



The Future of Natural Gas

CAPL June General Meeting

Luciano Dalla-Longa | Group Lead, Natural Gas Economy
Calgary, Alberta | June 22nd | 2011



Future Oriented Information

In the interests of providing Encana shareholders and potential investors with information regarding Encana, including management's assessment of Encana's and its subsidiaries' future plans and operations, certain statements contained in this presentation are forward-looking statements or information within the meaning of applicable securities legislation, collectively referred to herein as "forward-looking statements." Forward-looking statements in this presentation include, but are not limited to: years of drilling inventory and number of drilling locations; North American estimated years of supply of gas and total resource potential; estimates of future natural gas prices; expected economics of new power generation using natural gas; forecast North American gas production for 2011 and beyond; and projected increase in demand for natural gas for power generation and transportation.

Readers are cautioned not to place undue reliance on forward-looking statements, as there can be no assurance that the plans, intentions or expectations upon which they are based will occur. By their nature, forward-looking statements involve numerous assumptions, known and unknown risks and uncertainties, both general and specific, that contribute to the possibility that the predictions, forecasts, projections and other forward-looking statements will not occur, which may cause the company's actual performance and financial results in future periods to differ materially from any estimates or projections of future performance or results expressed or implied by such forward-looking statements. These assumptions, risks and uncertainties include, among other things: the risk that the company may not conclude potential joint venture arrangements with others; volatility of and assumptions regarding commodity prices; assumptions based upon the company's current guidance; fluctuations in currency and interest rates; product supply and demand; market competition; risks inherent in the company's and its subsidiaries' marketing operations, including credit risks; imprecision of reserves and resources estimates and estimates of recoverable quantities of natural gas and liquids from resource plays and other sources not currently classified as proved, probable or possible reserves or economic contingent resources; marketing margins; potential disruption or unexpected technical difficulties in developing new facilities; unexpected cost increases or technical difficulties in constructing or modifying processing facilities; risks associated with technology; the company's ability to replace and expand gas reserves; its ability to generate sufficient cash flow from operations to meet its current and future obligations; its ability to access external sources of debt and equity capital; the timing and the costs of well and pipeline construction; the company's ability to secure adequate product transportation; changes in royalty, tax, environmental, greenhouse gas, carbon, accounting and other laws or regulations or the interpretations of such laws or regulations; political and economic conditions in the countries in which the company operates; terrorist threats; risks associated with existing and potential future lawsuits and regulatory actions made against the company; and other risks and uncertainties described from time to time in the reports and filings made with securities regulatory authorities by Encana. Although Encana believes that the expectations represented by such forward-looking statements are reasonable, there can be no assurance that such expectations will prove to be correct. Readers are cautioned that the foregoing list of important factors is not exhaustive. Forward-looking statements with respect to anticipated production, reserves and production growth, including over five years or longer, are based upon numerous facts and assumptions, including a projected capital program averaging approximately \$6 billion per year that underlies the long-range plan of Encana, which is subject to review annually and to such revisions for factors including the outlook for natural gas commodity prices and the expectations for capital investment by the company achieving an average rate of approximately 2,500 net wells per year, Encana's current net drilling location inventory, natural gas price expectations over the next few years, production expectations made in light of advancements in horizontal drilling, multi-stage well completions and multi-well pad drilling, the current and expected productive characteristics of various existing and emerging resource plays, Encana's estimates of proved, probable and possible reserves and economic contingent resources, expectations for rates of return which may be available at various prices for natural gas and current and expected cost trends. In addition, assumptions relating to such forward-looking statements generally include Encana's current expectations and projections made in light of, and generally consistent with, its historical experience and its perception of historical trends, including the conversion of resources into reserves and production as well as expectations regarding rates of advancement and innovation, generally consistent with and informed by its past experience, all of which are subject to the risk factors identified elsewhere in this presentation.

Furthermore, the forward-looking statements contained in this presentation are made as of the date of this presentation, and, except as required by law, Encana does not undertake any obligation to update publicly or to revise any of the included forward-looking statements, whether as a result of new information, future events or otherwise. The forward-looking statements contained in this presentation are expressly qualified by this cautionary statement.

Who is Encana?

- **Leading North American energy company**
 - Calgary, Alberta
 - Denver, Colorado
- **100% production and reserves located in North America**
- **One of the largest producers of North American natural gas**
 - Current Production: 3,300 MMcfe/d
 - 23,000 Net Drilling Locations
 - \$24B Market Capitalization (May 2011)

encana.



Natural Gas Economy

Our mission is to establish natural gas as the foundation of North America's energy portfolio

encana.

- Abundant!
- Affordable!
- Clean!
- Reliable!
- Domestic Solution!



AGENDA

- Supply
- Demand
- Price
- Power Generation
- Environmental Regulation
- Summarize

