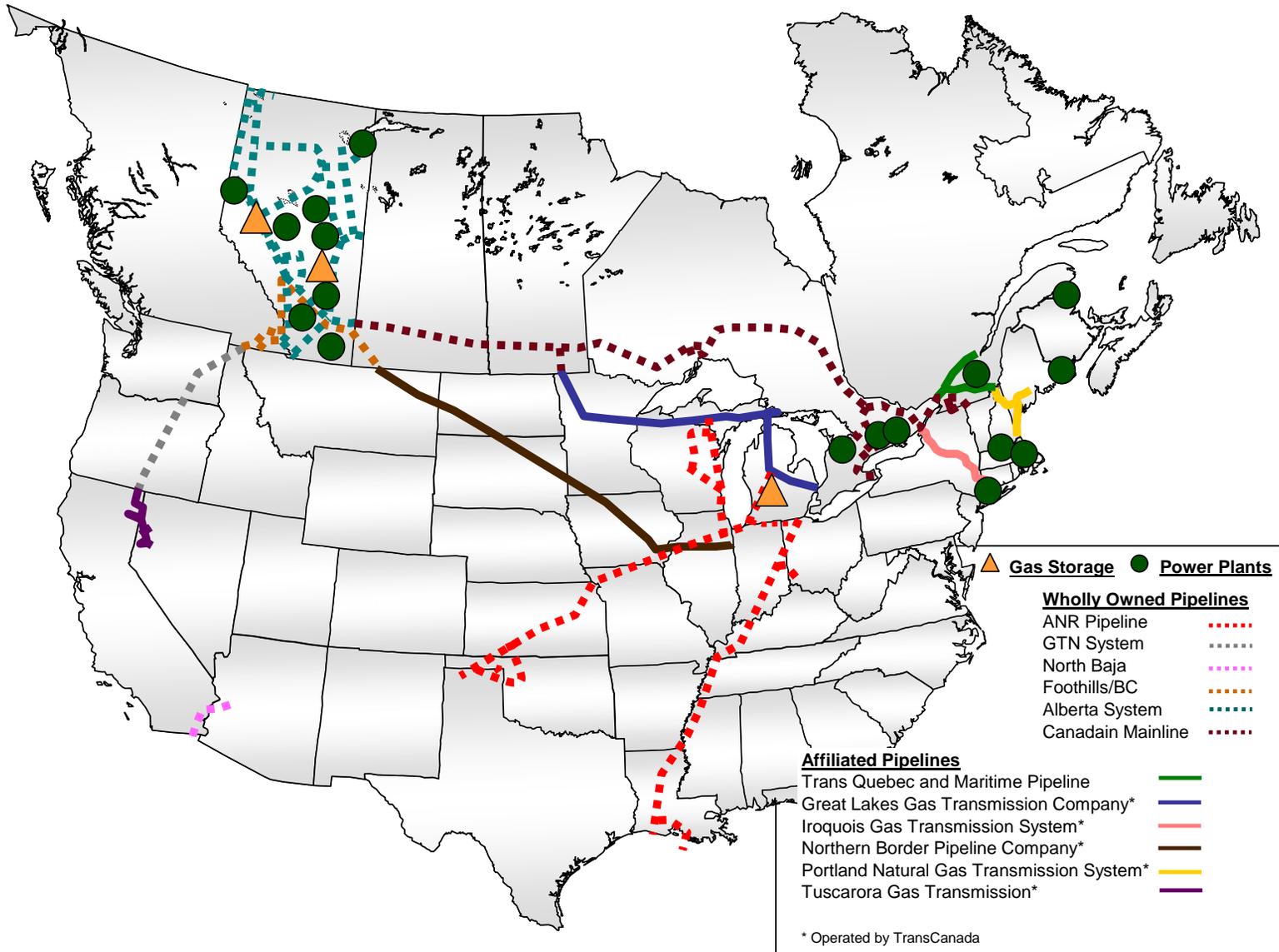
# **FINANCIAL ANALYSIS OF THE ALASKA GAS PIPELINE**

# FINANCIAL ANALYSIS OF THE ALASKA GAS PIPELINE PROJECT

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- **Assess the investment philosophy, asset portfolio, and financial structure of potential owner companies**
  - TransCanada
  - Producer Project Owner
    - ConocoPhillips (COP)
    - BP
  
- **Assess the risk/reward and potential return of the investment in the pipeline project**
  - Assuming certain percentage of firm transportation (FT) committed before investment
  - Assuming no FT commitment until year 2 of operations
  - Assuming all FT sold prior to initial construction
  
- **Evaluate the potential investment in the Alaska Pipeline Project in the context of each company's investment philosophy, asset portfolio, and financial structure**
  - Assess how investing in the project could impact each company's financial stability
  - Assess the project in light of other likely alternative project investments available to the companies

# TRANSCANADA



# TRANSCANADA (continued)

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## ➤ **Corporate Vision and Investment Philosophy**

- Become the leading energy infrastructure company in North America
- Deliver strong financial performance
- Maximize corporate financial flexibility
- Execute on the current portfolio of large, attractive projects and initiatives
- Create and cultivate a high-quality portfolio of future growth opportunities

## ➤ **Asset Portfolio**

- Natural Gas Transportation
  - 36,500 miles of wholly-owned pipelines connecting North American gas producing basins to downstream markets
  - 15 billion cubic feet per day (Bcf/d) of natural gas transported in 2007
- Natural Gas Storage
  - 355 billion cubic feet (Bcf) of storage capacity
- Crude Oil Transportation
  - Keystone Pipeline Project linking growing Canadian oil sands supplies with refineries in the U.S. Midwest
  - New build, plus conversion of underutilized Mainline capacity
- Power Generation
  - Assets in Canada and the U.S.
  - Diverse portfolio of nuclear, natural gas, coal, hydro, and wind
- LNG
  - Two LNG import terminals in the development phase
  - Quebec location on the St. Lawrence River
  - New York State in Long Island Sound
- Marketing

# TRANSCANADA (continued)

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## ➤ Key Facets of Current Portfolio

- Planned investment of approximately \$10 billion in a number of energy infrastructure projects currently under construction throughout North America
- Pipeline Segment
  - Approximately \$5.3 billion of committed capital projects
    - Alberta System's North Central Corridor
    - Keystone Oil Pipeline
- Energy Segment
  - Plan to invest more than \$4.6 billion in a variety of projects
    - Bruce Power, Bruce A Restart and Refurbishment Project
    - Halton Hills Generating Station
    - Portlands Energy Centre
    - Cartier Wind

# TRANSCANADA (continued)

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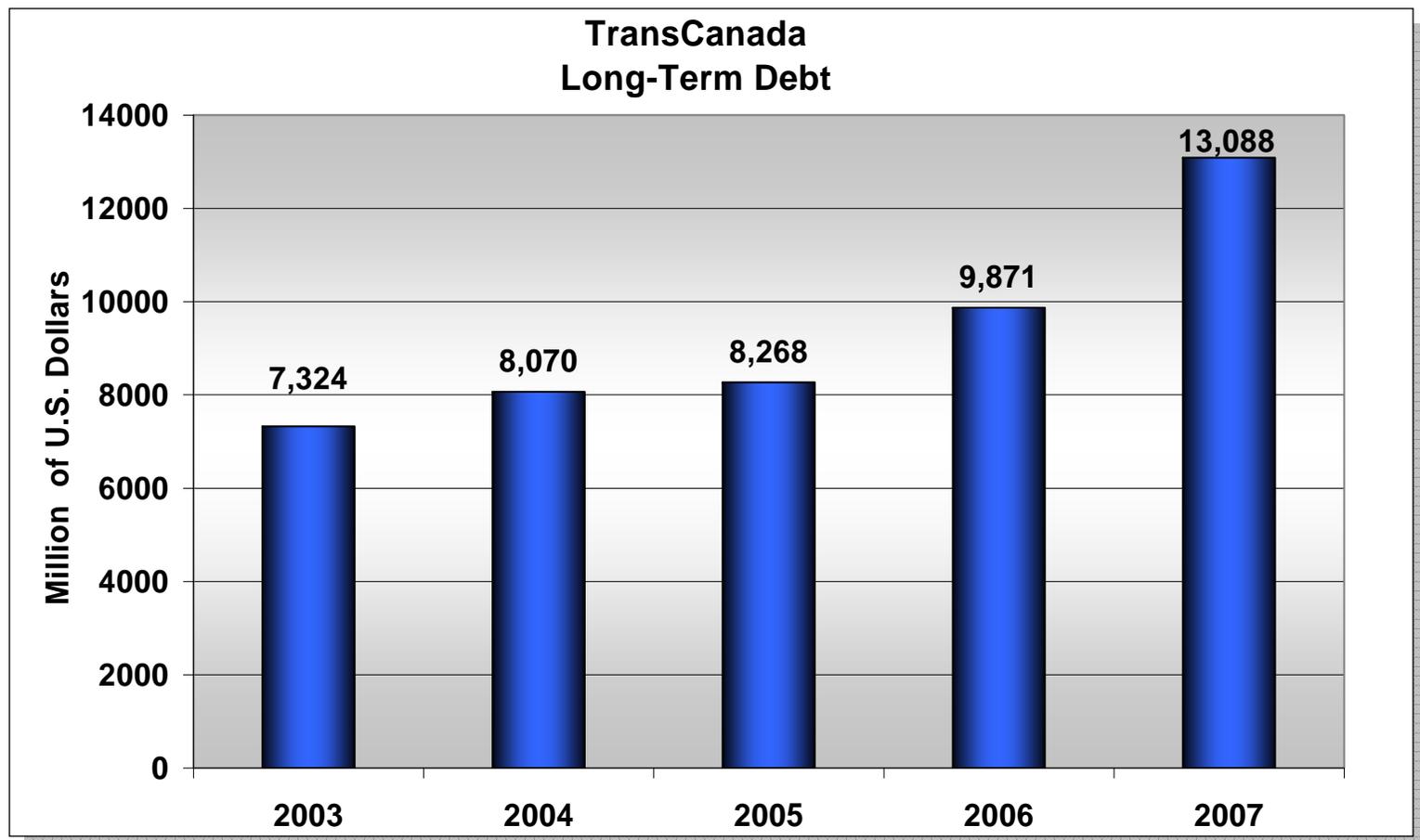
## ➤ **Future Investments Criteria**

- Select only the very best opportunities and move those initiatives forward
- Build on existing large and attractive portfolio of projects and investment opportunities in the Pipeline and Energy segments
- Cultivate a portfolio that provides the opportunity to reinvest substantial discretionary cash flow into opportunities in natural gas and crude oil pipelines, power generation facilities, natural gas storage, and LNG terminals
- Capitalize on North America's increasing demand for cleaner and more efficient energy
- Continue to deliver strong and sustainable financial returns to shareholders

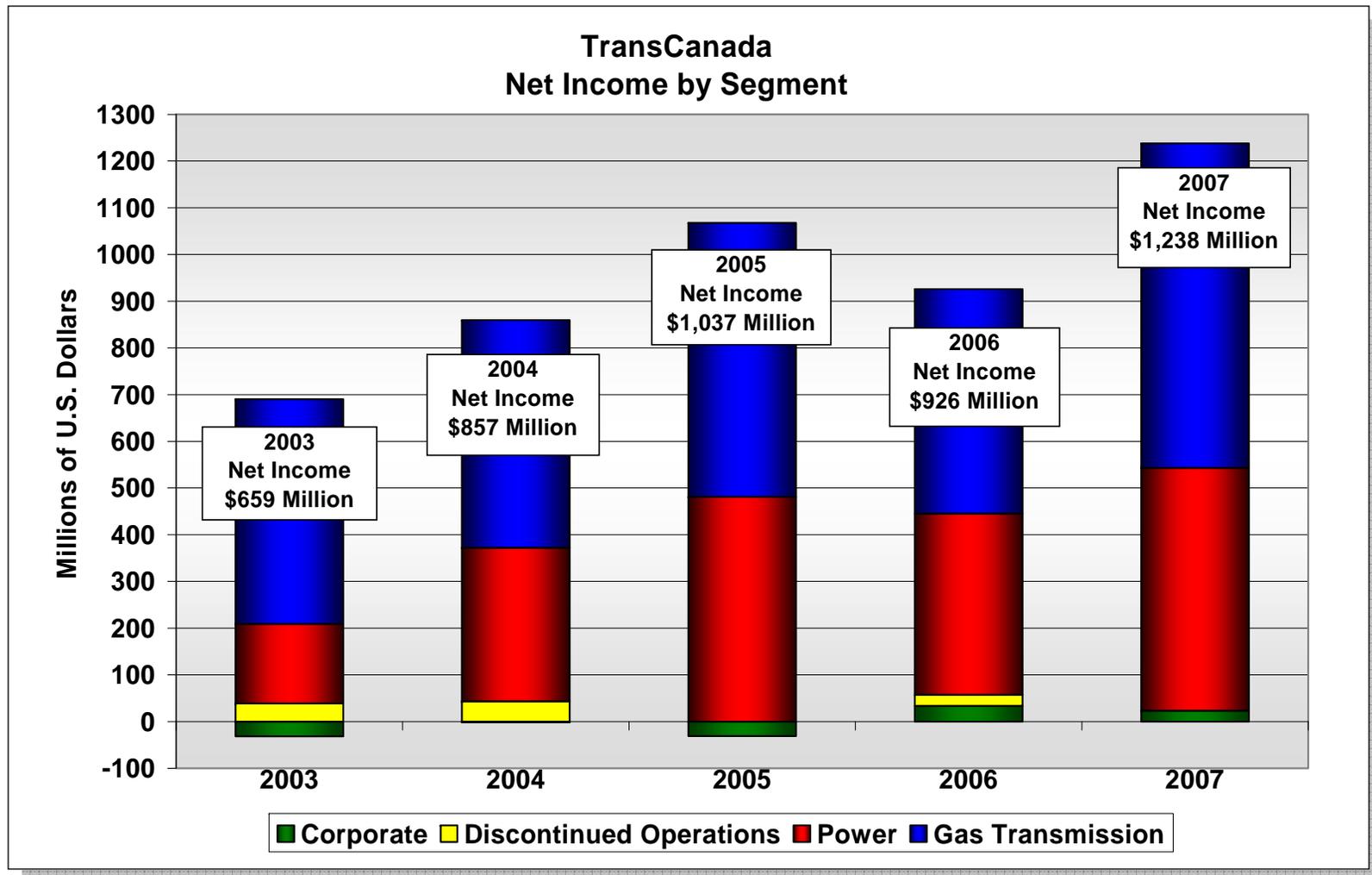
# TRANSCANADA (continued)

## ➤ Financial Structure

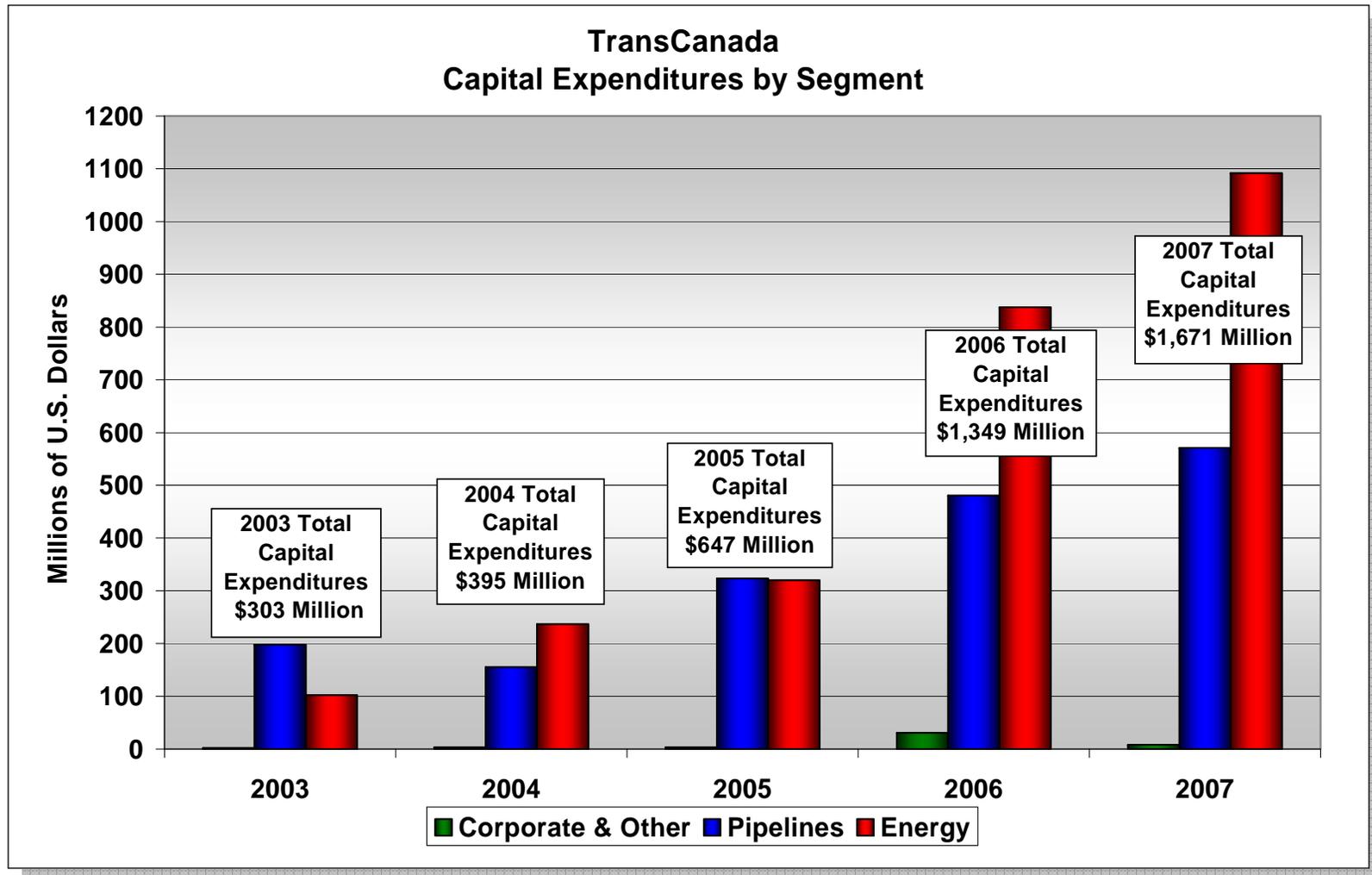
- Current Market Capitalization, \$23 billion
- Long-term debt as of March 31, 2008, \$13 billion
- Detailed 2007 Financial Performance analysis located in Appendix



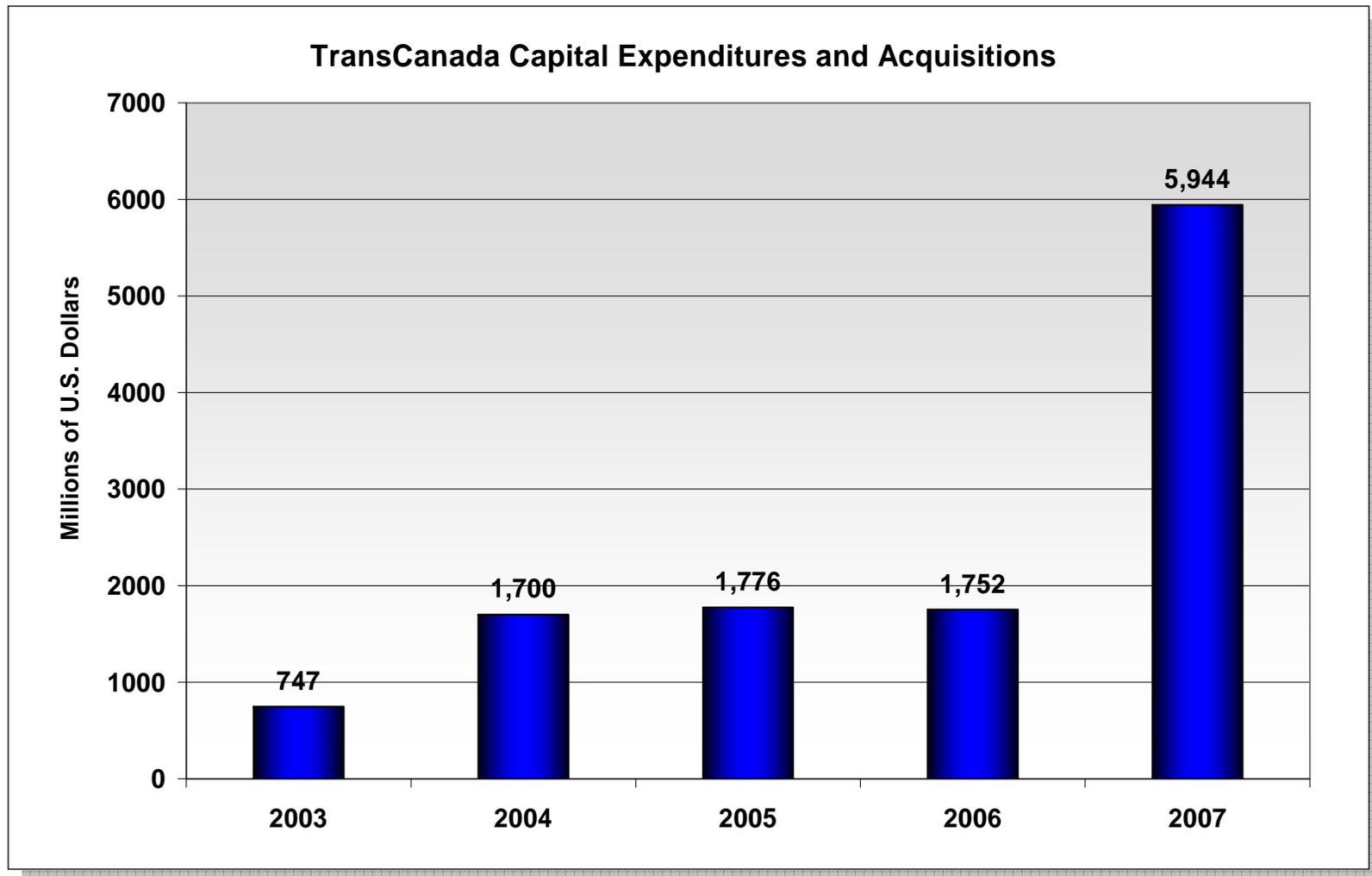
# TRANSCANADA (continued)