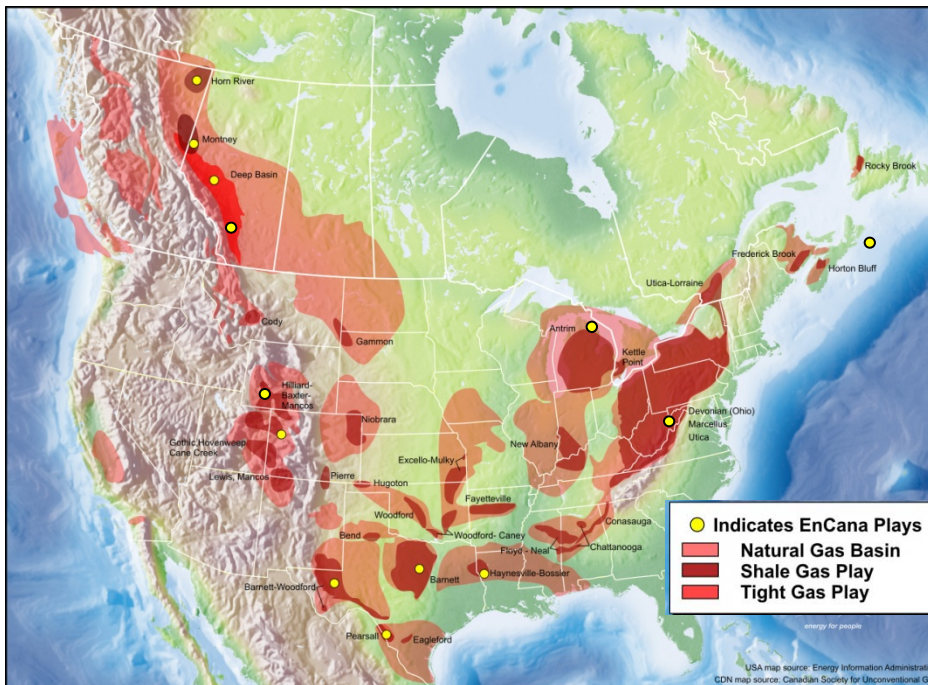
Vast Energy Resource in North America

Technology Continues to Unlock Shale Gas

encana.

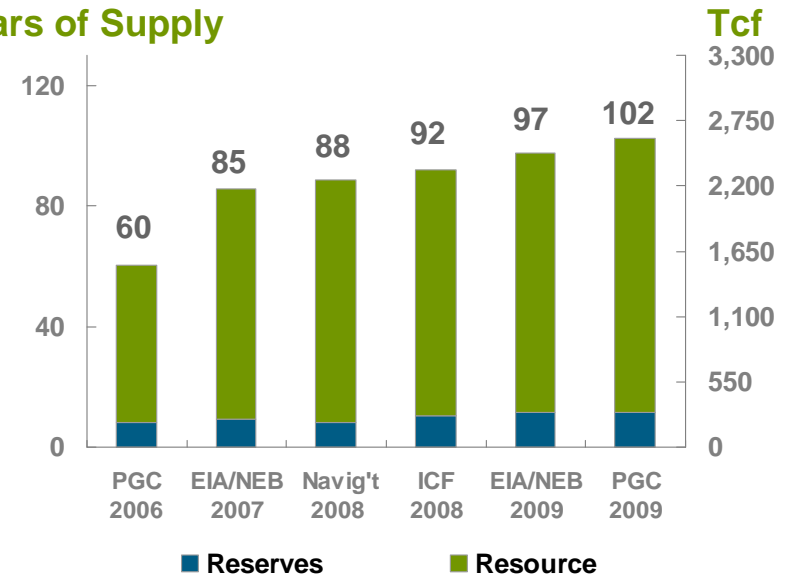
North American Natural Gas Basins

Abundant and Widespread



Canada and U.S. Resource Estimates

Years of Supply



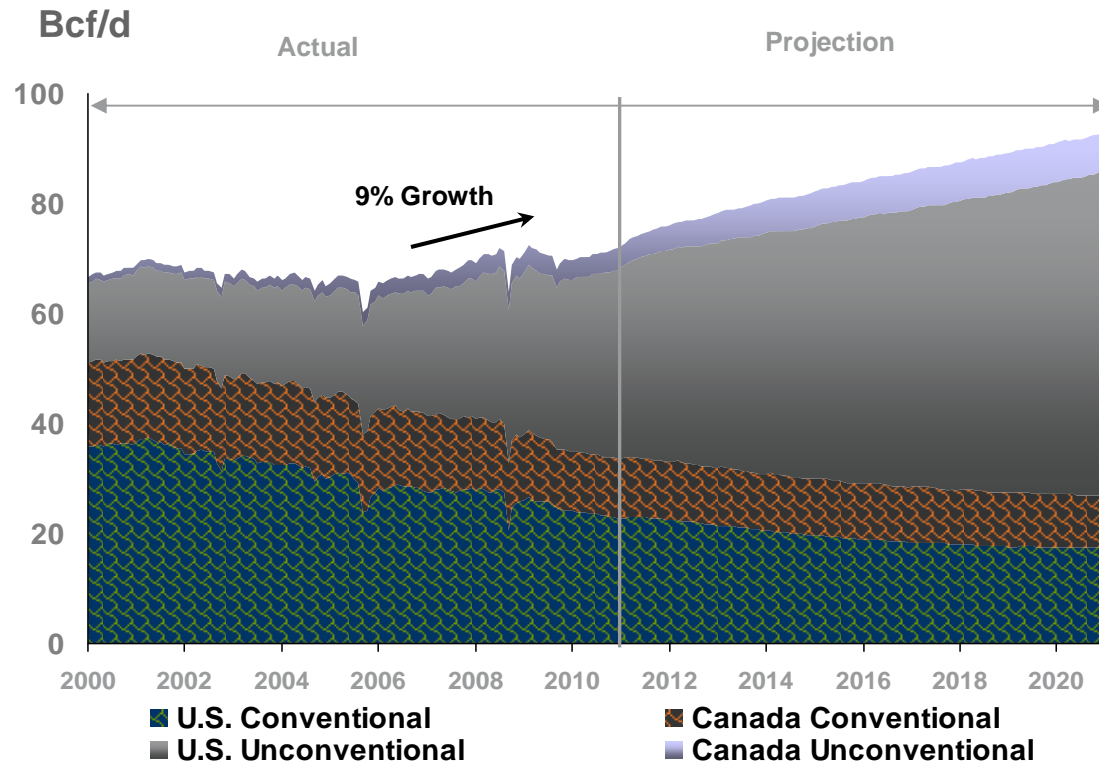
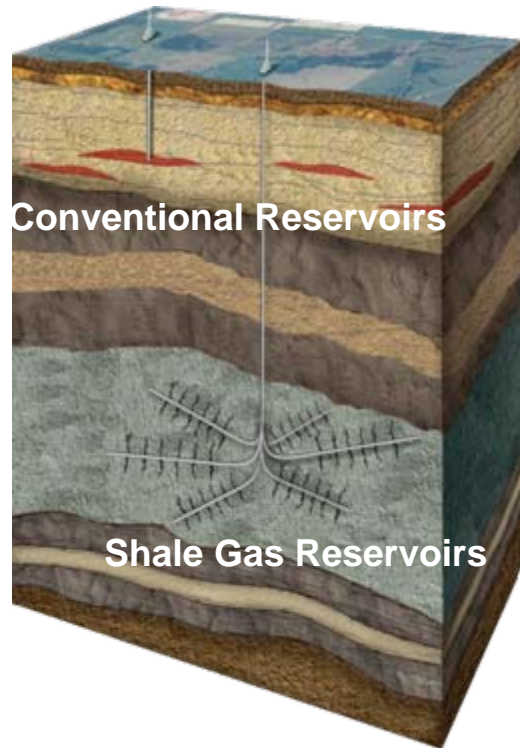
- 2,600 Tcf of Total Resource
- 100+ Year Supply at 70 Bcf/d
- 70+ Year Supply at 100 Bcf/d

Sources: EIA, CSUG, IHS, Encana

North American Technology Renaissance

Rapidly Increasing Production

encana.

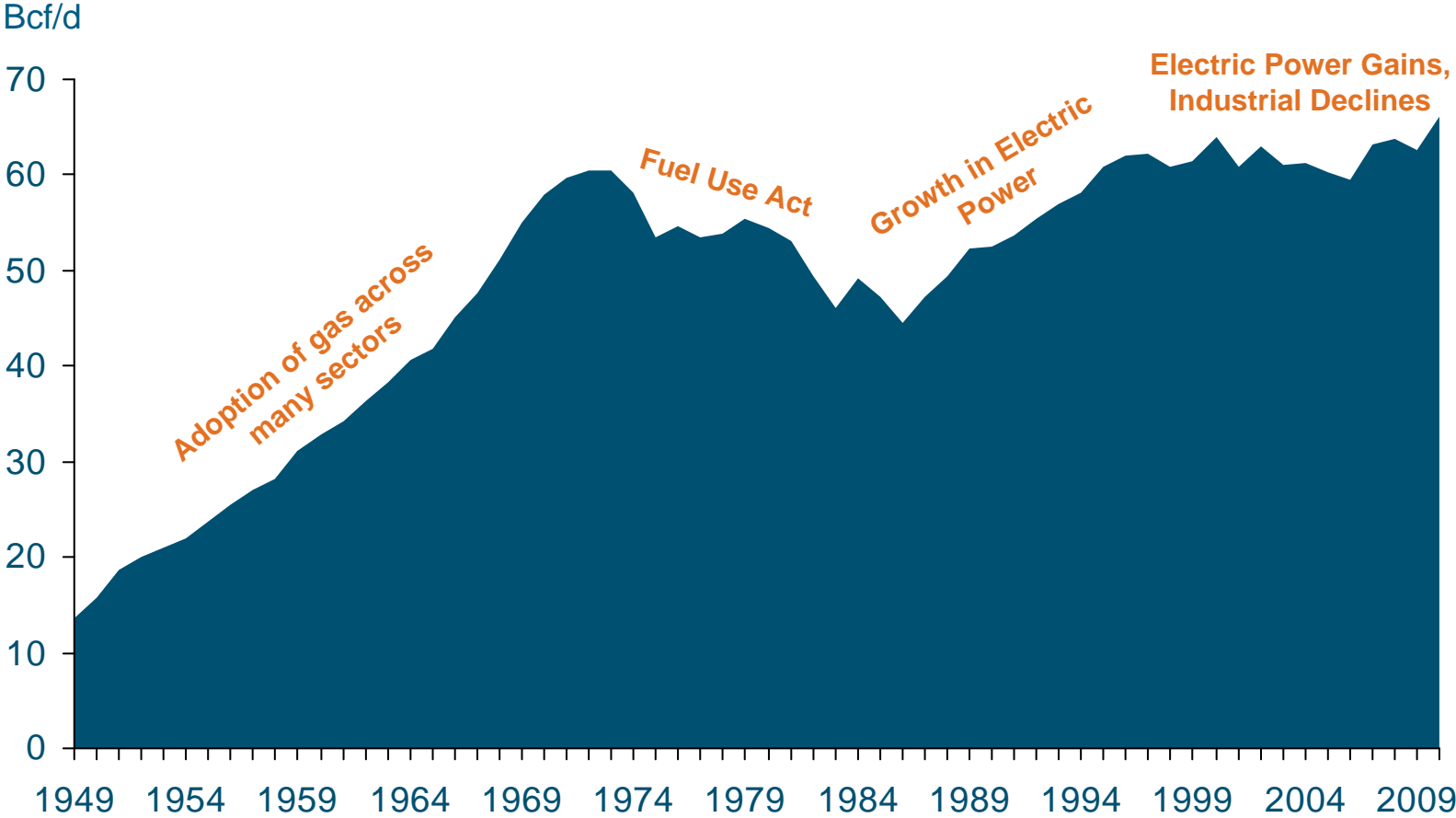


Production is growing due to horizontal drilling and fracturing

Source: IHS & NEB historic data, Encana projection at \$6.50 NYMEX

United States Natural Gas Demand Historical Perspective

The natural gas market has seen little demand growth over the last 15 years.