# TRANSCANADA (continued)



# TRANSCANADA (continued)



# FINANCIAL ANALYSIS OF POTENTIAL OWNER COMPANIES

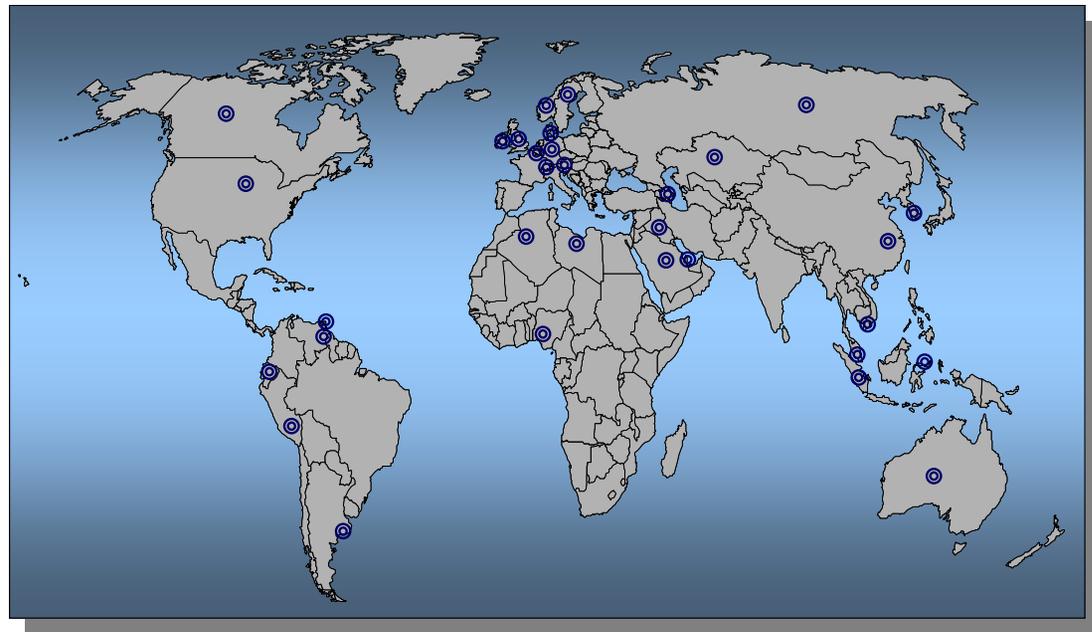
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- **Producer Project Owners**
  - ConocoPhillips
  - BP

# CONOCOPHILLIPS ASSET PORTFOLIO

- **Exploration activities in 23 countries**
- **Production activities in 16 countries**
  - Total 2007 production 2.3 million barrels per oil equivalent day
  - Including Lukoil and Syncrude
- **Refineries**
  - 12 in the U.S.
  - 4 in Europe
  - 1 in Asia
  - 2007 Refining Capacity 2.7 million barrels per day (MMbp/d)
    - 2.04 MMbp/d in U.S.
    - 669 thousand barrels per day (Mbp/d) Internationa
- **As of December 31, 2007:**
  - Third-largest integrated energy company in the U.S.
    - Market capitalization
    - Oil and natural gas reserves
    - Oil and natural gas production
  - Fourth-largest refiner in the world
  - Sixth-largest worldwide reserves holder, non-government-controlled company

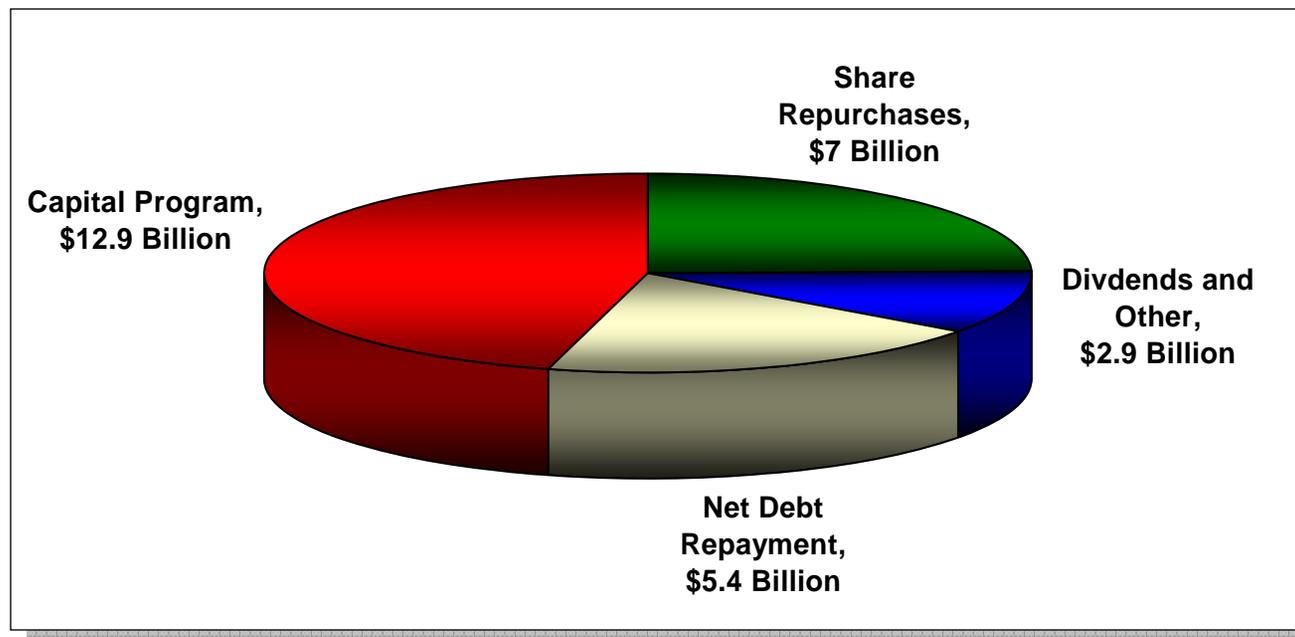
- **Refined Products Marketing**
  - U.S., Europe, and Malaysia
  - Phillips 66, Conoco, 76, and JET brands
- **Joint Venture Operations**
  - DCP Midstream in the U.S., 50 percent Interest
    - 63 Natural Gas Processing Plants
    - 58,000 miles of natural gas gathering
  - Chevron Phillips Chemical Company, 50 percent Interest
    - 36 Production Facilities in 7 countries
    - 6 Research and Technology Centers



# CONOCOPHILLIPS (continued)

## ➤ Corporate Vision and Investment Philosophy

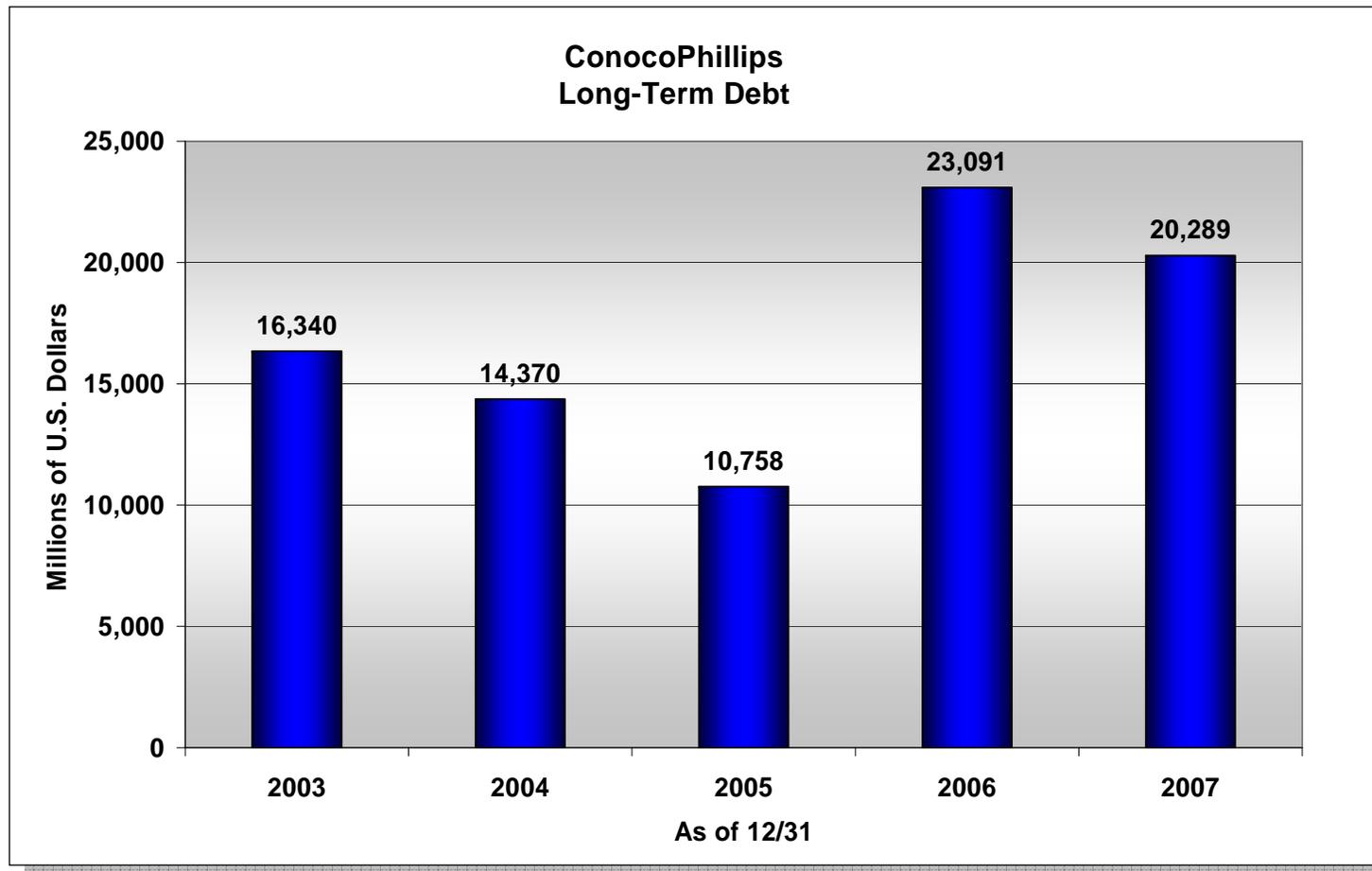
- Exercised a consistent, proven investment strategy that balances allocations of cash flow
  - Grow the asset base
  - Return capital to shareholders through dividends and share repurchases
  - Manage debt
- Investment allocations are based upon the dynamic industry environment including identification of new investment opportunities
- In the recent past, the company has completed key acquisitions and new investments while reducing corporate debt
- 2007 Uses of Cash are summarized in the chart below



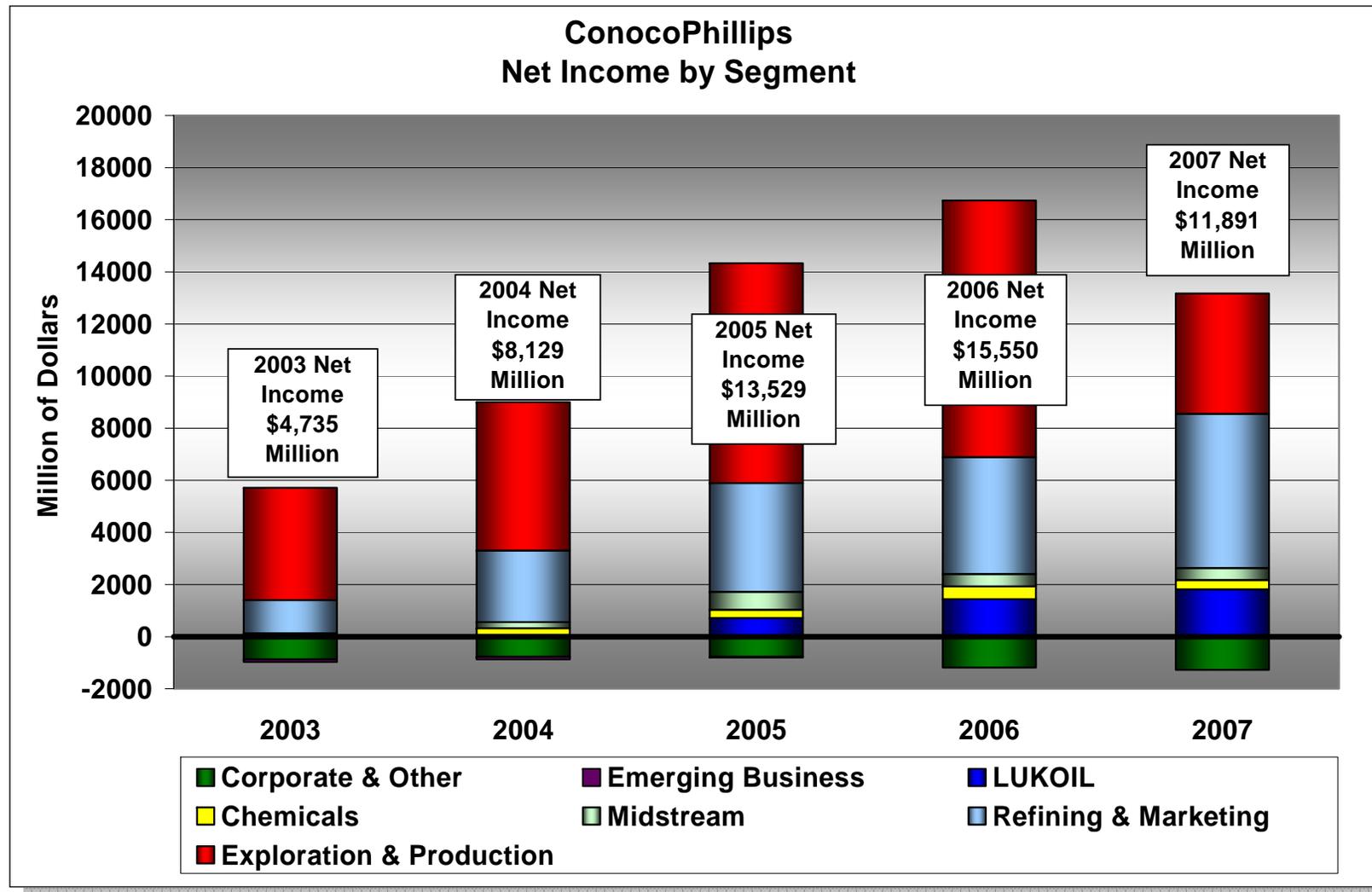
# CONOCOPhillips ASSET PORTFOLIO (continued)

## ➤ Financial Structure

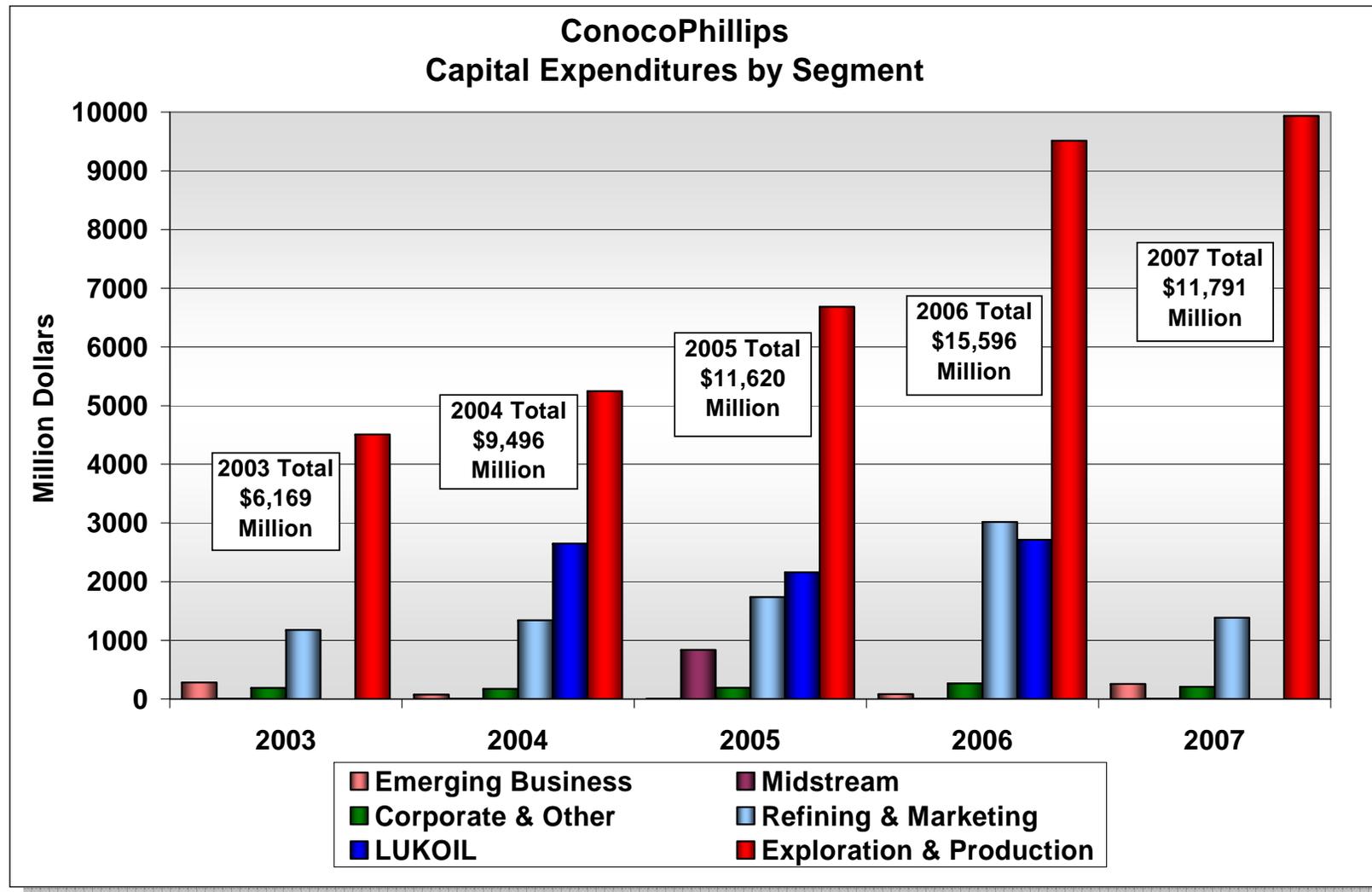
- Current market capitalization, \$144 billion
- Debt as of March 31, 2008, \$ 22 billion
- Long-term debt, \$ 20 billion



# CONOCOPhillips ASSET PORTFOLIO (continued)



# CONOCOPhillips ASSET PORTFOLIO (continued)



# BP WORLDWIDE

- **Exploration activities in 29 countries**
- **Over 24,000 service stations worldwide**
- **Interest in 17 crude oil refineries**
- **Corporate Vision and Investment Philosophy**
  - Continue to support the strong list of projects under development and coming on stream
  - Newly delineated the business into groups to emphasize the key drivers of the business
    - Upstream
    - Downstream
    - Alternative Energy
  - Investments in alternative energy to provide a focus on technology to support the existing business as well as the development of the supply of low-carbon energy for the future
  - Focus on evaluation of long-term strategy given increased oil prices and the trends in the world economy, including the identification of the right opportunities in a challenging marketplace
  - Cash flows from BP's strong asset base are allowing the company to increase investment in future growth and shareholder dividends
  - Returning cash to shareholders through dividends and buybacks
    - Increased the quarterly dividend (March 2008) to 13.525 cents per share, compared with 10.325 cents per share in 2007, a 16 percent increase
    - \$7.5 billion of shares were repurchased for cancellation in 2007



# BP WORLDWIDE ASSET PORTFOLIO

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## ➤ Africa

- Exploration and Production - Algeria, Angola, and Egypt
- Refining and Marketing – Southern Africa
- Marketing Operations for lubricants, oil and gas products, and solar panels across the continent

## ➤ Asia

- Exploration and Production - China, Indonesia, Vietnam, and Pakistan
- Chemicals manufacturing - China, the Philippines, South Korea, and Malaysia
- LNG – China
- Joint Venture opportunities in many countries including Kuwait and United Arab Emirates
- BP Solar – India
- Lubricants and oil products marketing throughout the region
- Major retail operations - India and China

## ➤ Australasia

- Exploration and Production - Australia and New Zealand
- BP Solar – Australia
- Sales and marketing of lubricants and oil products takes place throughout the region
- Major retail operations in both Australia and New Zealand

## ➤ Europe

- London is where BP's corporate headquarters are located, and the UK is, therefore, a center for trading, legal, finance, and other mainstream business functions. The UK is also home to three of BP's major global research and technology groups
- Exploration and Production - the North Sea, the UK and Norway, The Netherlands, and Azerbaijan
- Leader of the Baku-Tbilisi-Ceyhan (BTC) pipeline project
- Joint Venture - Russia (50 percent ownership of TNK-BP)

# BP WORLDWIDE ASSET PORTFOLIO (continued)

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## ➤ Europe (continued)

- Refining – BP owns, or has a stake in nine regional refinery operations
- Marketing - BP retail sites are a common sight in several European countries and in Germany BP markets under the Aral brand
- Wholesale and retail lubricants and other oil products are sold throughout Europe to both consumers and business customers
- BP Solar – Spain
- Numerous chemical plants within the region

## ➤ North America

- Exploration and Production - The BP group is the largest oil and gas producer and one of the largest gasoline retailers in the United States, and has significant natural gas production in Canada
- The largest non-US company on the New York Stock Exchange
- BP Alternative Energy business operations center - Houston, and solar manufacturing facilities in the U.S.
- Canadian activities focus on the production of natural gas and derivatives
- Exploration and production work is a core aspect of BP's presence in Trinidad and Tobago – where BP is a major local producer
- BP is a major

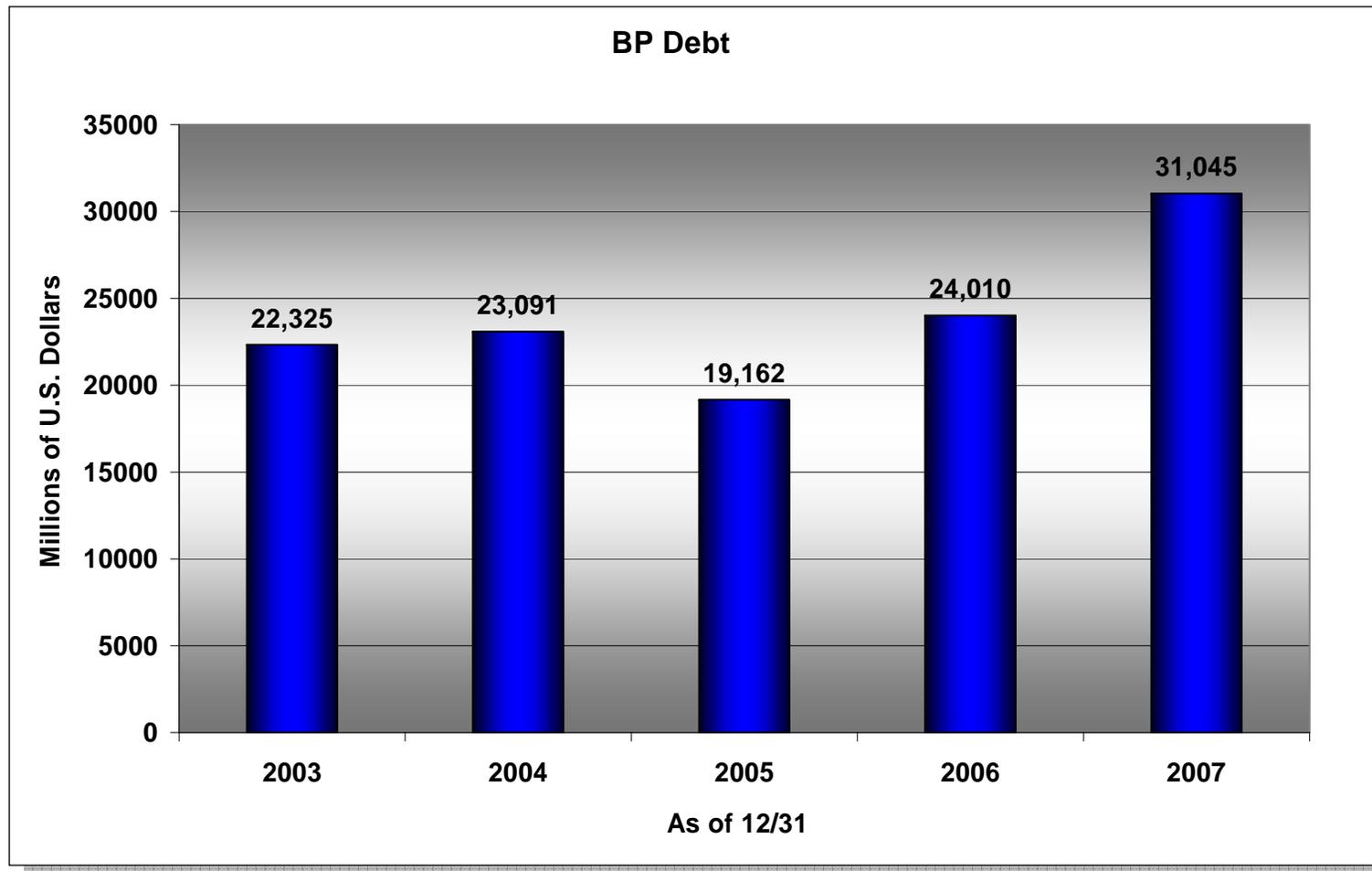
## ➤ South America

- Exploration and production work is a core aspect of BP's presence in Colombia and Venezuela
- In Brazil, BP has a chemicals joint venture and significant solar projects. Elsewhere in South America, activities center on the sale of oil, lubricants, and oil products

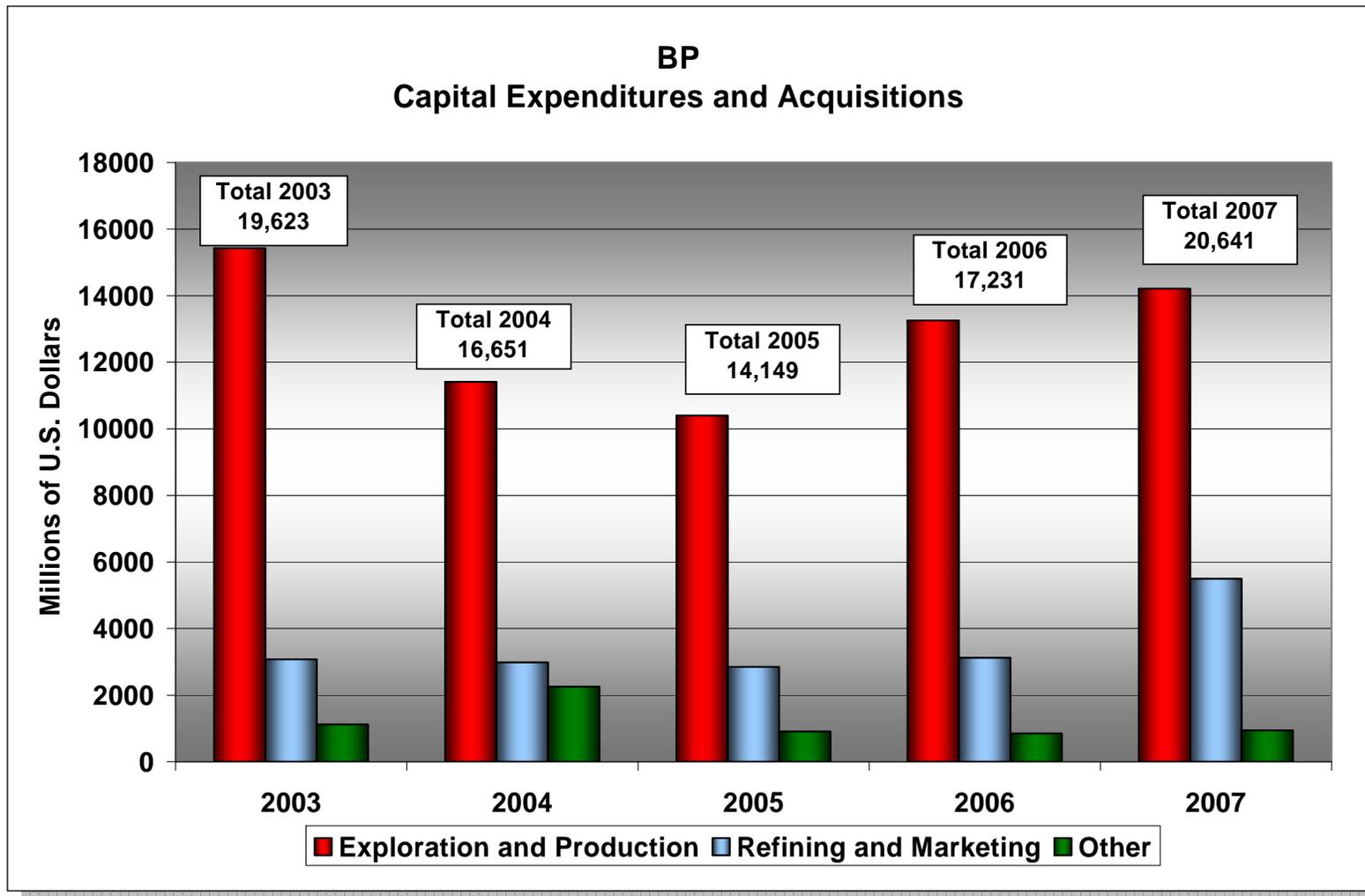
# BP WORLDWIDE ASSET PORTFOLIO (continued)

## ➤ Financial Structure

- Current Market Capitalization, \$228 billion
- Debt as of December 31, 2007, \$31 billion

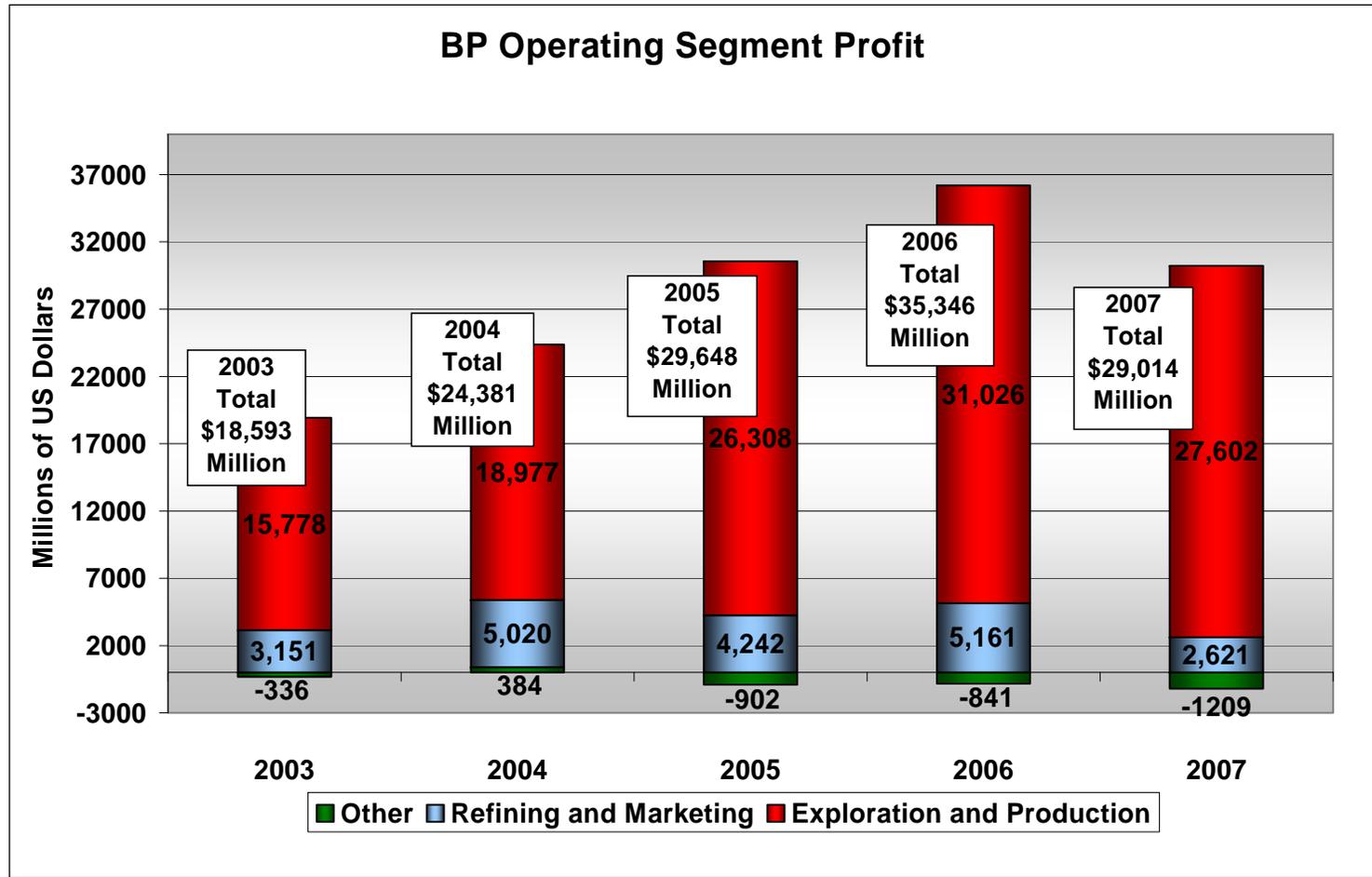


# BP WORLDWIDE ASSET PORTFOLIO (continued)



# BP (continued)

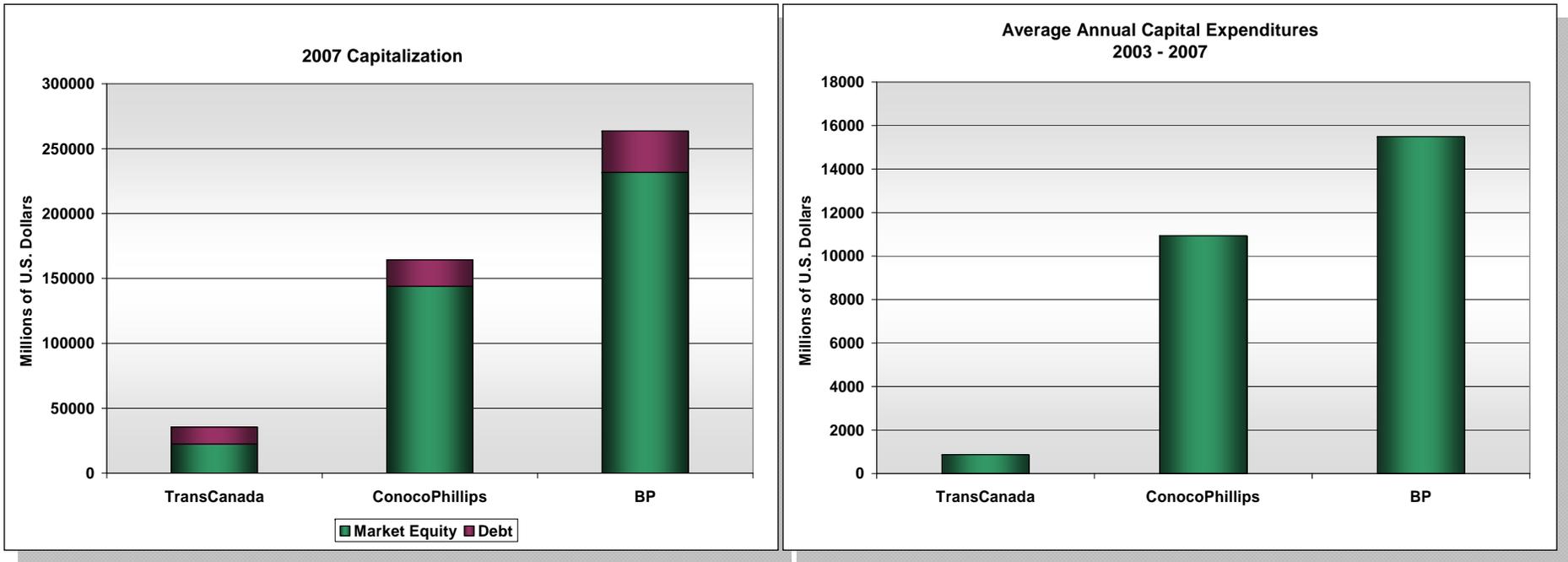
## ➤ Operating Profit by Segment



NOTES: Figures are before tax (EBIT)

BP states Segment Operating Profit on an inventory replacement basis of current pricing

# COMPANY FINANCIAL COMPARISON



# RISK/REWARD AND POTENTIAL PROJECT RETURN

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- **Assuming certain percentage of FT committed before investment**
  - Revenue Risk is reduced, but not eliminated
  - Some Revenue Upside is lost as the result of likely lower overall negotiated tariff rates for FT shippers
  - Some Revenue Upside is retained as uncommitted operational capacity may be sold to spot shippers at base tariff rates
  - Some Capacity Risk may be eliminated depending upon the Project Developer's final technical design relative to overall system FT commitments
  - The Project Developer still faces significant risks
    - Construction risk – weather delays, design delays, construction quality issues, material/equipment availability delays, etc.
    - Capital Cost risk – raw material costs, labor, interest rate risk
    - Operating Cost risk – depending upon how FT is structured, negotiated rates will leave operational risk with Project Developer
    - Credit risk that is assessed based upon the creditworthiness of the companies standing behind the FT commitment
    - Regulatory risk
  
- **Assuming no FT commitment until year 2 of operations**
  - Not a valid reference case
  - The pipeline project is not likely to be built without throughput commitments, therefore, the risk is very, very high for any project sponsor looking to proceed with development in this case

## RISK/REWARD AND POTENTIAL PROJECT RETURN (continued)

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### ➤ **Assuming all FT sold prior to initial construction**

- If all of the FT capacity on the system is sold prior to initial construction, revenue risk is mitigated
- Capacity risk is reduced as project can be “right-sized” to meet committed market demand with expansion capabilities
- The Project Developer still faces significant risks
  - Construction risk – weather delays, design delays, construction quality issues, material/equipment availability delays, etc.
  - Capital Cost risk – raw material costs, labor, interest rate risk
  - Operating Cost risk – depending upon how FT is structured, negotiated rates will leave operational risk with Project Developer
  - Credit risk that is assessed based upon the creditworthiness of the companies standing behind the FT commitments
  - Regulatory risk

# POTENTIAL COMPANY INVESTMENT

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- **Evaluate the potential investment in the Alaska Pipeline Project in the context of each company's investment philosophy, asset portfolio, and financial structure**
  - Assess how investing in the project could impact each company's financial stability
  - Assess the project in light of other likely alternative project investments available to the companies
  
- **TransCanada**
  
- **COP**
  
- **BP**

# POTENTIAL COMPANY INVESTMENT - TRANSCANADA

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## ➤ **Financial Stability**

- In the last five years, net income has doubled and the company has been able to take on additional debt, almost doubling long-term debt in the same period
- The company has also been able to define and capture new opportunities that have provided a solid foundation for new equity
- The “midstream” energy services sector has been in favor with investors
- More than 60 percent of TransCanada’s equity is held by institutional investors
  - Favor predictable, stable returns
  - Favor low risk investments for the majority of their portfolios
  - Sometimes take on medium to high risk investments, but do so in “small bites”
- A project the size of the Alaska Gas Pipeline dwarfs cumulative total TransCanada capital spending in the last 5 years
- On a stand-alone basis, at today’s market capitalization, taking on this project will be highly leveraging to TransCanada, both positive and negative, in contrast to historical investments
  - Would likely require raising additional equity
  - Would likely impact equity returns in the medium-term, dependent upon project timeline and cash funding needs

## ➤ **Relative to other TransCanada Investments**

- Complements existing Canadian gas pipeline and storage assets, owned by TransCanada and others
- Long lead time does not provide support for near- to medium-term earnings growth; TransCanada would have to identify, consummate, and execute other projects in the interim
- May provide needed infusion of natural gas liquids into Alberta
  - Supports expected supply shortfall in petrochemical feedstock
  - May provide some supply to meet heavy crude diluent demand

# POTENTIAL COMPANY INVESTMENT - CONOCOPhillips

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## ➤ **Financial Stability**

- COP routinely takes on large, medium- to high-risk projects; however, as a large, integrated multi-national corporation, such higher risk projects are offset by long-term producing reserves, midstream assets, and other investments
- Approximately 80 percent of COP equity is held by institutional and mutual fund investors that own the stock because of the corporation's ability to manage such risks
- The capital required for execution of the project is of the same order of magnitude as COP's current capital budget
- In any case, the financial risk of the Alaska Gas Pipeline Project will ride on the shoulders of those companies that own or control the majority of the gas reserves in the state
  - Companies like BP are used to taking on such risks in return for developing reserves
  - Investors in companies like BP expect corporations to take on such risk to develop the reserves, but also trust the established track record of these companies in assessing and managing development risk

## ➤ **Relative to other ConocoPhillips Investments**

- The COP investment philosophy is based upon allocation of capital
- COP has been investing in stock buybacks in the last couple of years suggests that management views returning recent cash increases to investors to be more profitable than investing in additional new projects
- COP likely views the Alaska Gas Pipeline Project as leveraging and important to the company's future reserve position as they have allocated the initial capital to pursue the first phases of the Denali project development

# POTENTIAL COMPANY INVESTMENT - BP

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## ➤ **Financial Stability**

- Even larger than COP, BP is one of the largest, integrated multi-national energy corporations and does take on medium- to high-risk projects in balance with the corporation's total portfolio risk
- The capital required for execution of the project is in line with BP's current capital budget
- In any case, the financial risk of Alaska Gas Pipeline Project will ride on the shoulders of those companies that own or control the majority of the gas reserves in the state
  - Companies like COP are used to taking on such risks in return for developing reserves
  - Investors in companies like COP expect corporations to take on such risk to develop the reserves, but also trust the established track record of these companies in assessing and managing development risk

## ➤ **Relative to other BP Investments**

- Like COP, BP has also been buying back stock
- BP also invests, as do most large, integrated companies, based upon an allocation model that considers the health of each asset sector and the ranking of available projects on a risk/return basis
- Stock buyback typically signals board confidence in the existing asset base and a preference for returning recent cash increases to investors rather than increasing capital spending with additional new investments

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## **FUTURE PERFORMANCE OF TRANSCANADA'S CANADIAN GAS ASSETS**

# FUTURE PERFORMANCE OF TRANSCANADA'S CANADIAN GAS ASSETS

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- **TransCanada Gas Pipeline and Storage Assets**
- **Forecast of future natural gas production in Canada, specifically with respect to Western Canadian Sedimentary Basin gas and potential McKenzie Delta gas**
  - Forecast of Canadian regional gas demand, including oil sands project demand, based upon likely scenarios for the rate of development of those projects and associated natural gas demand
  - Address the status of announced oil sands projects as the result of:
    - The impact of ballooning capital costs
    - The impact of carbon dioxide (CO<sub>2</sub>) sequestration
- **Evaluation of existing natural gas storage locations and future supply/demand for storage**
- **Future Performance of TransCanada's Canadian Gas Assets**
  - Without Alaska Gas Supply
  - With Alaska Gas Supply

# TRANSCANADA GAS PIPELINE AND STORAGE ASSETS

- **Gas pipeline assets are either wholly-owned by or affiliated with the parent**
- **TransCanada’s gas pipeline assets are summarized in the table at the right**
- **TransCanada is also general partner and a common unit holder of TC PipeLines, LP, a publicly held limited partnership with interests in the Tuscarora, Northern Border Pipelines and Great Lakes Gas Transmission Company**
- **Specific information associated with each of these assets is provided in the Appendix – Natural Gas Pipelines**

Pipeline System	Length	Average throughput (2006)
<a href="#">Alberta System</a>	23,498 km	11.1 Bcf/d
<a href="#">Canadian Mainline</a>	14,957 km	8.1 Bcf/d
<a href="#">Foothills System*</a>	1,241 km	3.8 Bcf/d
<a href="#">ANR Pipeline</a>	17,000 km	4.0 Bcf/d
<a href="#">GTN</a>	2,174 km	2.2 Bcf/d
<a href="#">North Baja</a>	129 km	0.3 Bcf/d
<a href="#">Tamazunchale Pipeline</a>	130 km	In service December 2006

\*This information includes 2006 data from the B.C. System assets, which were integrated with the Foothills System on April 1, 2007.