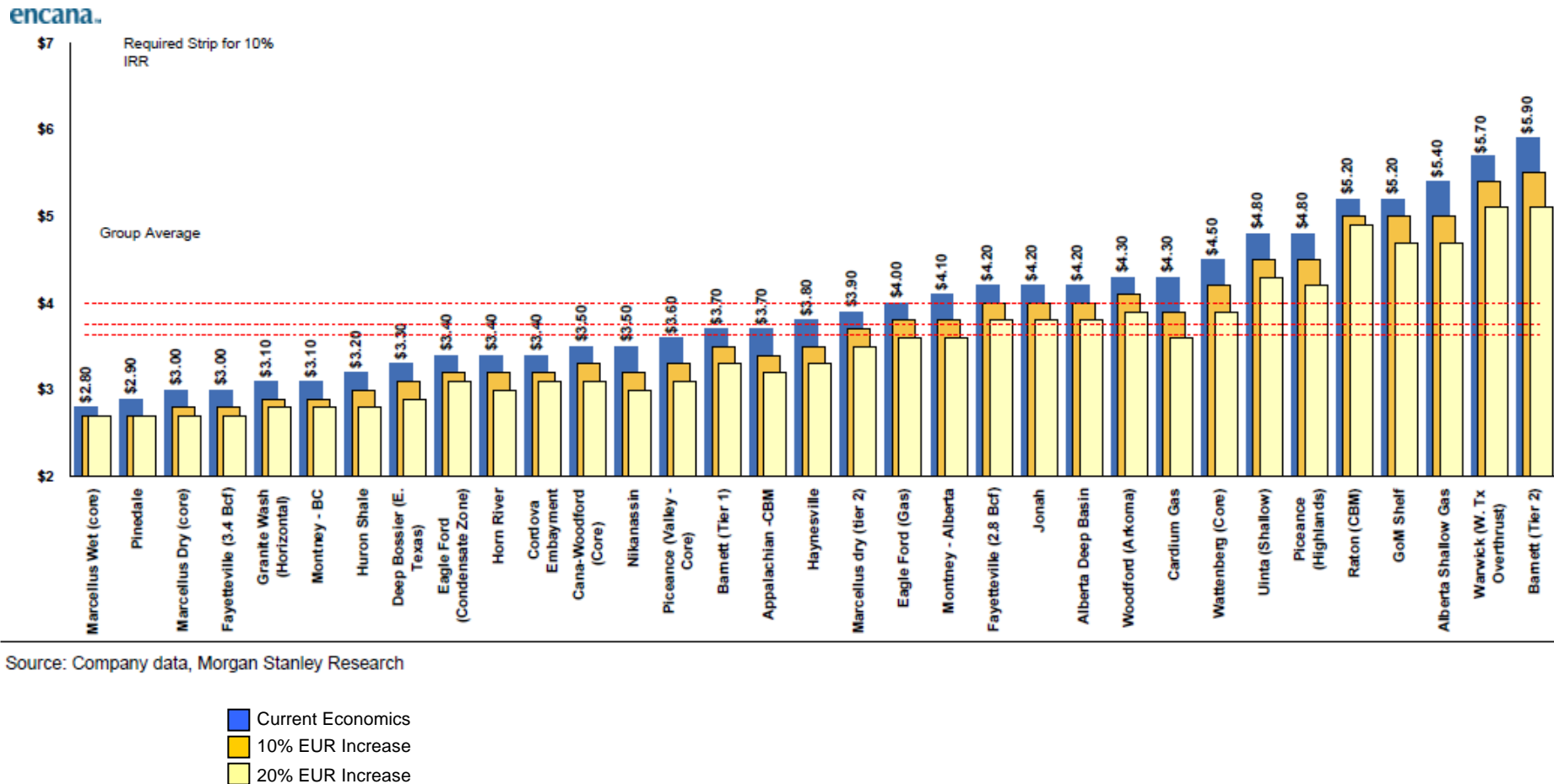


Source: Encana, EIA

Cost of Supply – 2011

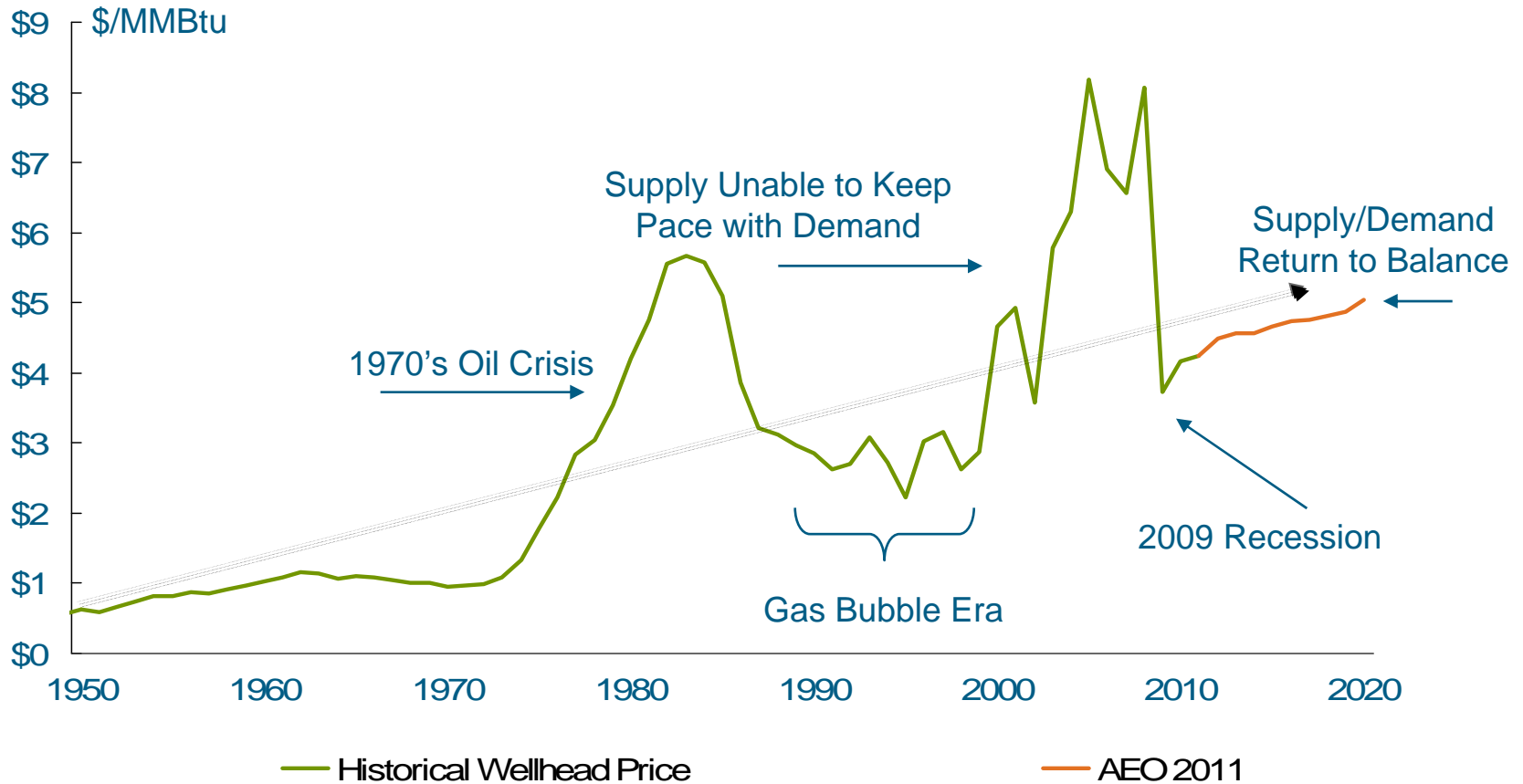
Many plays economic below \$4 - All are economic below \$6/mmbtu

Increasing Expected Ultimate Recovery (EUR) of gas by 10 - 20% would further reduce the average break-even economics by ~\$0.30/mmbtu and ~\$0.50/mmbtu respectively.