Affiliated Pipelines	Length	Average throughput (2006)
<a href="#">Great Lakes Gas Transmission Company*</a> (53.55% direct; 6.2% indirect ownership)	3,404 km	2.2 Bcf/d
<a href="#">Iroquois Gas Transmission System</a> (44.5% ownership)	666 km	1.1 Bcf/d
<a href="#">Northern Border Pipeline Company*</a> (6.7% indirect ownership)	2,250 km	2.2 Bcf/d
<a href="#">Portland Natural Gas Transmission System*</a> (61.71% ownership)	474 km	0.1 Bcf/d
<a href="#">Trans Québec and Maritimes Pipeline (TQM)*</a> (50% ownership)	572 km	0.4 Bcf/d
<a href="#">Tuscarora Gas Transmission*</a> (1% direct; 13.1% indirect ownership)	491 km	0.1 Bcf/d

\*Operated by TransCanada

Source: TransCanada

# CANADIAN GAS PIPELINES

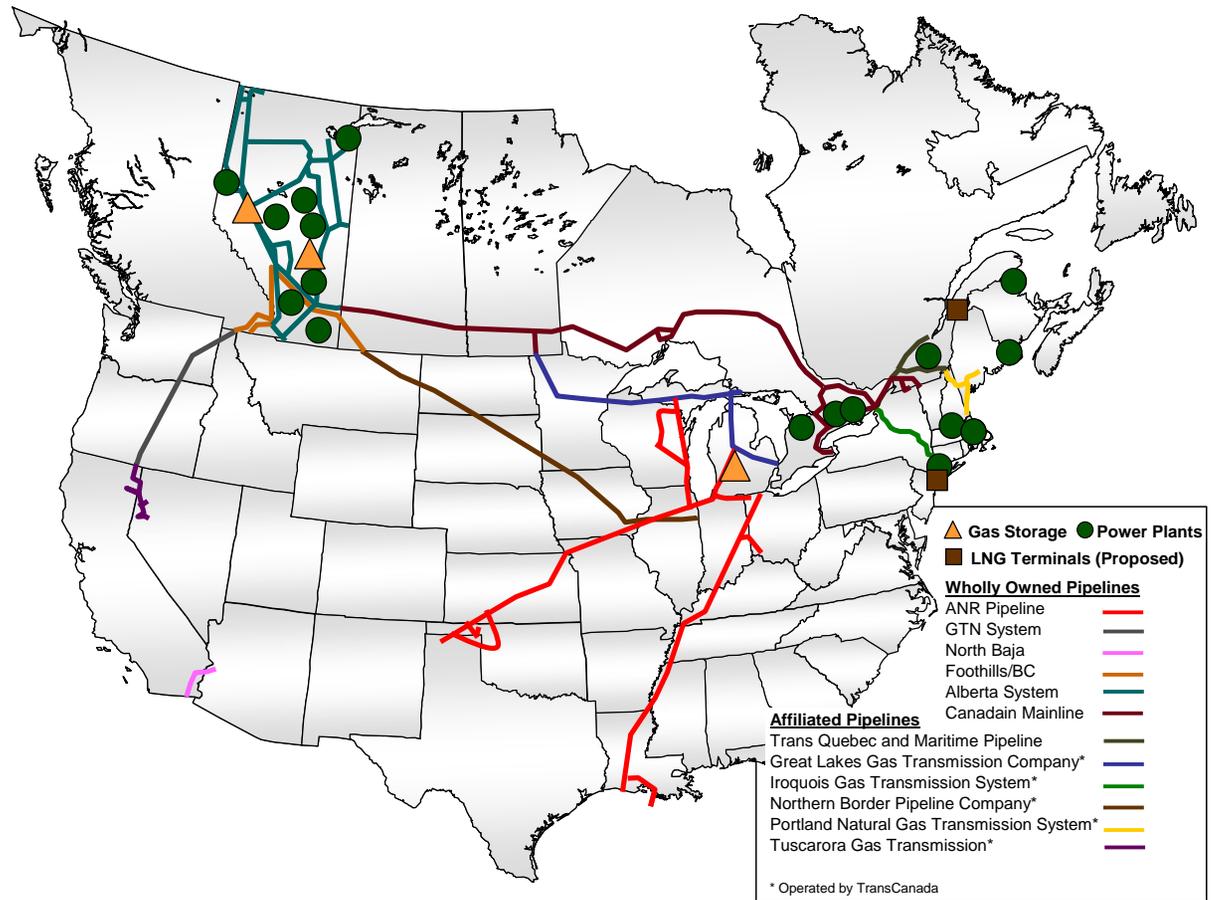
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- **Alberta System - gathers natural gas for use within the province for delivery to provincial boundary points. Connects with**
  - Canadian Mainline
  - BC System
  - Foothills System
  - Other pipelines
  
- **Canadian Mainline – extends from the Alberta/Saskatchewan border east to the Québec/Vermont border and connects with other natural gas pipelines in Canada and the U.S.**
  
- **Foothills - carries natural gas for export from central Alberta to the U.S. border serving markets in the U.S. Midwest, Pacific Northwest, California and Nevada. Western leg runs through British Columbia to connect to Gas Transmission Network (GTN) and the Eastern leg runs through Saskatchewan connecting with Northern Border Pipeline Company (NBP)**
  
- **Ventures LP – supplies natural gas in Alberta to the oil sands region and a petrochemical complex at Joffre**
  
- **TQM – transports gas from interconnection with Canadian Mainline at Montreal to Quebec City and connects to the Portland system**
  
- **Additional background information is located in the Appendix**

# GAS STORAGE OVERVIEW

## ➤ Canadian Natural Gas Storage

- 120 Bcf capacity
  - 100 percent owned Edson facility
    - 50 Bcf capacity
    - 725 million Standard cubic feet per day (MMScf/d) injection/withdrawal
  - 60 percent owned Crossalta facility
    - 32 Bcf capacity (net)
    - 288 MMScf/d injection/withdrawal (net)
  - Contracted storage
    - 38 Bcf capacity (net)



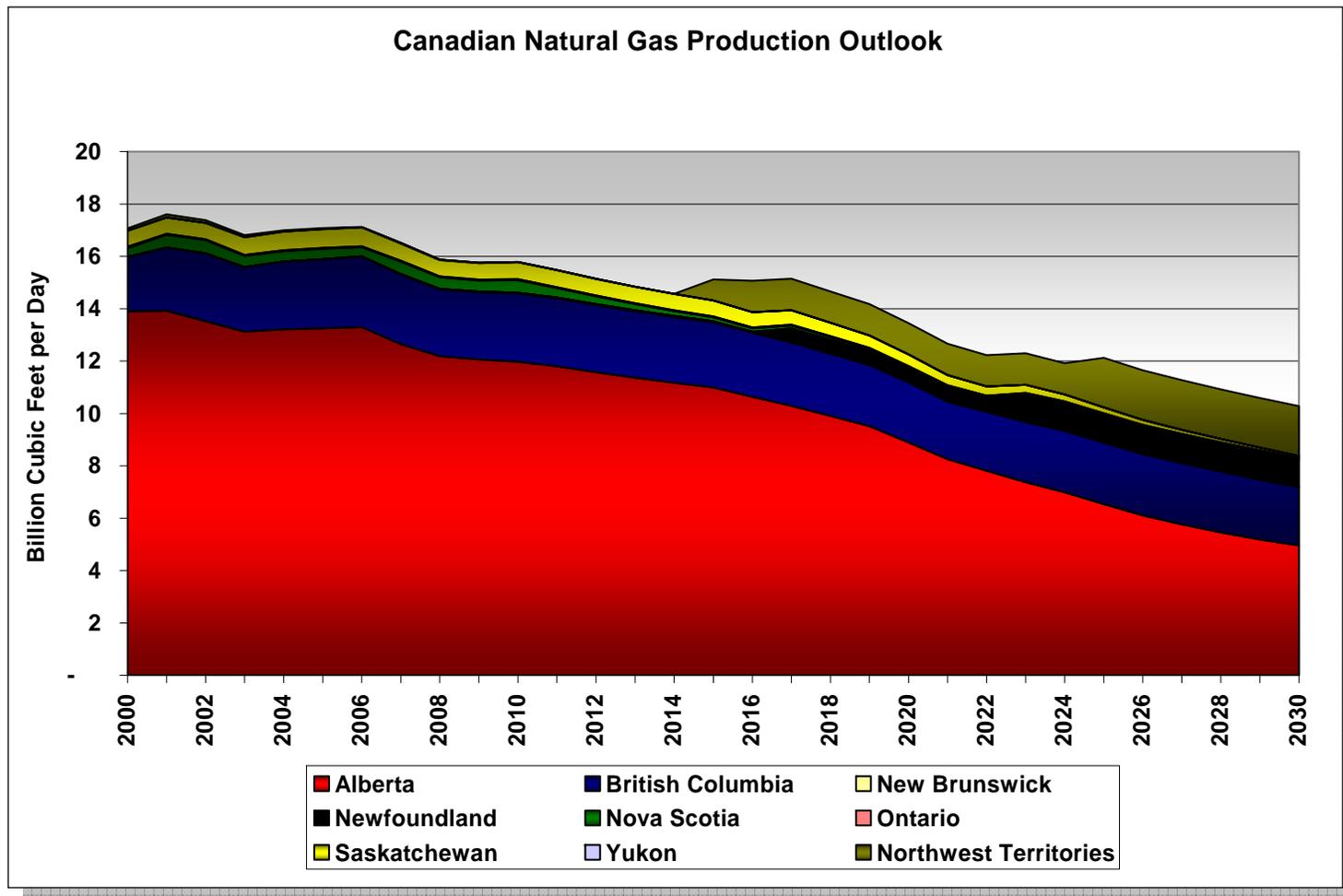
# FORECAST OF CANADIAN GAS PRODUCTION

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- **Production by Province**
- **Western Canada Natural Gas Production Outlook**
- **Western Canada Gas Demand**
- **Alberta Gas Demand**
- **Alberta Hub and Export Capacity**
- **Alberta Gas Supply Forecast**
- **Impact of Oil Sands Project Demand**

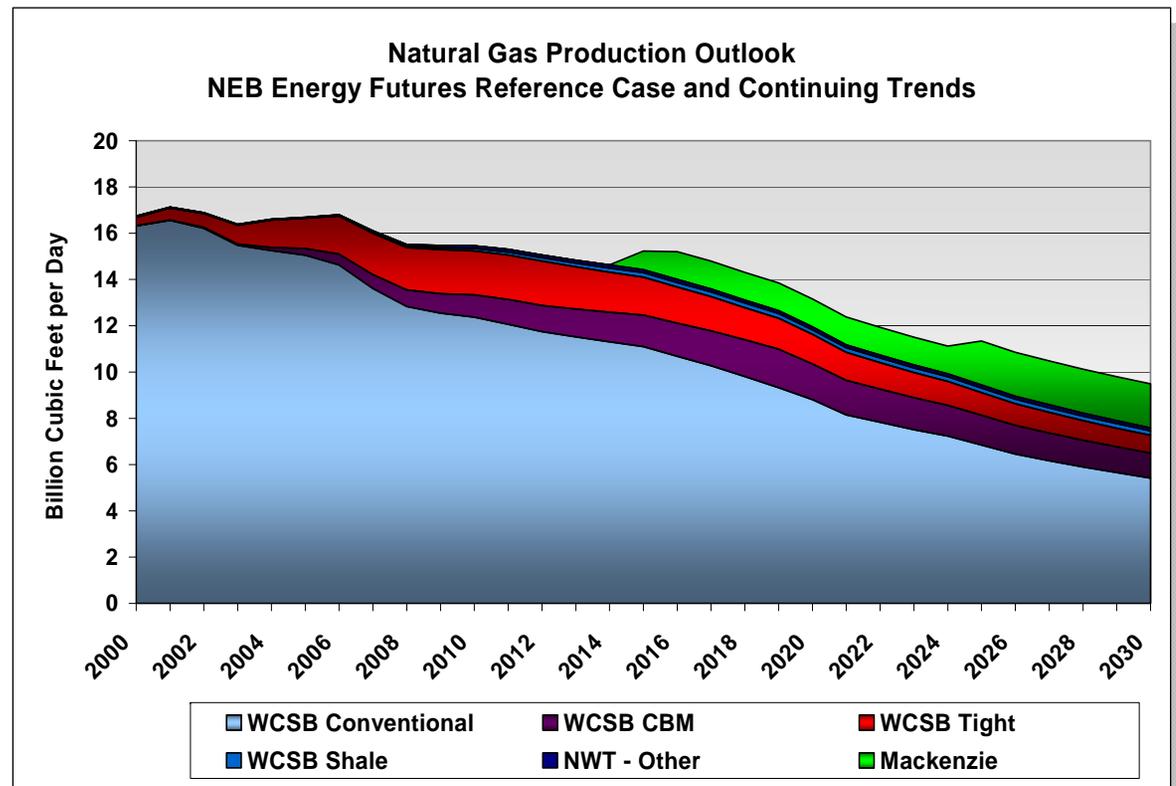
# PRODUCTION BY PROVINCE

- The largest proportion of Western Canadian production is from Alberta
  - Alberta produces almost 75 percent of Western Canadian production



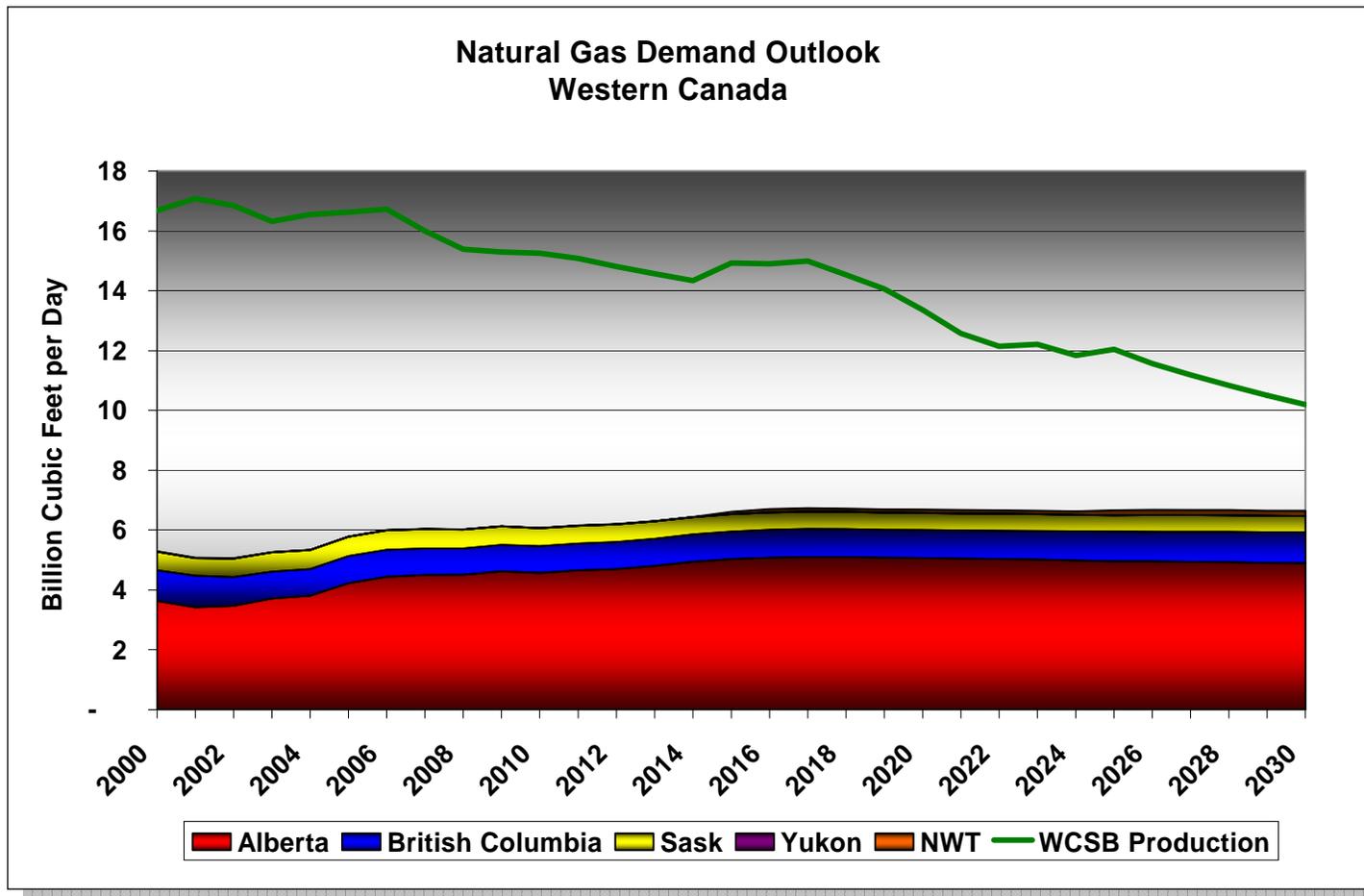
# WESTERN CANADA NATURAL GAS PRODUCTION OUTLOOK

- **Forecast of future natural gas production in Western Canada by National Energy Board (NEB) completed in November 2007**
  - Mackenzie gas production beginning in 2015 at 1.2 Bcf/d with an expansion to 1.9 Bcf/d in 2025
- **The NEB has forecast declining Western Canadian gas production despite increases in tight gas and coal bed methane production. The NEB forecast is based on flat real Henry Hub price of \$7.00 per million British thermal units (MMBtu) in 2005 dollars**
- **Mackenzie gas, currently projected on stream in 2015 at 1.2 Bcf/d, only partially offsets the expected production decline**
- **Shale gas, in northeastern British Columbia, is a promising new trend that is not captured in the NEB forecast**



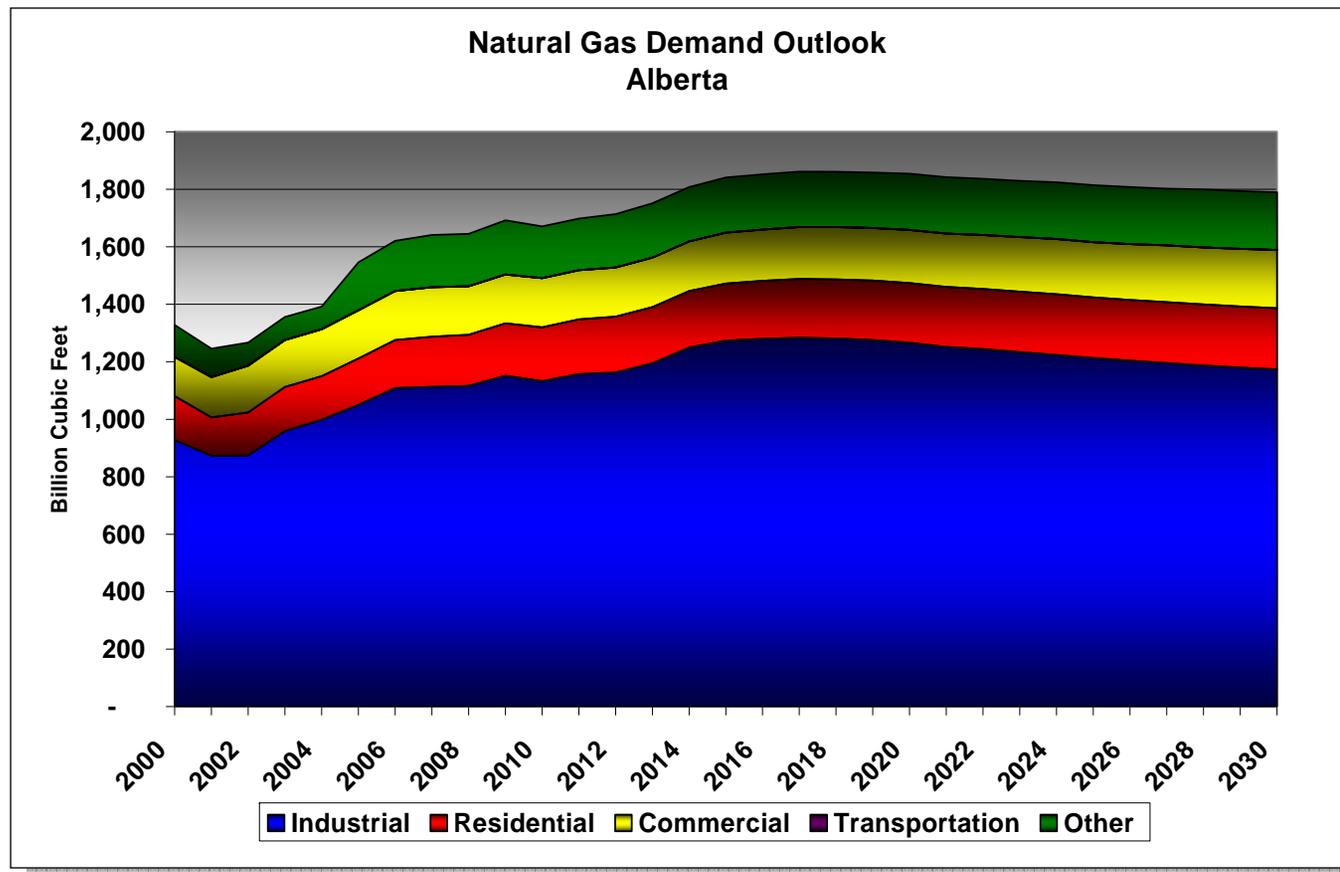
# WESTERN CANADA GAS DEMAND

- **Western Canadian natural gas demand grows by almost 1.1 percent per year for the next 10 years**
  - Growth is driven by Alberta demand with 92 percent of increased demand in the next 10 years
  - Demand growth slows in later years of forecast due to continuing energy improvements