Natural Gas Prices Past, Present, and Future

Natural gas prices have risen over time with increased use, except for periods of oversupply during the 1990s and more recently 2009-11.



Source: EIA

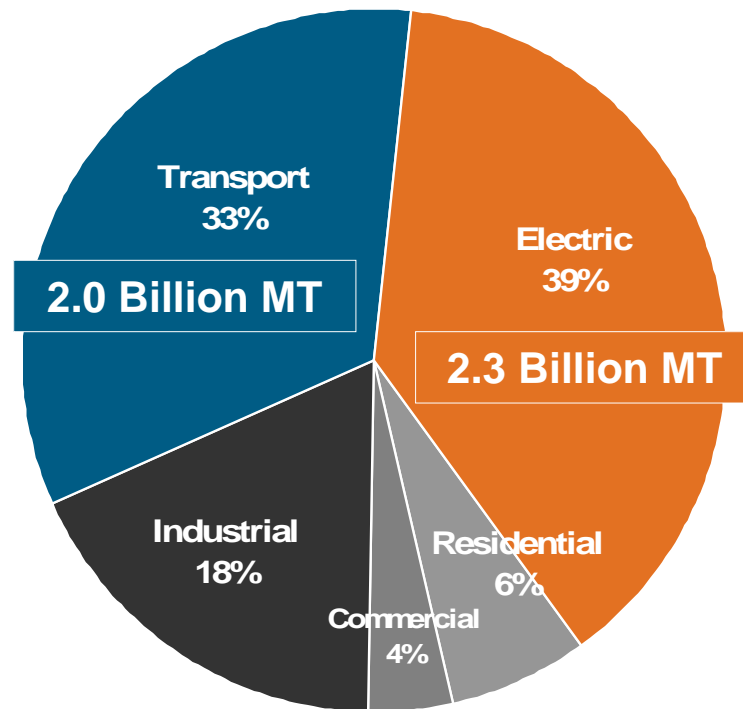
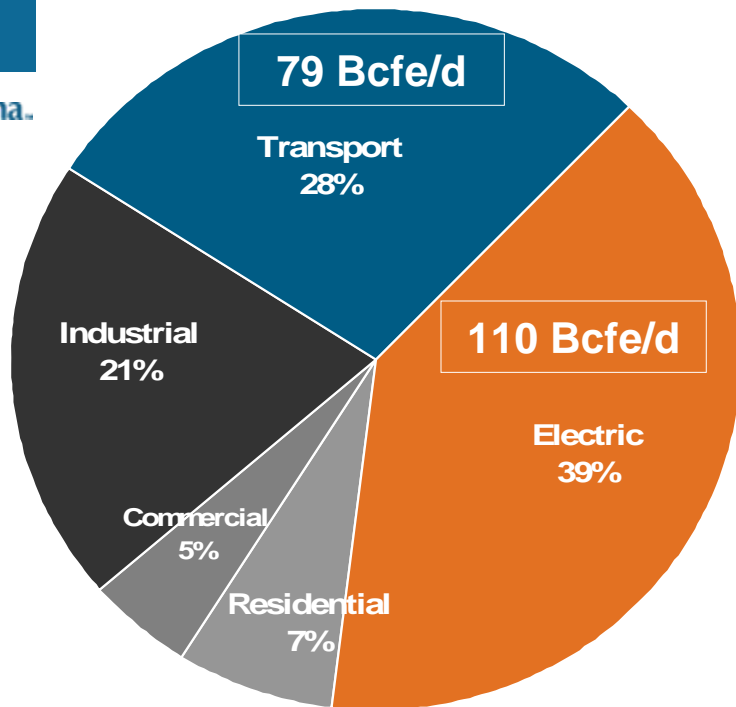
Natural Gas Can Make the Greatest Impact

Canada and US Energy Consumption by Sector - 2009

Input Energy Consumption
(281 Bcfe/d)

Annual CO2 Emissions
(6.1 Billion Metric Tonnes)

encana.



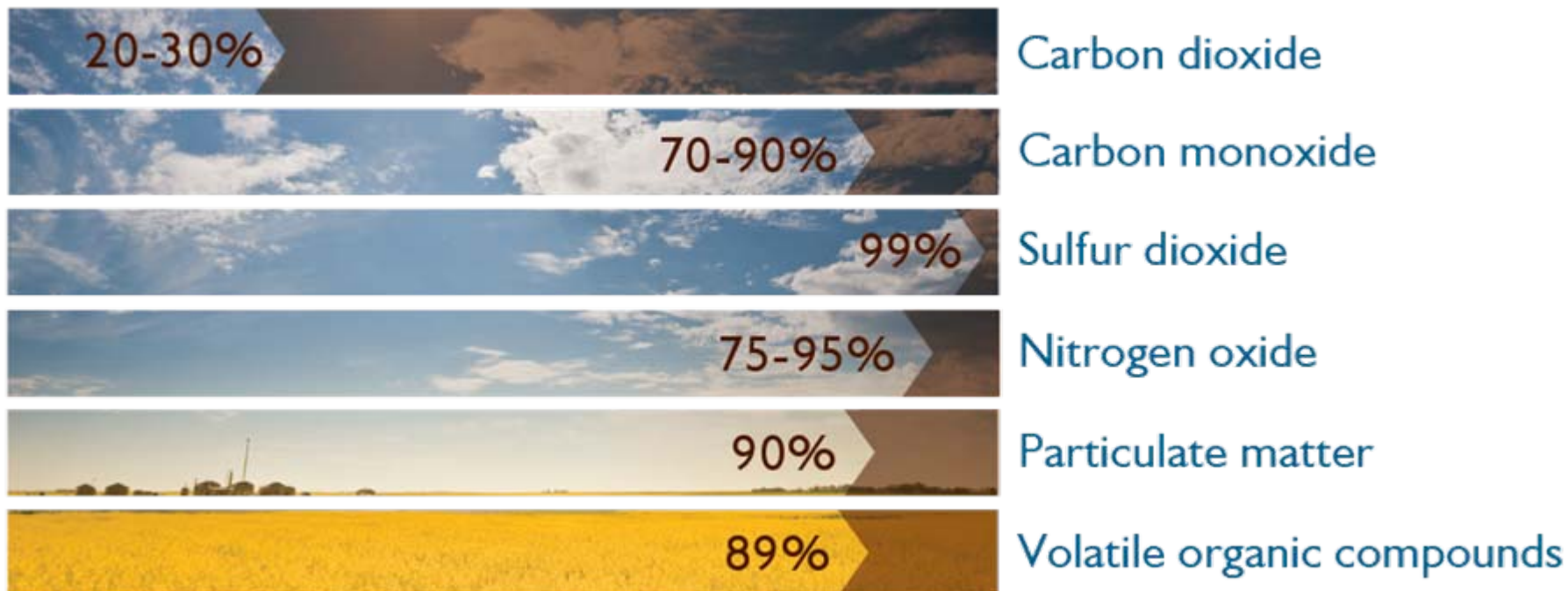
Need to focus on Electric Power and Transportation Sectors
(70% of total emissions) to move the “Emission Reduction Needle”

Cleaner, Healthier Air

Comparing Natural Gas to Diesel and Gasoline in Transportation

Estimated Emissions Reductions Summary

encana.