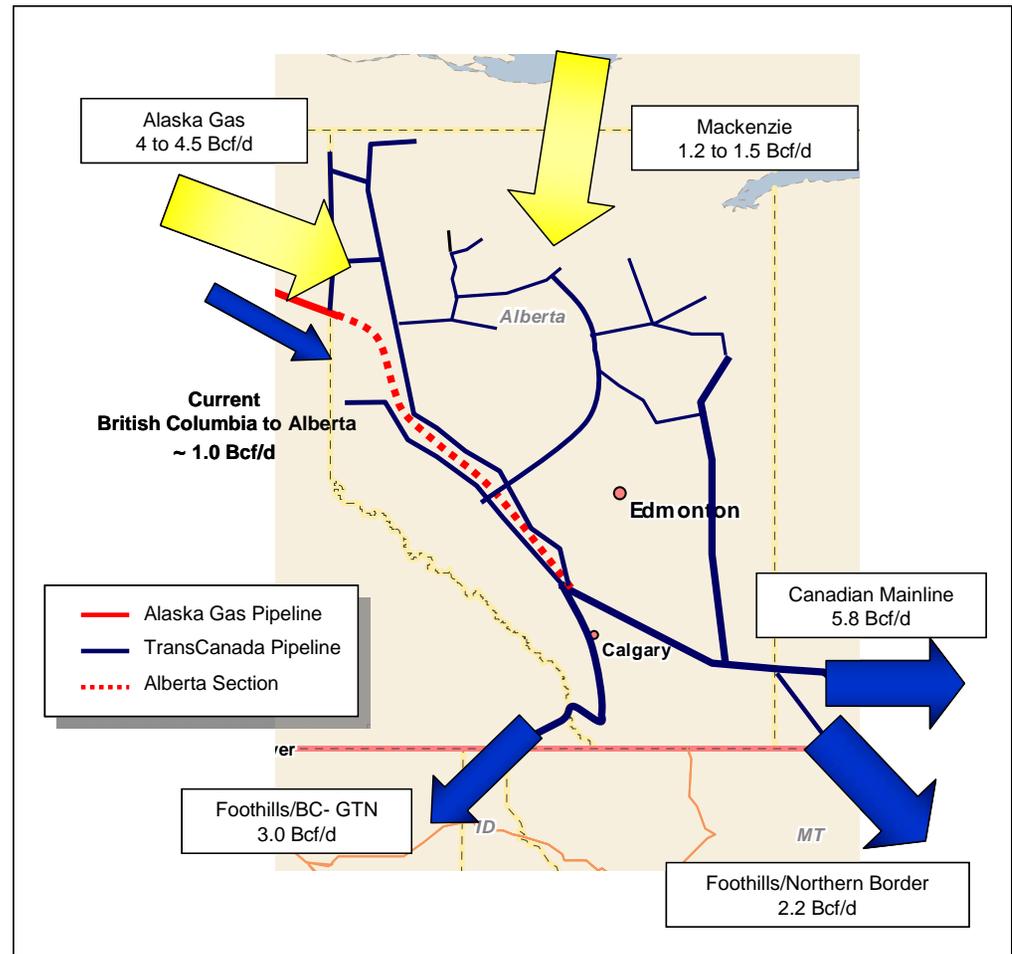
# ALBERTA GAS DEMAND

- **Industrial demand growth reflects growing natural gas demand for oil sands developments**
  - Forecast of oil sands natural gas demand reflects continuing increases in fuel use efficiencies in oil sands production at the rate of 1 percent improvement per year, the historical rate of fuel efficiency improvement
  - Total oil sands development natural gas purchases are projected to increase from 0.65 Bcf/d in 2005 to 1.8 Bcf/d in 2015, despite use of alternative technologies such as coal gasification in some developments



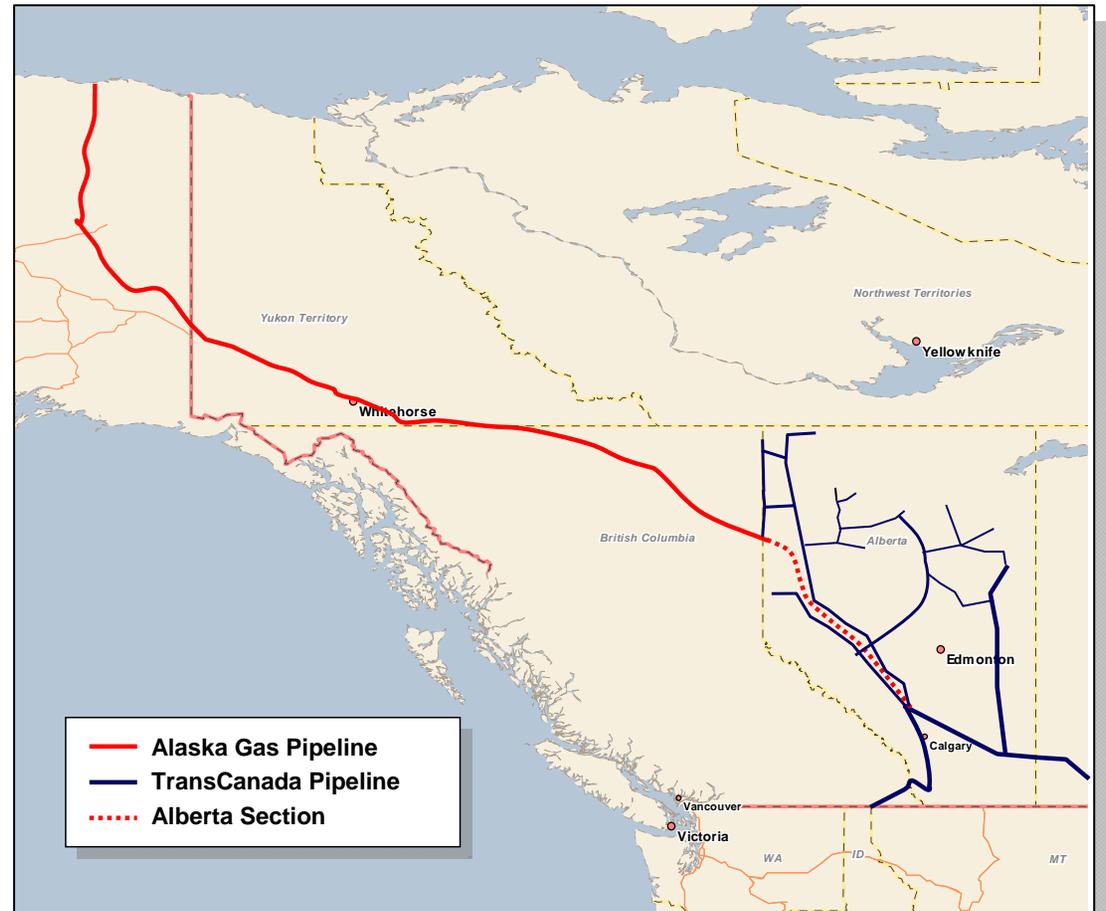
# ALBERTA HUB AND EXPORT CAPACITY

- **Current Alberta Hub supply comes from Alberta production and northeastern British Columbia production**
- **Total export capacity out of Alberta of 11 Bcf/d post conversion of a portion of Canadian Mainline gas export capacity to crude service for the Keystone Project**
- **New gas supply**
  - Mackenzie gas will come into the northern part of Alberta
  - Alaska gas under the TransCanada proposal will come into the Alberta Hub at Boundary Lake
- **Available capacity to be utilized for Alaska gas will be dependent upon projections of local production in Alberta and Northeastern British Columbia, development timeline for Mackenzie gas, and growing Alberta demand**



# PROPOSED ALASKA GAS PIPELINE ROUTE

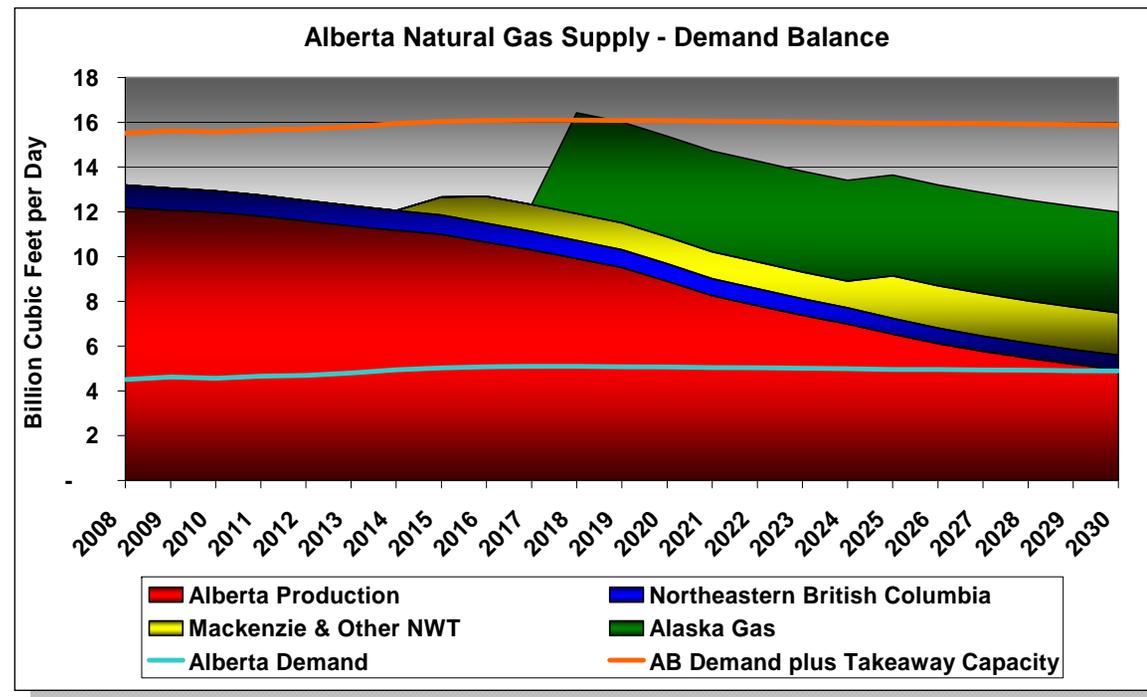
- **Alaska Gas Pipeline will connect with Alberta Hub at Boundary Lake and utilize a combination of new build and pre-build existing pipe to allow connection to markets in Alberta on the Alberta system, Canadian markets east of Alberta, and U.S. markets in the Midwest, Northeast, Pacific Northwest, and California**



# ALBERTA GAS SUPPLY FORECAST

- Alberta Hub supply consists of local Alberta gas production, anticipated production from northeastern British Columbia, Mackenzie gas, and Alaska gas
- Alberta Hub demand includes Alberta natural gas demand and Alberta export capacity on Canadian Mainline and Foothills
- Under NEB reference case projections of production and demand, Alberta Hub supply will exceed total demand and take away capacity by 0.3 Bcf/d in the first year of Alaska gas flows

- Reference case forecast is a lower production scenario than would be projected at the higher prices utilized in the Alaska gas line evaluations
- A higher gas price forecast would result in higher production and require additional Alberta gas export capacity with Alaska gas



# FUTURE PERFORMANCE OF TRANSCANADA'S CANADIAN GAS ASSETS

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## ➤ Status of oil sand development

- Impact of capital costs
  - Recent work completely by Muse concluded
    - Approximately two-thirds of the bitumen expected will be realized by 2020 due to the combination of capital cost increases and oil price predictions
    - Bitumen production is likely to be higher if the recent high oil price environment is sustained in the medium to long term
    - Similarly, bitumen upgrader capacity development will also be impacted; if prices remain at relatively high levels, the capacity will likely be developed but project schedules will be impacted
- Impact of CO<sub>2</sub> sequestration
  - The Canadian government has considered various methods to meet commitments under the Kyoto Accord
  - Canada's current government has stated that emissions would be cut by up to 65 percent from 2006 levels by 2050 and in January 2008 government officials suggested that the focus will be on industrial regulation rather than implementation of a carbon tax
  - In February 2008, British Columbia unveiled a provincial comprehensive tax program aimed at curbing emissions of greenhouse gases
    - Beginning July 1st, 2008, businesses and residents of British Columbia will be taxed \$10 per metric ton of carbon emitted by fuels such as gasoline, diesel, natural gas, coal, propane, and home heating fuel and the tax will increase yearly by \$5 per ton to \$30 per ton in 2012, at which point the government will re-evaluate the tax rate
    - The plan is said to be designed to be revenue neutral with income generated returned in the form of tax cuts and environmental rebates

# FUTURE PERFORMANCE OF TRANSCANADA'S CANADIAN GAS ASSETS

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## ➤ Status of oil sand development

- Impact of CO<sub>2</sub> sequestration (continued)
  - Existing tar sands development is concentrated in Alberta, therefore, the current regulations will not impact oil sands development
  - Future industrial regulation could impact project costs, but are not likely to impact oil sands development
    - Near- to medium-term disposal is likely focused on injection into geologic reservoirs
    - Alberta has a long history of reservoir development, potential for tertiary recovery, and available technological resources to implement underground sequestration programs
    - Technological advances are also expected to both limit the production of and develop new economic uses for such gas streams

# EVALUATION OF NATURAL GAS STORAGE AND OUTLOOK

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- **Existing Canadian gas storage locations**
  - TransCanada owns approximately one-third of all gas storage capacity in Alberta
  - Existing Edson and CrossAlta facilities provide much needed flexibility in existing gas delivery infrastructure
  - These facilities are expected to remain vital to the region and profitable in the future
  
- **Future supply/demand for storage**
  - As provincial supply sources shift over time, well-located gas storage capacity will increase in importance with respect to maintaining the relative supply/demand balance in the region
  - Continue to realize significant synergistic benefit in association with TransCanada's Alberta power assets

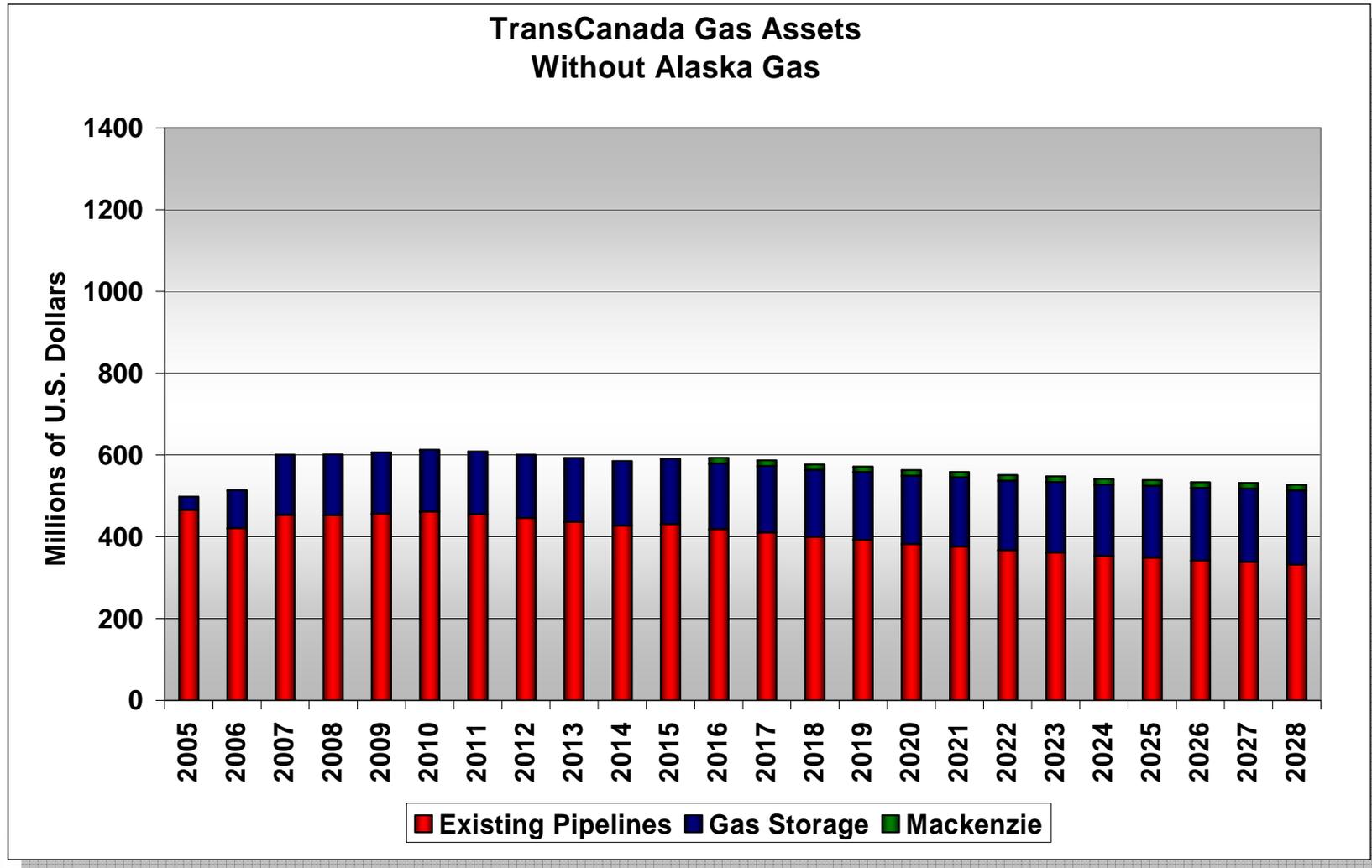
# FUTURE PERFORMANCE OF TRANSCANADA'S CANADIAN GAS ASSETS

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- Without Alaska Gas Pipeline
- With Alaska Gas Pipeline

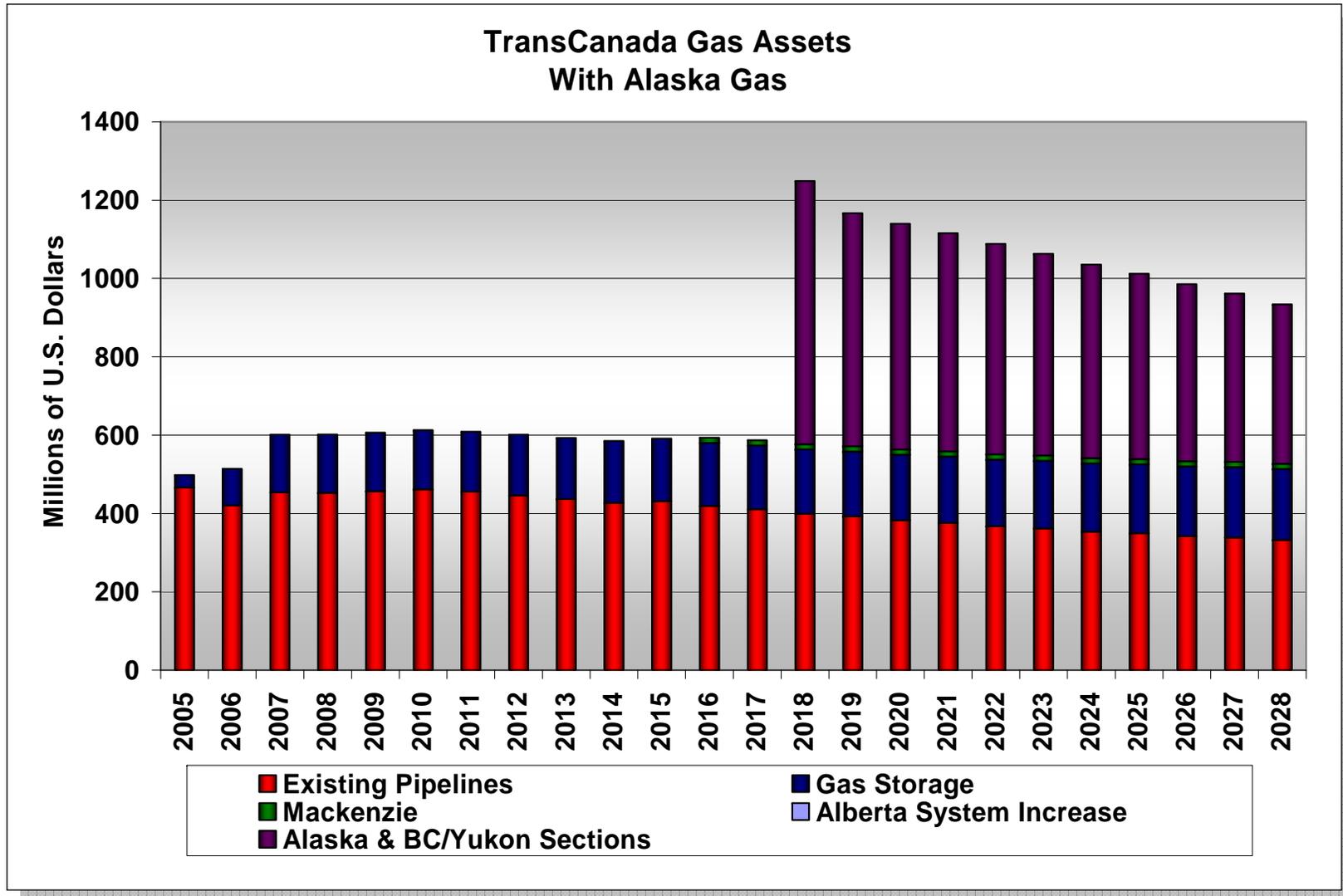
# TRANSCANADA'S CANADIAN GAS ASSETS WITHOUT ALASKA GAS SUPPLY

➤ Net Income Forecast



# TRANSCANADA'S CANADIAN GAS ASSETS WITH ALASKA GAS SUPPLY

## ➤ Net Income Forecast



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## OVERVIEW OTHER TRANSCANADA ASSETS

# OVERVIEW OF OTHER TRANSCANADA ASSETS

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- **Other pipeline assets**
- **Power overview**
- **Keystone**
- **LNG terminal development-assessment of timing/competitive projects**

## **TRANSCANADA OTHER GAS PIPELINE ASSETS**

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- **ANR - major gas transmission system transporting gas from the U.S. Gulf Coast and Mid-continent supply areas to northern Midwest markets. Purchased in February 2007**
- **GTN System – consists of GTN and North Baja Systems. GTN links Foothills with Pacific Gas and Electric Company’s California Gas Transmission System. North Baja extends from southwestern Arizona to the California/Mexico border**
- **Great Lakes - owned by TransCanada and TC Pipelines LP. Connects with Canadian Mainline at Emerson, Manitoba and serves markets in Midwestern U.S. and central Canada**
- **Iroquois – connects with the Canadian Mainline in New York and delivers gas to customers in the northeastern U.S.**
- **Portland – connects with TQM to provide gas to customers in the northeastern U.S.**
- **Tamazunchale -supplies natural gas under a long-term contract with the CFE from facilities of PEMEX Gas to an electricity generation station near Naranjos, Veracruz**
- **Transgas – Colombia natural gas pipeline**
- **Gas Pacific/INNERGY – pipeline extending from Argentinian to Chile and industrial gas marketing company in Concepcion, Chile**
- **Additional pipeline information located in the Appendix**