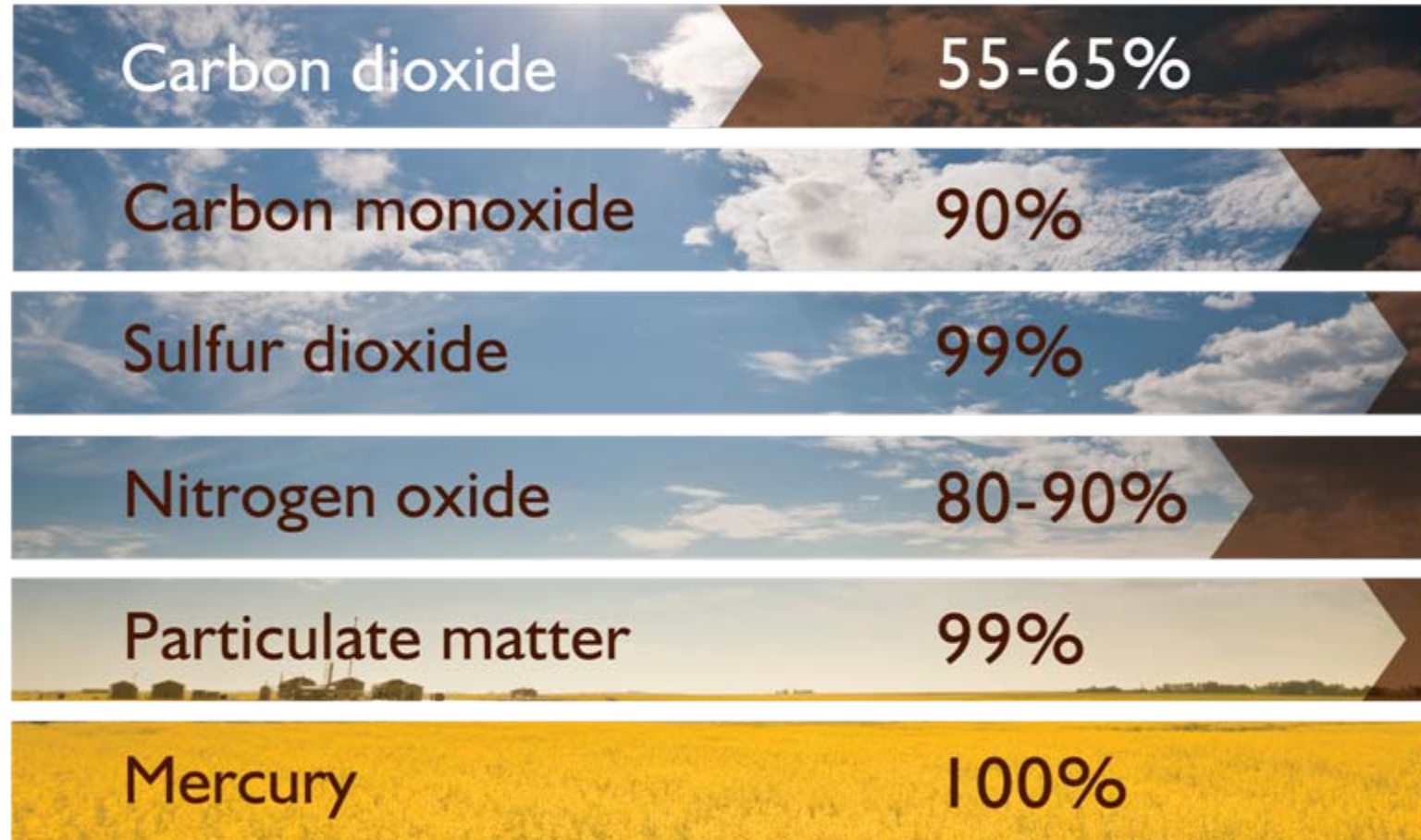


* Compared to traditional diesel and gasoline engines

Source: NGVAmerica, Encana estimate, EPA

Natural Gas - Cleaner, Healthier Air

Estimated Emissions Reductions vs. Coal for Power Generation



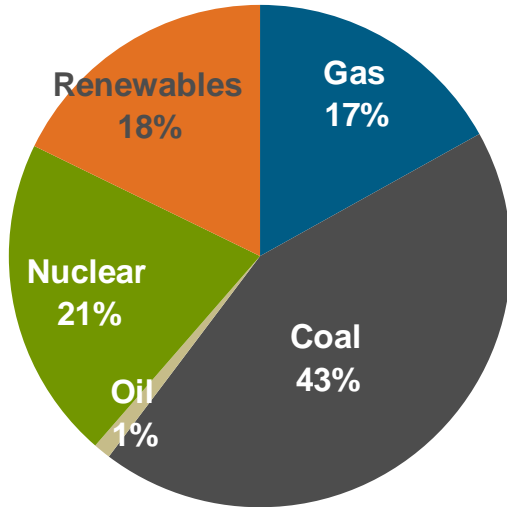
encana.

Source: Naturalgas.org, EPA

Canada and US Electrical Generation

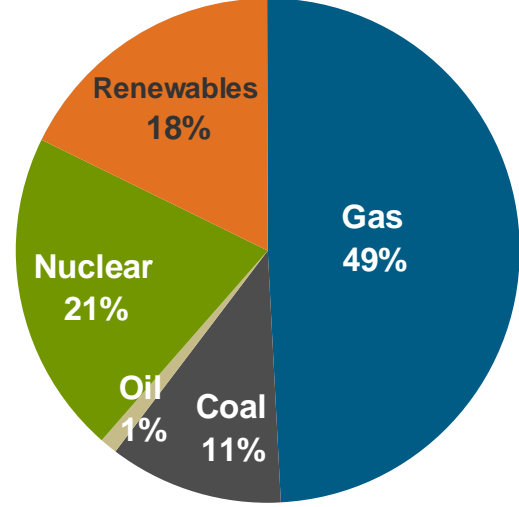
What if 25 Bcf/d of additional Natural Gas is used?

Current Mix (4,290 TWH)