# POWER DEMAND AND POSITIONING OF TRANSCANADA ASSETS

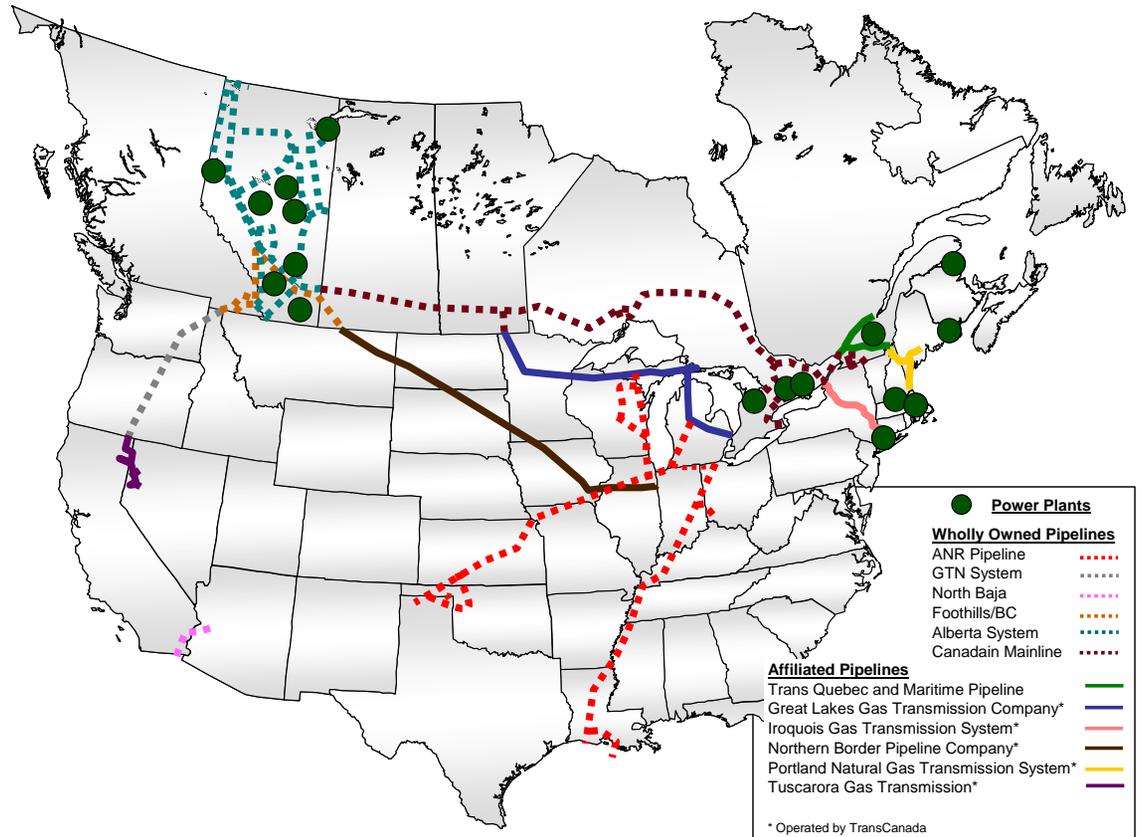
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- **Overview**
  - History
  - Strategic Goals
  - Summary Description of Assets
  
- **Market**
  - Alberta
  - Quebec
  - Ontario
  - NEPOOL
  - NYISO
  
- **Growth**
  - Strategic Goals
  - Projects in Development
  - Capital Requirements
  - Growth Assumptions
  
- **Financial**
  - Historical
  - Projections
  
- **Risk Factors**

# POWER SEGMENT OVERVIEW

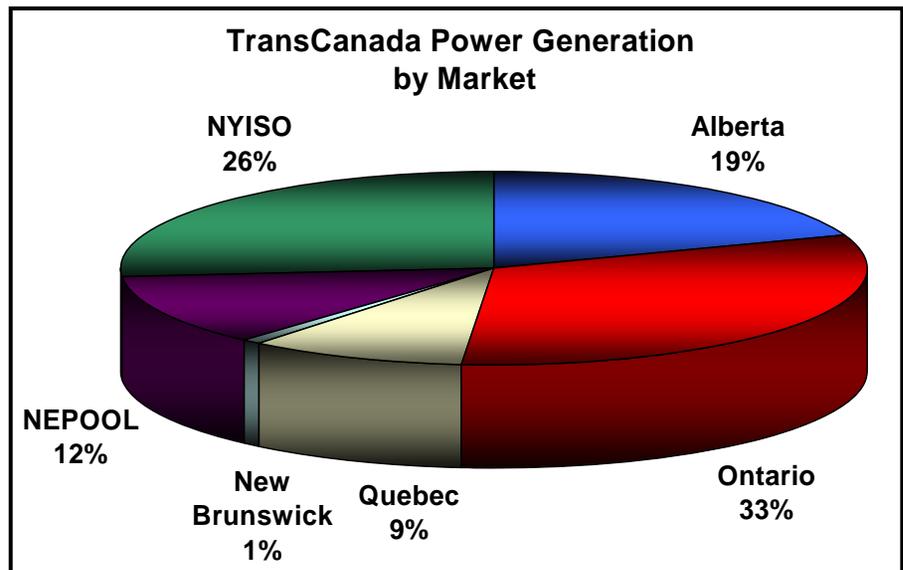
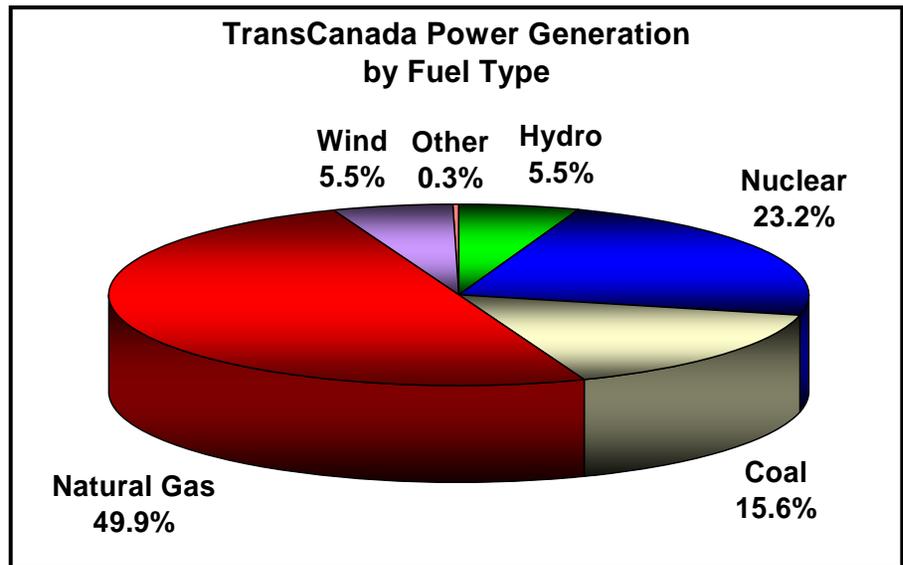
## ➤ 16 Power Plants

- 7,700 MW
- Primarily low cost base load capacity
  - Nuclear (32 percent)
  - Coal (22 percent)
  - Gas PPA (21 percent)
  - Gas Merchant (12 percent)
  - Hydro (7 percent)
  - Wind (6 percent)



# GENERATION ASSET SUMMARY

- TransCanada is well diversified by type of fuel used for generation as well as by market
- Exposure to natural gas fuel type is mostly cogeneration which is high efficiency and offsets market exposure with long-term host steam and power contracts
- Capacity with merchant exposure is either low cost or located where significant capacity is available



# GENERATION ASSET SUMMARY

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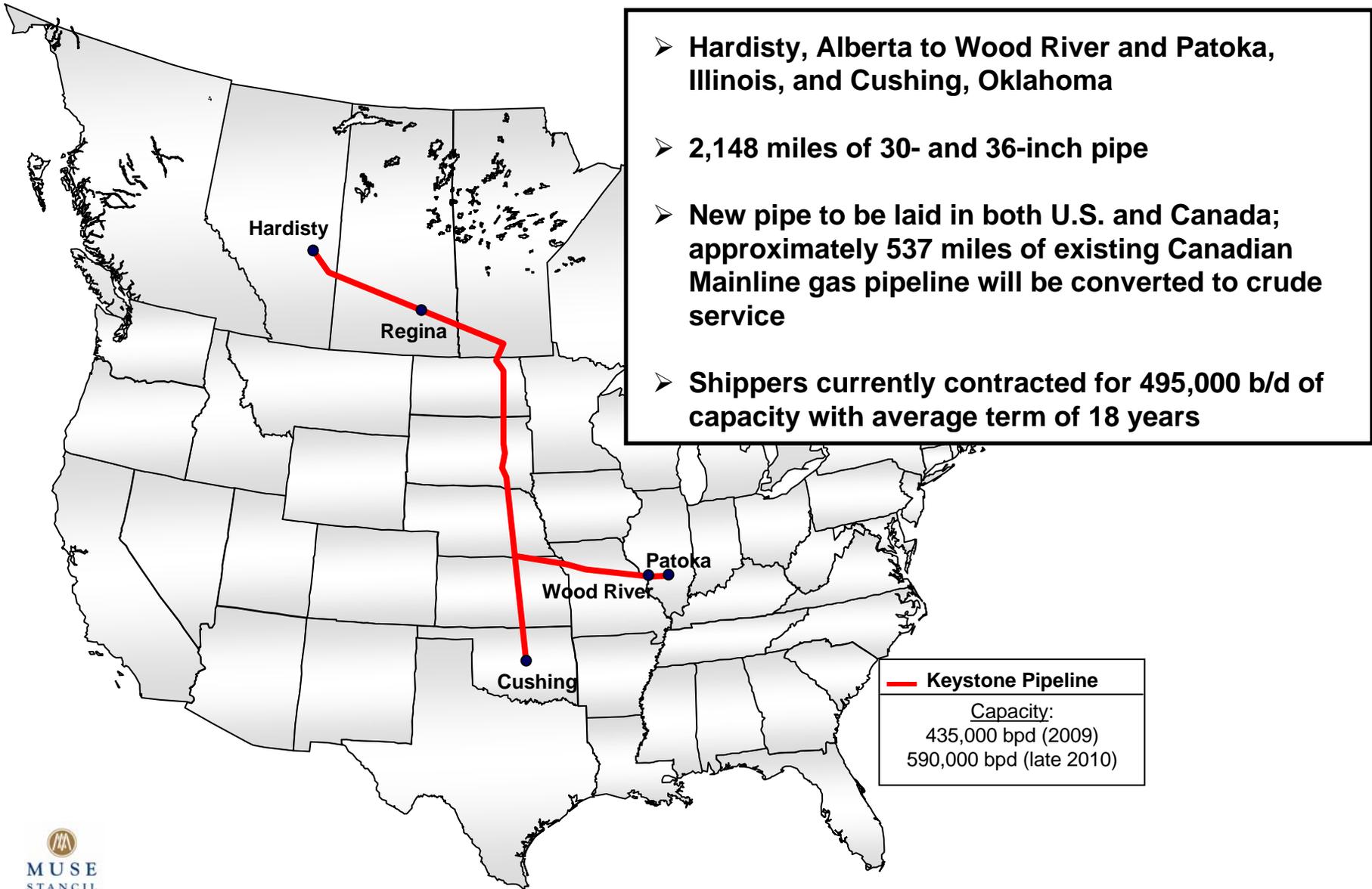
- **TransCanada's Energy Assets are concentrated in the Alberta supply region and the Eastern terminus of their pipeline system**
  - Energy assets are positioned to enhance the value of the pipeline system and visa versa
  - Long-term experience in these markets helps to successfully compete in utility RFPs for new projects
  
- **See the Appendix for a summary of each market region and development projects**

# POWER PROJECTS IN DEVELOPMENT

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- **TransCanada has a strong pipeline of development prospects which will assure growth over the next several years**
  
- **In Construction**
  - Bruce B restart of two units (2010)
  - Portlands Energy combined cycle (2Q 2009)
  - Halton Hills (3Q 2010)
  - Cartier Wind 110 MW
  
- **In Development**
  - Quebec Wind RFP
  - Future RFPs
  - Bruce B Refurbishment of New Build
  - Bell Plain Polygeneration
  - Slave River Hydro
  - Northern Lights Transmission
  - Cacouna LNG Terminal
  - Broadwater LNG Terminal
  
- **In Advanced Development**
  - Cartier Wind 419 MW
  - Kibby Wind 132 MW (2009 to 2010)
  - Coolidge Generating Station 550 MW Combined Cycle (2011)

# TRANSCANADA'S KEYSTONE CRUDE PIPELINE PROJECT



## **TRANSCANADA'S KEYSTONE CRUDE PIPELINE PROJECT (continued)**

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- **Keystone received NEB approval in 2007 for construction and operation of the Canadian portion of the project**
- **The U.S. Department of State issued a Record of Decision and National Interest Determination in early 2008**
- **In January 2008, ConocoPhillips executed an option to acquire a 50 percent ownership interest in the Keystone project. ConocoPhillips has also committed to ship crude oil on the pipeline**
- **In March 2008, the U.S. State Department issued a Presidential Permit to Keystone authorizing the construction, maintenance, and operation of facilities at the United States and Canadian border to transport crude oil between the two countries**
- **Applications for U.S. regulatory approvals at the state level have also been received allowing for the initiation of construction activities**
- **The project is on track to achieve an in-service date by the end of 2009**

# LNG TERMINAL DEVELOPMENT ASSESSMENT OF PROJECTS

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- **TransCanada's LNG focus is on regasification terminals supported by long-term, fee-for-service contracts**
  
- **TransCanada has announced two LNG terminal development projects**
  - Broadwater Energy
  - Cacouna Energy
  
- **In general, many announced North American LNG terminal projects have stalled or been cancelled**
  - Capital cost escalation
  - Uncertainty of available gas supply
  - Public opposition to terminal site development
  - Lagging North American natural gas price support for imports relative to other LNG import markets such as Spain

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# **NORTH AMERICAN GAS SUPPLY AND DEMAND COMPETITION ISSUES**

# NORTH AMERICAN GAS SUPPLY AND DEMAND

## IMPACTS ON TRANSCANADA

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- **Reserve development along the U.S. Gulf Coast (ANR)**
  - Longer lead time on deep water development
  - Recent “finds” and production development has been farther west in the GOM or farther east in the GOM relative to ANR mainline origin
  - Expect ANR to transport relatively more gas supplied from the North Texas, Southwestern Arkansas, and Northern Louisiana shale plays and relatively lower volumes from offshore GOM in the future
  
- **Reserve development and competition in the U.S. Rocky Mountains**
  - Gas producers in the U.S. Rocky Mountain region have endured a relatively lengthy period of gas oversupply
  - Recent capacity expansions and the development of new gas transmission capacity out of the region (e.g., Rockies Express Pipeline) has “uncorked the bottle” and new supplies of Rockies gas are moving eastward to supply markets in the upper Midwest
  - New gas-on-gas competition may result in modifications to long-term historical gas distribution patterns as end-use markets adjust to the availability of new sources of supply
  
- **LNG terminal development and expected supply competition overall**
  - LNG terminal development to date has largely been regionalized and limited to U.S. Gulf Coast locations
  - FERC approved 14 new terminal sites between 2002 to 2007, of which are on the U.S. Gulf Coast
  - LNG imports increased steadily from 2002 to 2007 from 0.6 Bcf/d to 2.1 Bcf/d. However, LNG import volumes for 2008 are down. Year-to-date LNG imports through March 2008 are 0.8 Bcf/d, reflecting lower U.S. gas prices relative to other international markets
  - Supplies of imported LNG will offset pipeline capacity restraints in some areas (such as TransCanada’s proposed Broadwater Import Terminal), but will offset production declines from fields in the GOM in the longer term **IF** U.S. gas prices are competitive in pulling LNG supplies from other import markets in Europe and Asia

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# TRANSCANADA'S FUTURE EARNINGS

# IMPACT OF ALASKA GAS SUPPLY ON TRANSCANADA'S FUTURE EARNINGS

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## ➤ **Net Income Forecast**

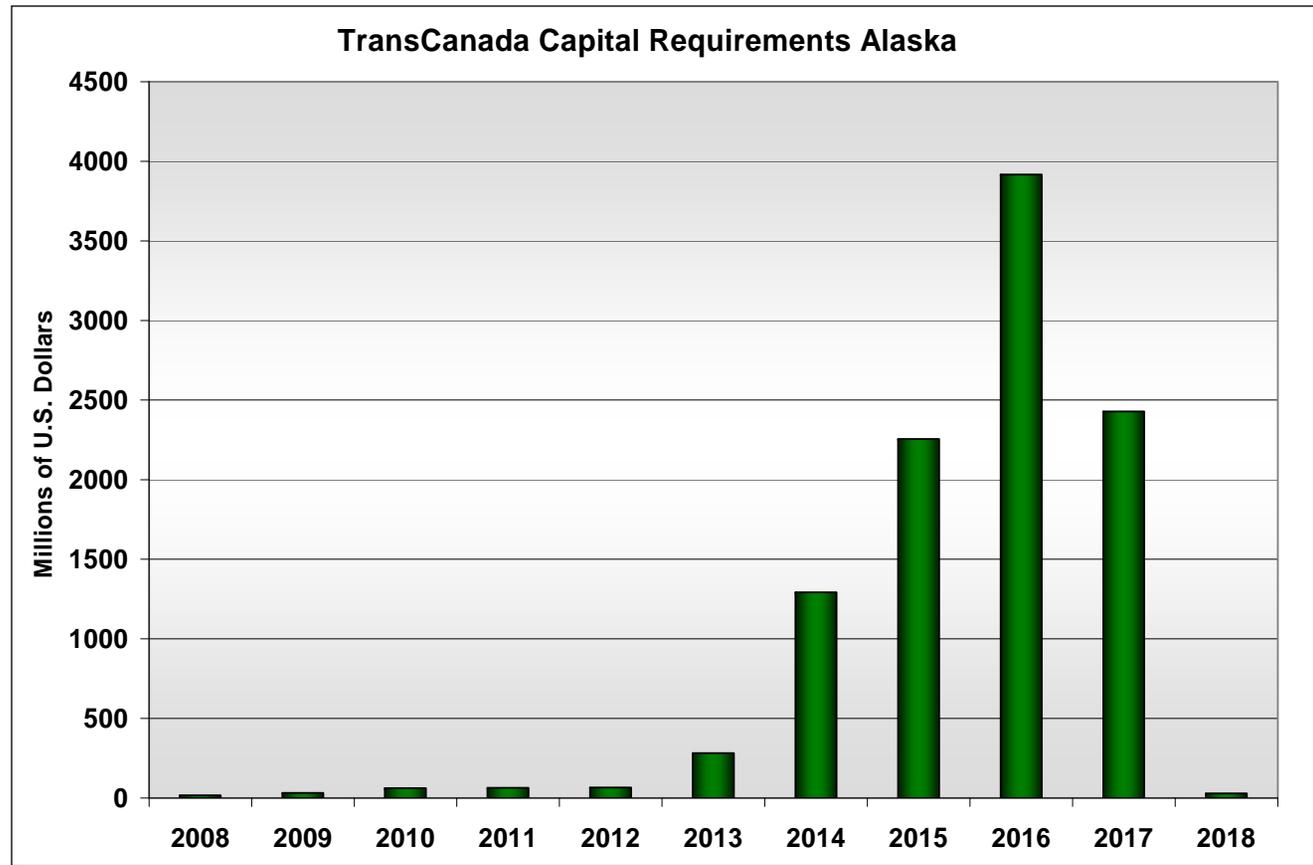
- With Alaska Gas
- Without Alaska Gas

## ➤ **Potential financing, debt and equity, return on equity**

- Financing: Assuming sufficient risk allocation to other parties and barring unforeseen environmental credit constraints, financing should be available for the Alaska Gas Pipeline Project
  - Project risk must be allocated, for example
    - Credit Risk to FT shippers
    - Construction Risk to EPC contractors and material/equipment suppliers
    - Operational Risk to Insurance providers
    - Capital Cost Risk to Government Guarantee
  - Health of the capital markets could impact timing of the project
- Debt and Equity
  - TransCanada has demonstrated track record with respect to raising equity
  - Depending on total amount of equity required, equity partners may be included
  - The availability of non-recourse project debt will be a function of project risk accepted by other parties
  - Debt holders will require high degree of risk management and risk allocation

# ALASKA PROJECT CAPITAL REQUIREMENTS

- Net of anticipated state contribution of \$500 million
- Includes Alaska Section, Yukon and British Columbia Section, and Alberta Section development and execution capital
  - Excludes Gas Treatment Plant
- Assumes 30 percent equity during construction



# TC FINANCIAL FORECAST

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## ➤ Canadian Pipelines

- Under the current regulatory environment, the primary factor in projected pipeline earnings is increased or continued capital investment above the rate of depreciation
- Earnings are not impacted by changes in throughput levels or changes in contract levels
- With the exception of the Alberta System, earnings contributions from Canadian Pipelines is expected to be in long-term decline despite continuing negotiations with the NEB for increased return on equity rates
- Continuing investments in the Alberta System will maintain the rate base and result in continued increases in equity earnings

## ➤ U.S. Pipelines

- Earnings contribution from U.S. pipelines is projected to increase due to increasing capital expenditure, growing volumes in end-use markets, and differences in regulatory environment
- FERC regulated tariffs offer higher equity returns
- The systems are permitted to discount or negotiate tariffs on a non-discriminatory basis

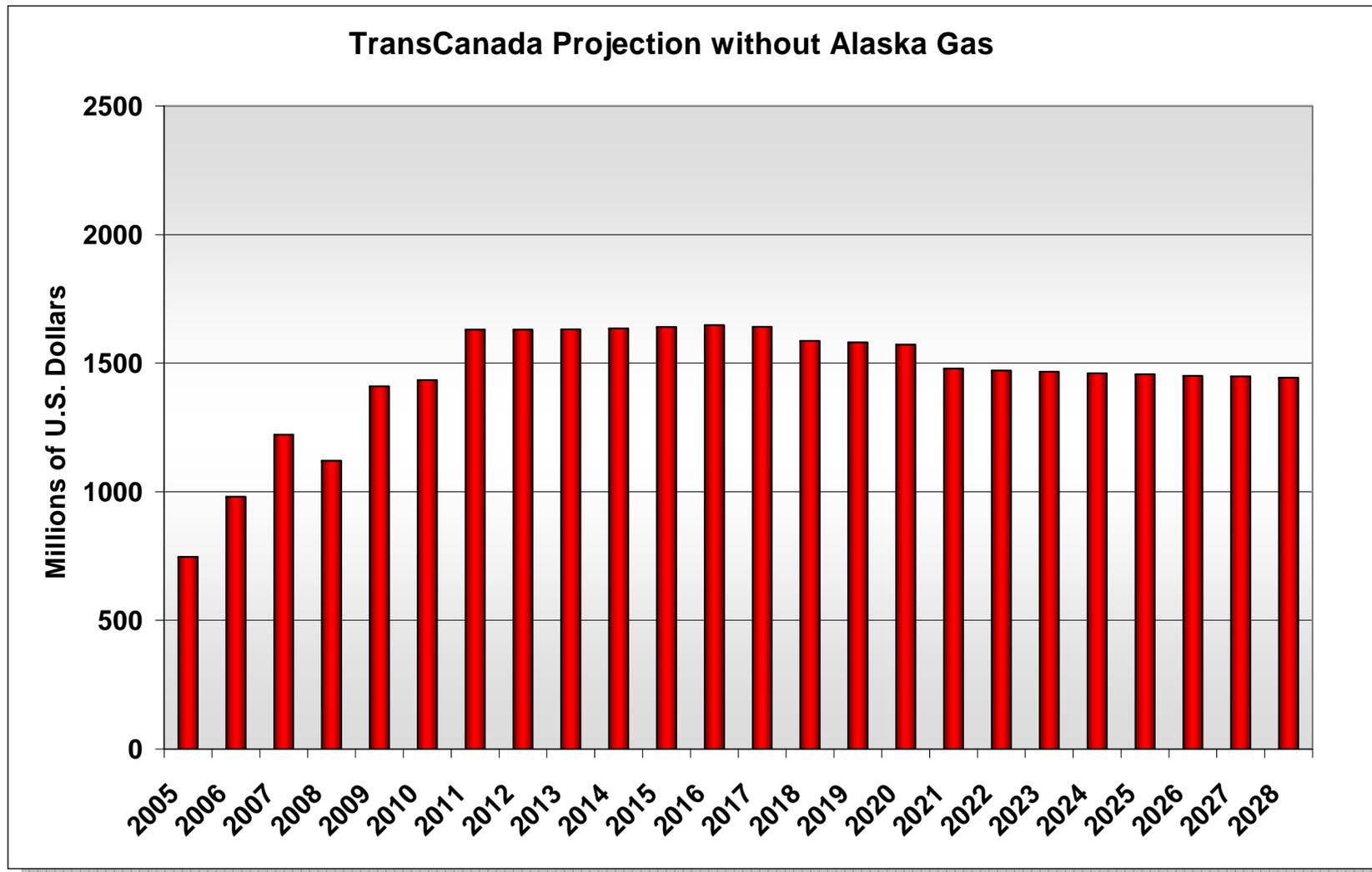
## ➤ Energy

- Current operating projects and projects in construction will continue to increase earning from this business segment
- Identified development opportunities will provide continued growth into the next decade

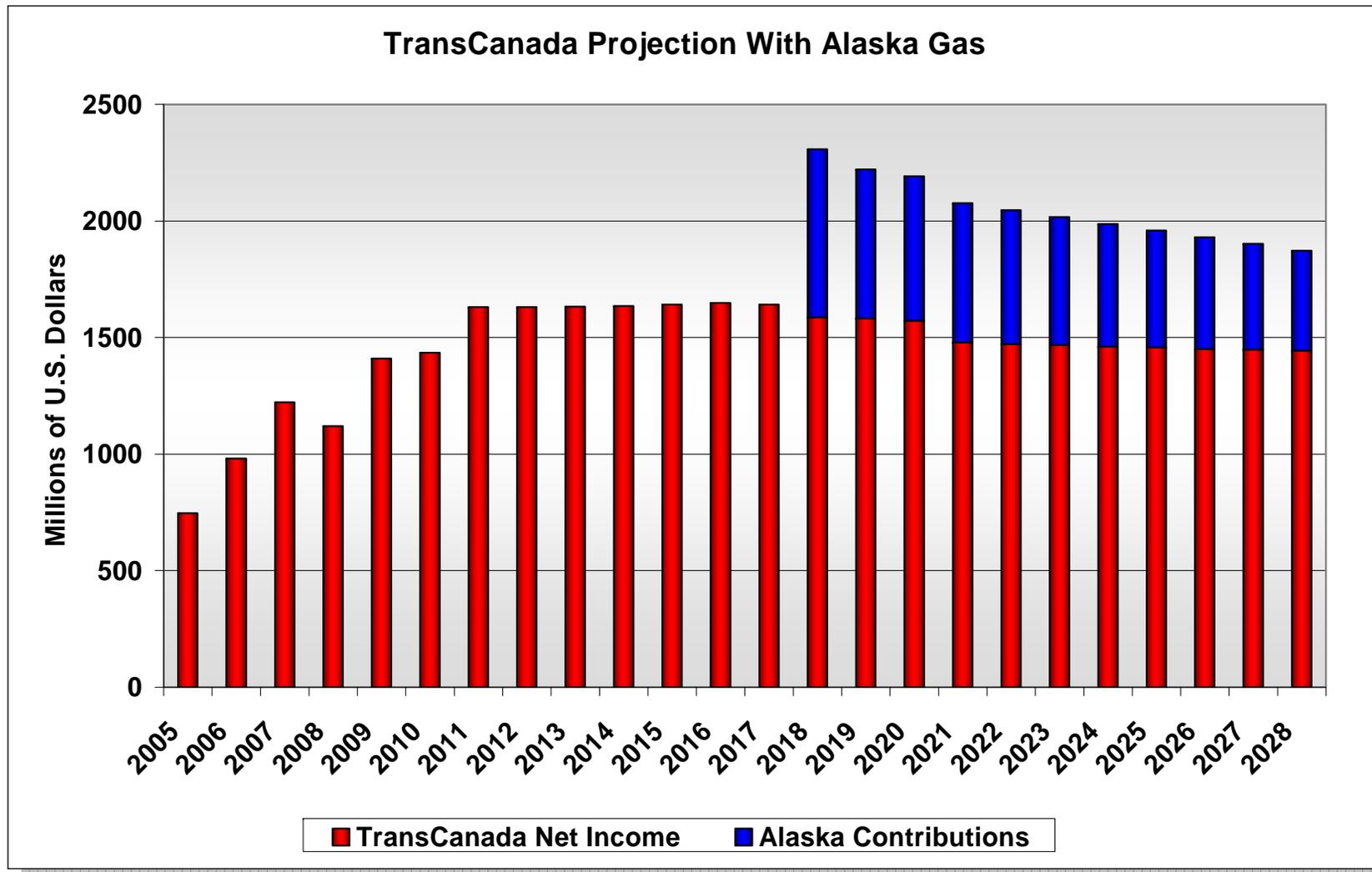
## ➤ New Projects

- Keystone Pipeline
- Mackenzie Gas
- LNG development

# NET INCOME WITHOUT ALASKA GAS



# NET INCOME WITH ALASKA GAS



# APPENDIX I

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# TRANSCANADA FINANCIAL PERFORMANCE

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## ➤ Financial Performance (Canadian Dollars)

- 2007 net income and net income from continuing operations of \$1.223 billion (\$2.31 per share)
  - Compares to net income of \$1.079 billion (\$2.21 per share), and net earnings of \$1.051 billion (\$2.15 per share) in 2006
  - Increase of 7 percent on a per-share basis in 2007
- Comparable earnings of \$1.107 billion or \$2.09 per share in 2007, compared to \$925 million or \$1.90 per share for 2006
  - Comparable earnings grew by 10 percent on a per-share basis in 2007
  - Comparable earnings per share increased at a compound average annual growth rate of 8.6 percent, from \$1.08 per share in 1999 to \$2.09 per share in 2007
- Funds generated from operations increased to \$2.621 billion in 2007
  - Increase of \$243 million or 10 percent above 2006 performance
- Quarterly dividend on the company's common shares increased for the 8<sup>th</sup> straight year – 2007 increase of 6 percent to \$0.36 per share, or \$1.44 per share on an annualized basis
- Raised \$1.725 billion in common equity in 2007 through a public offering to help fund the ANR acquisition, the largest fully-funded subscription receipts transaction in Canadian history
- Initiated a 2 percent discount on common shares issued under the corporation's dividend reinvestment and share purchase plan; 30 percent participation rate and common equity raise of over \$150 million in 2007
- Sold U.S. \$1 billion of 30-year senior notes
- Issued U.S. \$1 billion of junior subordinated notes, both at very competitive market rates reflective of 'A' credit ratings
- In the last 8 years
  - TransCanada invested approximately \$18 billion in value-creating pipeline and energy growth opportunities
  - Funds generated from operations grew at a compound average annual growth rate of 12.2 percent from \$1 billion to \$2.6 billion
- Compound average annual total shareholder return of approximately 21 percent

# CONOCOPHILLIPS FINANCIAL PERFORMANCE

<b>Selected Financial Data</b>					
<i>Millions of Dollars (except per share amounts)</i>					
	<b>2007</b>	<b>2006</b>	<b>2005</b>	<b>2004</b>	<b>2003</b>
Sales/Operating Revenue	187,437	183,650	179,442	135,076	104,246
Income/Continuing Ops	11,891	15,550	13,640	8,107	4,593
Net Income	11,891	15,550	13,529	8,129	4,735
Net Income per Common Share, Basic	7	10	10	6	3
Total Assets	177,757	167,781	106,999	92,861	82,455
Cash Dividends per Common Share	1.640	1.440	1.180	0.895	0.815

*Source: COP Annual Report*

# BP FINANCIAL PERFORMANCE

<b>Selected Financial Data</b>					
<i>Millions of Dollars (except per share amounts)</i>					
	<b>2007</b>	<b>2006</b>	<b>2005</b>	<b>2004</b>	<b>2003</b>
Net Cash From Operations	24,709	28,172	26,721	23,378	16,303
Replacement Cost Profit, EBIT	29,014	35,346	29,648	24,381	18,593
Earnings Per Share	6.47	4.31	6.22	4.26	2.75
Dividends	2.54	2.3	2.09	1.66	1.53

*Source: BP Annual Report, Standard & Poor's Stock Report May 2008*

# APPENDIX – NATURAL GAS PIPELINES

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# TRANSCANADA ALBERTA SYSTEM OVERVIEW

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- **The Alberta System gathers natural gas for use within the province for delivery to provincial boundary points for connection with**
  - Canadian Mainline
  - BC System
  - Foothills System
  - Other pipelines
  
- **100 percent owned by TransCanada**
  
- **One of the largest carriers of natural gas in North America (23,186 km)**
  
- **Regulated by the Alberta Energy and Utilities Board (EUB) primarily under the provisions of the Gas Utilities Act (Alberta) (GUA) and the Pipeline Act (Alberta)**

# TRANSCANADA MAINLINE OVERVIEW

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- **Extends from the Alberta/Saskatchewan border east to the Québec/Vermont border and connects with other natural gas pipelines in Canada and the U.S.**

## **The Canadian Mainline is regulated by the National Energy Board (NEB)**

- Sets tolls which provide TransCanada the opportunity to recover projected costs of transporting natural gas and provide a return on the Canadian Mainline's average investment base
- New facilities are approved by the NEB before construction begins and changes in investment base, the rate of return on common equity, the level of deemed common equity and the potential for incentive earnings are overseen by the NEB

# ANR PIPELINE

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- **TransCanada purchased ANR in February 2007**
  
- **ANR is a major gas transmission system transporting gas from the U.S. Gulf Coast and Mid-Continent supply areas to northern Midwest markets**
  - Supply areas include offshore GOM shelf and deepwater, onshore Louisiana, West Texas, Kansas, and Oklahoma
  - Market areas include Wisconsin, Michigan, Illinois, Ohio, and Indiana
  - ANR assets complement TransCanada's other systems, in particular Great Lakes Pipeline
  - Other pipeline interconnections provide access to gas supplies from Western Canada and the U.S. Rockies
  
- **ANR owns significant storage capacity in Michigan 235 billion cubic feet (Bcf) that allows for peak day system deliveries of 7.1 Bcf/d. Approximately half of ANR's peak day deliverability comes from storage capacity**
  - Gas storage capacity in ANR's market areas allows for more level demand load for gas through winter/shoulder/summer seasons

# TRANSCANADA FOOTHILLS OVERVIEW

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- **The Foothills natural gas transmission system carries natural gas for export from central Alberta to the U.S. border serving markets in the U.S. Midwest, Pacific Northwest, California and Nevada**
- **Annual deliveries of natural gas on the Foothills System totaled 1,403 billion cubic feet (Bcf) in 2006, compared to deliveries of 1,372 Bcf in 2005**
- **The Western leg of the Foothills System, the B.C. Zone, runs from Caroline, Alberta along the foothills of the Rocky Mountains through the Crowsnest Pass to Kingsgate, B.C., connecting with Gas Transmission Northwest (GTN) in Idaho**
- **The Eastern Leg of the Foothills System, the Saskatchewan Zone, runs from Caroline, Alberta south-easterly across Alberta and Saskatchewan to the Canada/U.S. border through Monchy, Saskatchewan connecting with Northern Border Pipeline Company in Montana**
- **The Foothills System is regulated by the National Energy Board (NEB).**

# TRANSCANADA GTN SYSTEM OVERVIEW

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- **Has been transporting natural gas to Western energy markets safely and reliably for more than 40 years**
- **Length of System: 612 miles**
- **Location of Pipeline: Begins at British Columbia-Idaho border, extends through northern Idaho, southeastern Washington and central Oregon, and ends at the Oregon-California border**
  - Interconnects
    - TransCanada's BC System at Kingsgate, British Columbia
    - Williams (Northwest Pipeline Corporation) at Spokane and Palouse, Wash., and at Stanfield, Ore.
    - Pacific Gas & Electric Company and Tuscarora Gas Transmission Company at Malin, Ore
    - Multiple taps also connecting to Avista Corporation and Cascade Natural Gas
  - Gas Sources
    - Western Canada – primary
    - U.S. domestic gas supplies at Stanfield, Ore.
  - System Capacity
    - Transport - more than 2.9 billion cubic feet of gas a day (Bcf/d)
    - Deliveries
      - More than 2.1 Bcf/d can be delivered to California
      - Up to 1 Bcf/d to the Pacific Northwest (though typical deliveries there are 600-700 million cubic feet a day)
    - 12 compressor stations (5 stations have three units, 7 stations have 2 units), spaced 50 to 60 miles apart along the pipeline, providing approximately 513,400 horsepower (ISO).

# TRANSCANADA GTN SYSTEM OVERVIEW (continued)

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## ➤ **Services**

- Transportation of natural gas, both firm and interruptible.
- Parking: Customers can store gas in pipeline.
- Lending: Customers can borrow gas from inventory and return it later.
- Customers can conduct transactions via Internet portal
- Market centers: Customers can move gas into and out of their own "paper pools" to increase flexibility in the purchase and sale of gas.

## ➤ **Customers**

- More than 45 companies receive firm transportation under long-term contracts
- Firm and interruptible transportation is also provided for more than 100 producers, marketers, electric and gas utilities, and other end-users, many of whom use firm capacity acquired through capacity release.

# TRANSCANADA NORTH BAJA SYSTEM OVERVIEW

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- **Partners - TransCanada GTN System and Sempra Energy International**
- **220-mile natural gas transportation pipeline serves the growing energy demand in Baja California, Mexico and portions of Riverside, Imperial and San Diego Counties in California.**
  - Began initial service on September 1, 2002, with an initial capacity of 200 million cubic feet per day
  - Completion of the pipeline's 21,000-horsepower compressor station in December of 2002 brought the pipeline's capacity to 500 million cubic feet in December 2002
  - 36/30-inch pipeline
  - Route: 80-mile U.S. segment (owned by TransCanada) and a 140-mile Mexican segment (Sempra Energy International)
- **Origin: Interconnection with El Paso Natural Gas Co. near Ehrenberg, Arizona**
- **Destination: Interconnection with the Transportadora de Gas Natural (TGN) Pipeline which runs from an interconnect with SDG&E at the U.S./Mexico border south of San Diego to the Presidente Juarez Power Plant in Rosarito, Baja California**
- **North Baja Pipeline Expansion Project**
  - Will allow natural gas arriving at terminals in Mexico from the western Pacific Rim to be delivered into California and other southwestern U.S. markets, providing an entirely new natural gas supply basin for the region
  - Will consist of 42- and 48-inch welded steel pipeline built immediately adjacent to the one installed in 2002

# **TRANSCANADA TAMAZUNCHALE SYSTEM OVERVIEW**

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- **TransCanada's Tamazunchale pipeline is a 36-inch, 130-kilometre pipeline that extends from the facilities of PEMEX Gas near Naranjos, Veracruz**
- **Supplies natural gas under a long-term contract with the CFE to an electricity generation station near Tamazunchale, San Luis Potosi**
- **Began commercial service on Dec. 1, 2006 and initially transporting 170 MMScf/d**
- **The Tamazunchale Pipeline is owned and operated by Transportadora de Gas Natural de La Huasteca (TGNH), a wholly owned subsidiary of TransCanada**

# TRANSCANADA TC PIPELINES, LP OVERVIEW

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- **TC PipeLines GP, Inc, a wholly-owned subsidiary of TransCanada, is the general partner of TC PipeLines, LP, a United States growth-oriented Master Limited Partnership**
- **TC PipeLines, LP was formed by TransCanada to acquire, own and actively participate in the management of U.S.-based natural gas pipelines and related assets**
- **TC PipeLines, LP owns:**
  - A 50 per cent interest in Northern Border Pipeline Company which owns a 1,249-mile interstate pipeline system that transports natural gas from the Montana-Saskatchewan border to markets in the Midwestern United States
  - Or controls a 99 per cent interest in Tuscarora Gas Transmission Company, which owns a 240-mile interstate pipeline system that transports natural gas from Oregon (where it interconnects with TransCanada's GTN System, to northern Nevada).
  - A 46.45 per cent interest in Great Lakes Gas Transmission Limited Partnership, which owns a 2,115-mile interstate pipeline system that transports gas from Emerson on the Manitoba-Minnesota border to St. Clair on the Michigan-Ontario border.

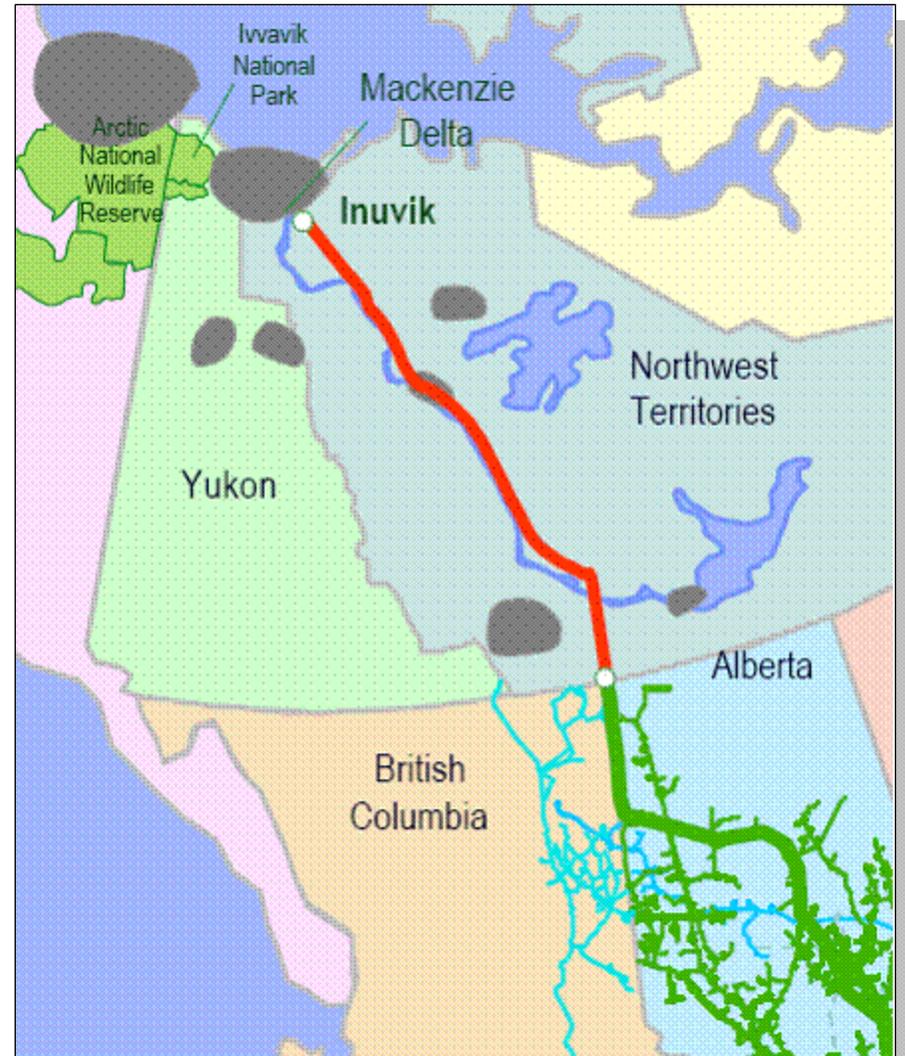
# TRANSCANADA GAS STORAGE OVERVIEW

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- **Non-regulated Gas Storage**
  - One of the largest natural gas storage providers in North America with approximately 360 Bcf of storage capacity
  
- **Non-regulated gas storage business owns or controls approximately 130 Bcf of capacity**
  - Approximately one-third of all storage capacity in Alberta
    - Wholly-owned 50-Bcf Edson, Alberta Facility with contracted long-term capacity of approximately 30 Bcf from a third party
    - 60 per cent interest in CrossAlta Gas Storage & Services Ltd., operatin a 50-Bcf storage facility near Crossfield, Alberta
  
- **Regulated gas storage business**
  - ANR Storage Company operating in the U.S.
  - Serves the TransCanada Pipeline Segment and provides firm and interruptible natural gas storage services to customers on the Great Lakes Gas Transmission and ANR Pipeline systems

# MACKENZIE GAS PIPELINE

- **The Mackenzie Gas Pipeline is a proposed pipeline project to bring gas from Inuvik, Northwest Territories to the northern border of Alberta where it will connect with the Alberta System**
- **TransCanada agreed to finance the Mackenzie Valley Aboriginal Pipeline Group's (APG) one third equity share in pre-development project costs**
  - Through the end of 2007, TransCanada had advanced \$137 million
  - Although total amount constitutes a loan to APG, there is no recourse should the project not proceed
  - TransCanada will be repaid out APG's share of equity returns in the project
  - TransCanada also holds an option to acquire 5 percent equity in the project at the decision to construct
  - TransCanada also gains rights of first refusal on 50 percent of any divestitures and an option to obtain a one-third interest in expansion opportunities once APG reaches its one-third equity share



# APPENDIX - LNG

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# BROADWATER ENERGY

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- **The project is a joint venture with Shell and will be located offshore New York State in Long Island Sound**
  - Designed with capabilities to receive, store, and regasify imported LNG
  - Average natural gas design send-out capacity is approximately 1 billion cubic feet per day (Bcf/d)
  - Significant economic incentives exist for the delivery of new gas supplies into the New York regional natural gas market
  
- **The project has been approved by FERC, but subsequently issues related to the project's environmental impact have been raised**
  - In March 2008, after three years of review, FERC unanimously approved the construction and operation of the project subject to the operator adopting more than 80 mitigation measures to enhance safety and security and to ensure that the project has limited environmental impacts.
  - In April 2008, The New York State Department of State (NYSDOS) issued a negative consistency determination in Broadwater Energy's Coastal Zone Management Act application, finding the project as designed is not consistent with the state's coastal zone policies.
    - NYSDOS was a cooperating agency in the development of the environmental impact statement (EIS) for the project along with: the Department of Homeland Security, the U.S. Coast Guard, the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, the National Oceanographic and Atmospheric Administration, and the National Marine Fisheries Service. The EIS was considered as part of the FERC approval process for the project.
    - In late April, Broadwater Energy initiated the first step in preparation for an appeal to the U.S. Department of Commerce regarding the New York State Department of State (NYSDOS) Coastal Zone Management Act determination. Broadwater filed a request with the Federal Energy Regulatory Commission (FERC), as the lead agency for the Broadwater project, to consolidate the record for the project. The 'consolidated record' includes all relevant information from FERC and other permitting agencies and will be submitted in conjunction with Broadwater's appeal to the Department of Commerce.

# CACOUNA ENERGY

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- **The project is a joint venture with Petro-Canada and will be located at Gros Cacouna Harbour on the St. Lawrence River in Quebec**
  - Designed with capabilities to receive, store, and regasify imported LNG
  - Average natural gas design send-out capacity is approximately 500 MMcf/d
  - Significant economic incentives exist for the delivery of new gas supplies into the New York regional natural gas market
  
- **Current project status is uncertain**
  - Anchor supply for the development of the Cacouna Energy (Cacouna) LNG regasification terminal was to be supplied from Gazprom's Baltic LNG project.
  - On February 7, 2008 Gazprom's management committee decided not to pursue the proposed Baltic LNG project.
  - In addition, gas supply shortages, capital cost pressures, excess North American regasification capacity, and world-wide natural gas economics have put a strain on the development of LNG import projects in North America.
  - At present, the project proponents are reported holding discussions to evaluate different options for the site and a public announcement will be made once a decision is reached. At this point, no announcements have been made as to the long-term outlook for Cacouna.

# APPENDIX - POWER

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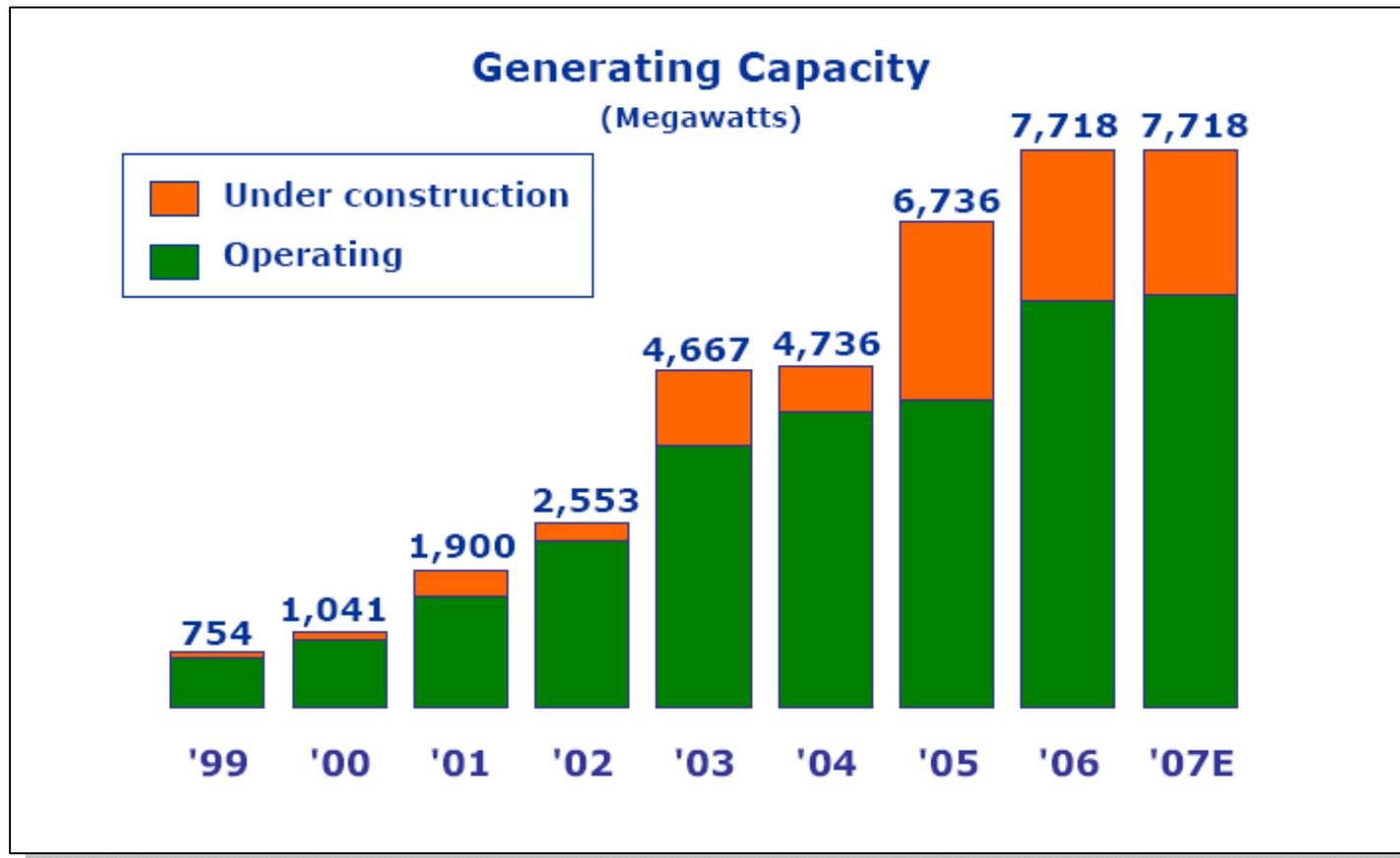
# TRANSCANADA POWER OVERVIEW

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- **Bruce Generating Station**
  - Owns 31.6 per cent of Bruce B, consisting of operating Units 5 to 8 with approximately 3,200 MW of generating capacity
  - Owns 48.7 per cent of Bruce A, consisting of operating Units 3 and 4 with approximately 1,500 MW of generating capacity and currently idle Units 1 and 2 with approximately 1,500 MW of generating capacity, which are currently being refurbished and are expected to restart in late 2009 or early 2010.
  
- **Cartier Wind Energy has agreements for wind power projects totaling 740 megawatts (MW) of capacity**
  - Located in the Gaspésie-Iles-de-la-Madeleine region and the Regional County Municipality of Matane in the province of Québec
  - The assets related to the projects are indirectly co-owned by TransCanada (62 per cent) and Innergex II Income Fund (38 per cent)
  
- **Portlands Energy Centre (PEC) is a high-efficiency, combined cycle natural gas generation plant located in downtown Toronto, ON**
  - Scheduled to begin supplying power in the summer of 2008 under a 20-year contract with the Ontario Power Authority
  - 550-MW plant is owned by PEC, a limited partnership of TransCanada and Ontario Power Generation
  
- **TransCanada also has rights to electricity generated by the following**
  - 560-MW, Sundance A power plant (100 per cent)
  - 706-MW Sundance B plant (50 per cent)
  - 756-MW Sheerness plant (100 per cent).

# HISTORICAL GROWTH IN GENERATING CAPACITY

- TransCanada has built a significant power asset portfolio which has grown at a 34 percent compound annual growth rate (CAGR) over the past 8 years

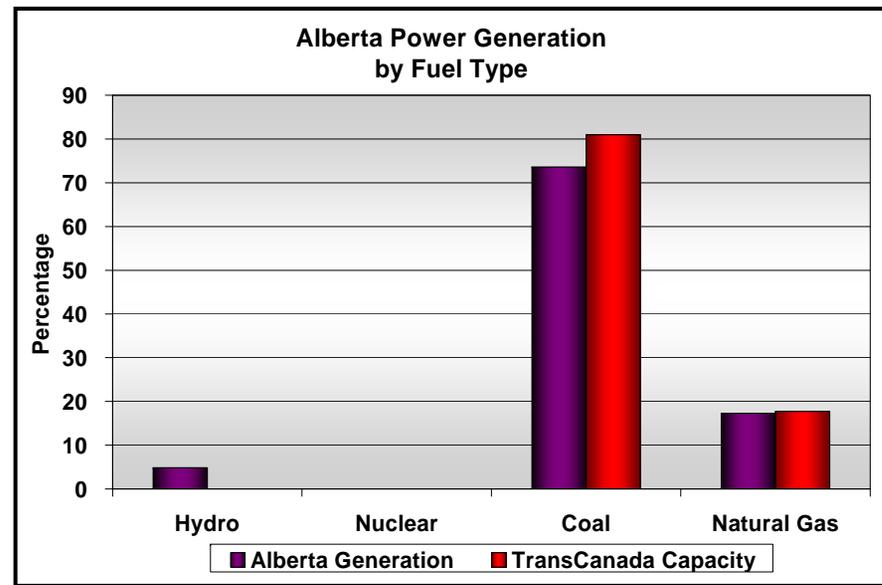
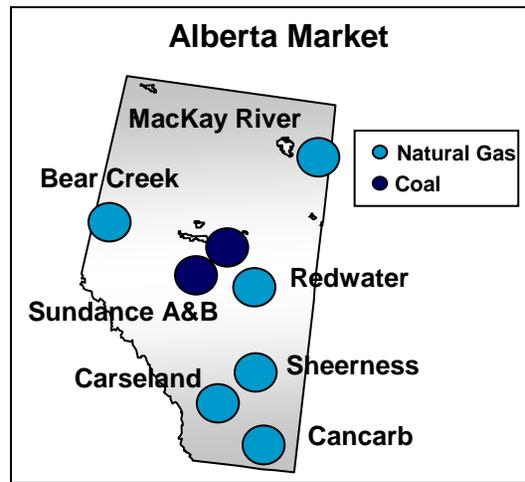


Source: TransCanada Investors Day Presentation November 21, 2007

# ALBERTA MARKET

- Alberta is a deregulated market and pool prices tend to be very volatile
- TransCanada's resources match the market average
- Exposure to natural gas volatility is mitigated by natural gas capacity being cogeneration which produces much lower cost power due to higher efficiency
- Natural gas assets strategically complement pipeline and storage assets in the same market
- Coal capacity consists of long-term PPA which expires in 2017 and 2020

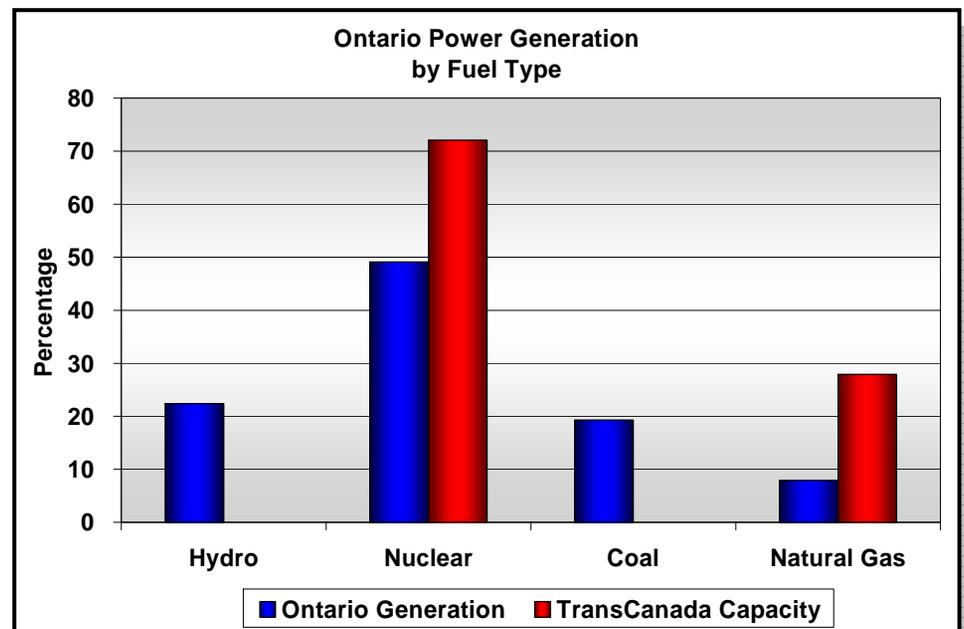
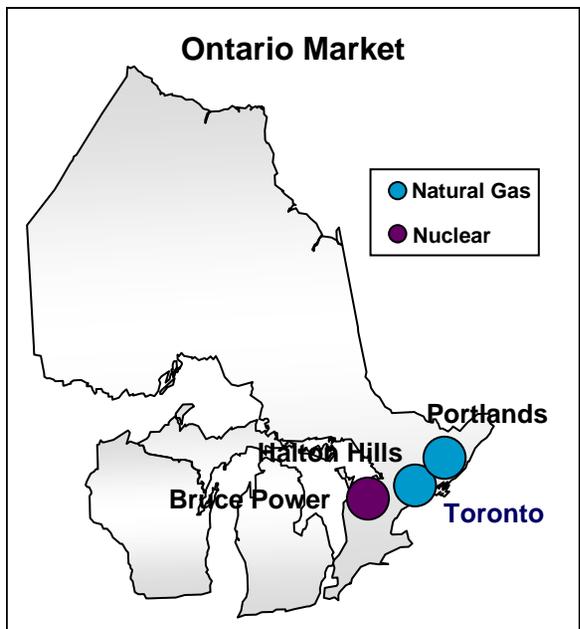
Alberta Key Statistics	
2007 Demand	9,580 MW
2007 Resources	10,698 MW
2007 Reserve Margin	11.7%
Forecast Demand Growth Rate	3.3%/Yr
Forecast 2011 Reserve Margin	11.3%



# ONTARIO MARKET

- Ontario is a very low cost market due to the high percentage of nuclear and hydro capacity
- TransCanada assets are more weighted to low cost nuclear than the market average
- Natural gas capacity is under long-term contract which assures stable cash flows
- Natural gas assets strategically complement pipeline assets in the market

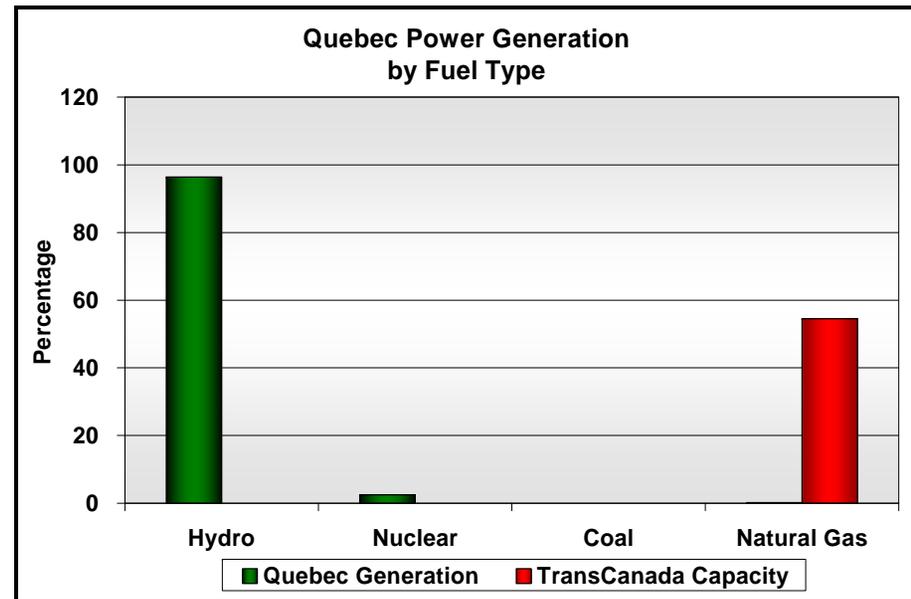
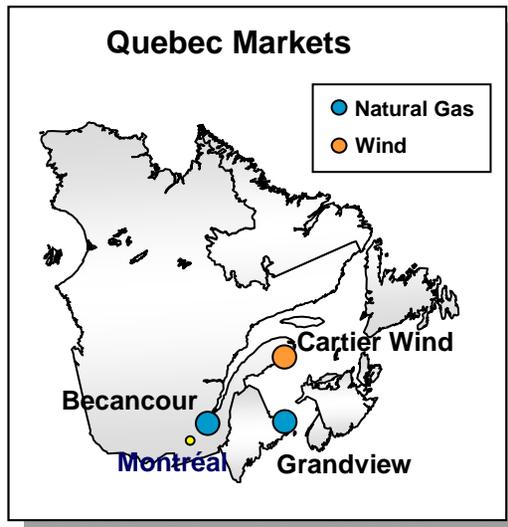
Ontario Key Statistics	
2007 Demand	25,423 MW
2007 Resources	28,727 MW
2007 Reserve Margin	13.0%
Forecast Demand Growth Rate	2.0%/Yr
Forecast 2011 Reserve Margin	17.0%



# QUEBEC MARKET

- Quebec is dominated by low cost hydro capacity
- All assets are under long-term contract which assures stable cash flows

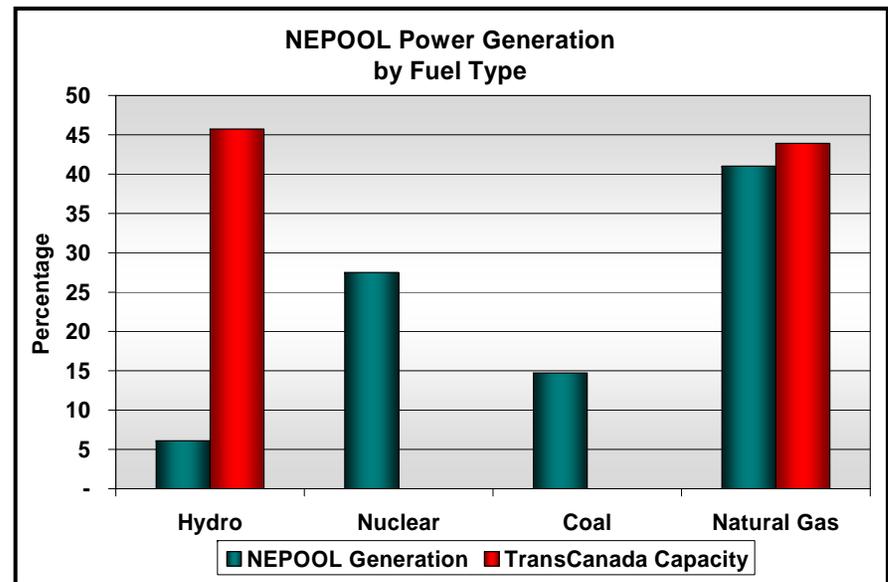
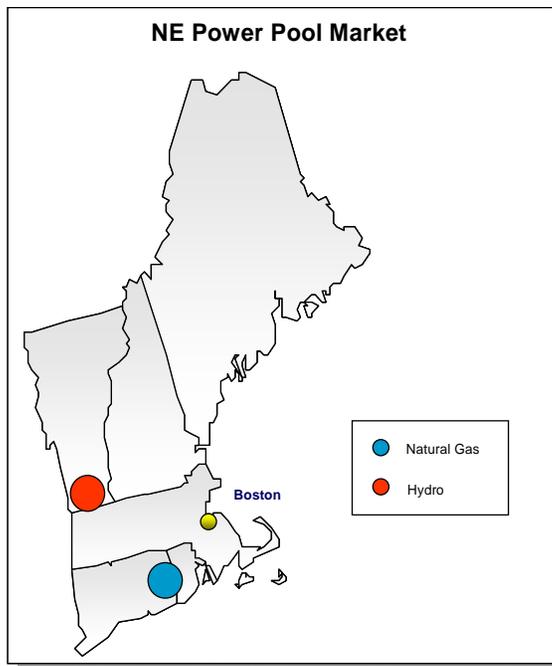
Quebec Key Statistics	
2007 Demand	35,569 MW
2007 Resources	39,597 MW
2007 Reserve Margin	11.3%
Forecast Demand Growth Rate	0.6%/Yr
Forecast 2011 Reserve Margin	10.0%



# NEPOOL MARKET

- TransCanada has a high percentage of low cost hydro capacity
- Capacity payments are available in this market which provide some insulation from market volatility
- Natural gas capacity is subject to reliability capacity payments due to its location in a transmission constrained zone

NEPOOL Key Statistics	
2007 Demand	27,041 MW
2007 Resources	31,053 MW
2007 Reserve Margin	14.8%
Forecast Demand Growth Rate	2.3%
Forecast 2011 Reserve Margin	9.2%



# NYISO MARKET

- The recent acquisition of the 2,800 MW Ravenswood Station is the only TransCanada asset in the NYISO market
- The high exposure to natural gas is mitigated by a location within Zone J (New York City) which is a supply constrained zone dominated by natural gas fueled stations

NYISO Key Statistics	
2007 Demand	32,541 MW
2007 Resources	40,897 MW
2007 Reserve Margin	25.7%
Forecast Demand Growth Rate	1.1%/Yr
Forecast 2011 Reserve Margin	18.5%