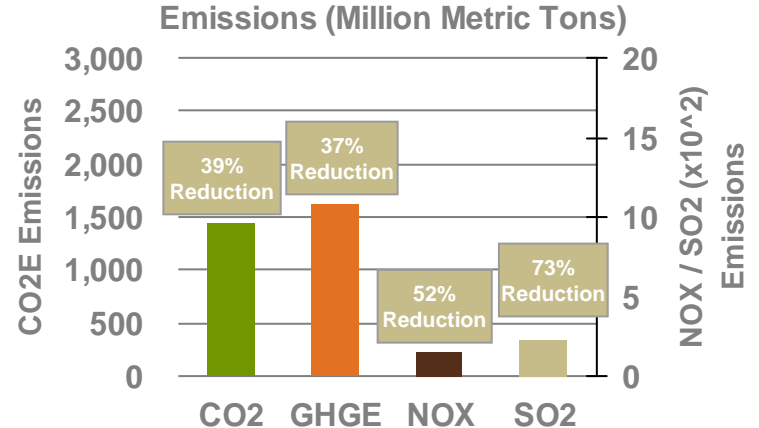
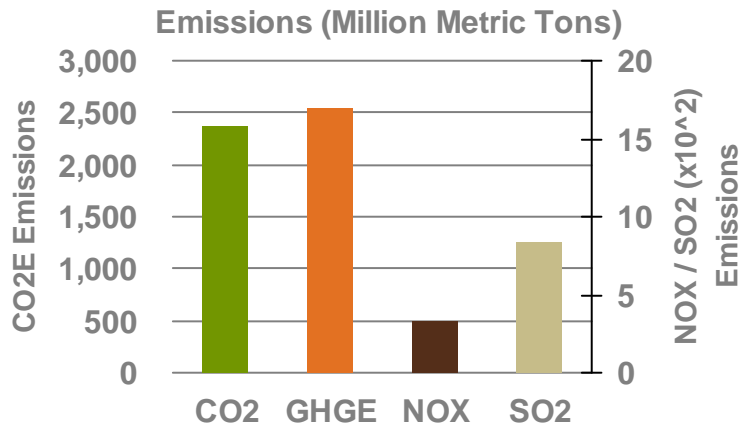


+25 Bcf/d
Domestic Gas

Mix Vision (4,290 TWH)



930 MM tons of CO2 reduced plus large reduction in NOX and SO2

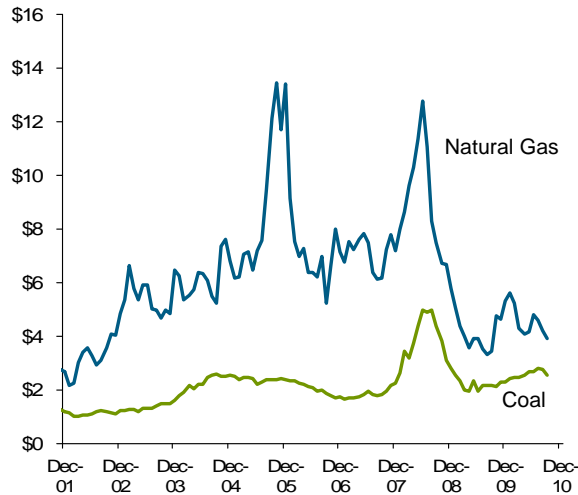


Gas Generation's – Competitive Advantage

Natural Gas Parity with Coal Without \$25 per tonne CO₂

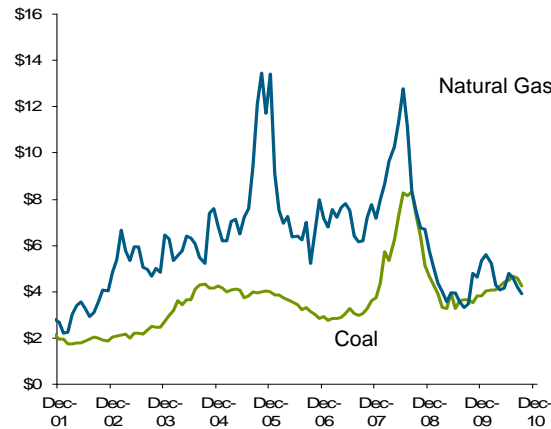
encana.

Historical Price per MMBtu



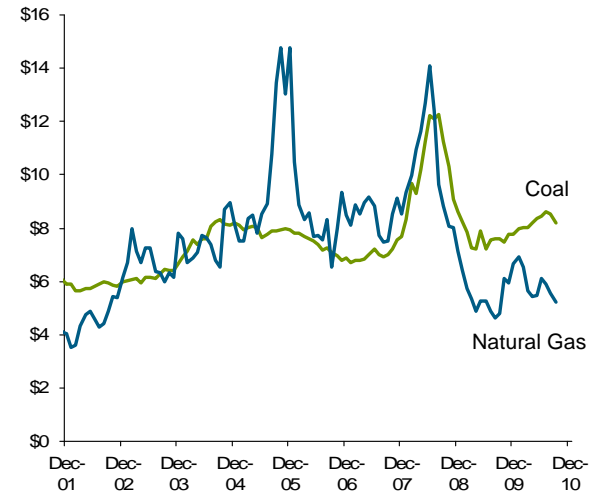
Gas prices are higher than coal for the raw commodity

Coal adjusted for efficiency penalty vs Natural Gas



Adjusted for efficiency, coal is now on par with gas

Coal adjusted for efficiency and CO₂ Cost @ \$25/t



Coal is currently higher cost than gas

Sources: NYMEX Oil, Coal and Gas Spot Prices

Power Generation

Intro Physics & Operations

$$\text{Energy} = \text{Power} \times \text{Time}$$

Watt-Hour

Directly convertible into BTUs

Watts

Instantaneous rate of energy use

Hours

The length that the energy use is sustained

encana.

- **Power Plant Example (*wholesale*)**
- A 500 Megawatt power plant for 3 hours at maximum load
 - = 500 MW x 3 hours
 - = 1,500 Megawatt Hours (MWh) of electrical energy

Consumer Example (*retail*)

- A 300 Watt computer running 1 year
 - = 300 Watts x 24 Hours x 365 Days
 - = 2600 kilowatt-hours (Kwh)
 - = 2.6 Megawatt Hours (MWh)

A 100 MW combined-cycle natural gas plant (as baseload) requires 12-15 mmbtu/d of natural gas to operate

Power Generation

Levelized Cost Introduction

- **What does Levelized Cost mean?**

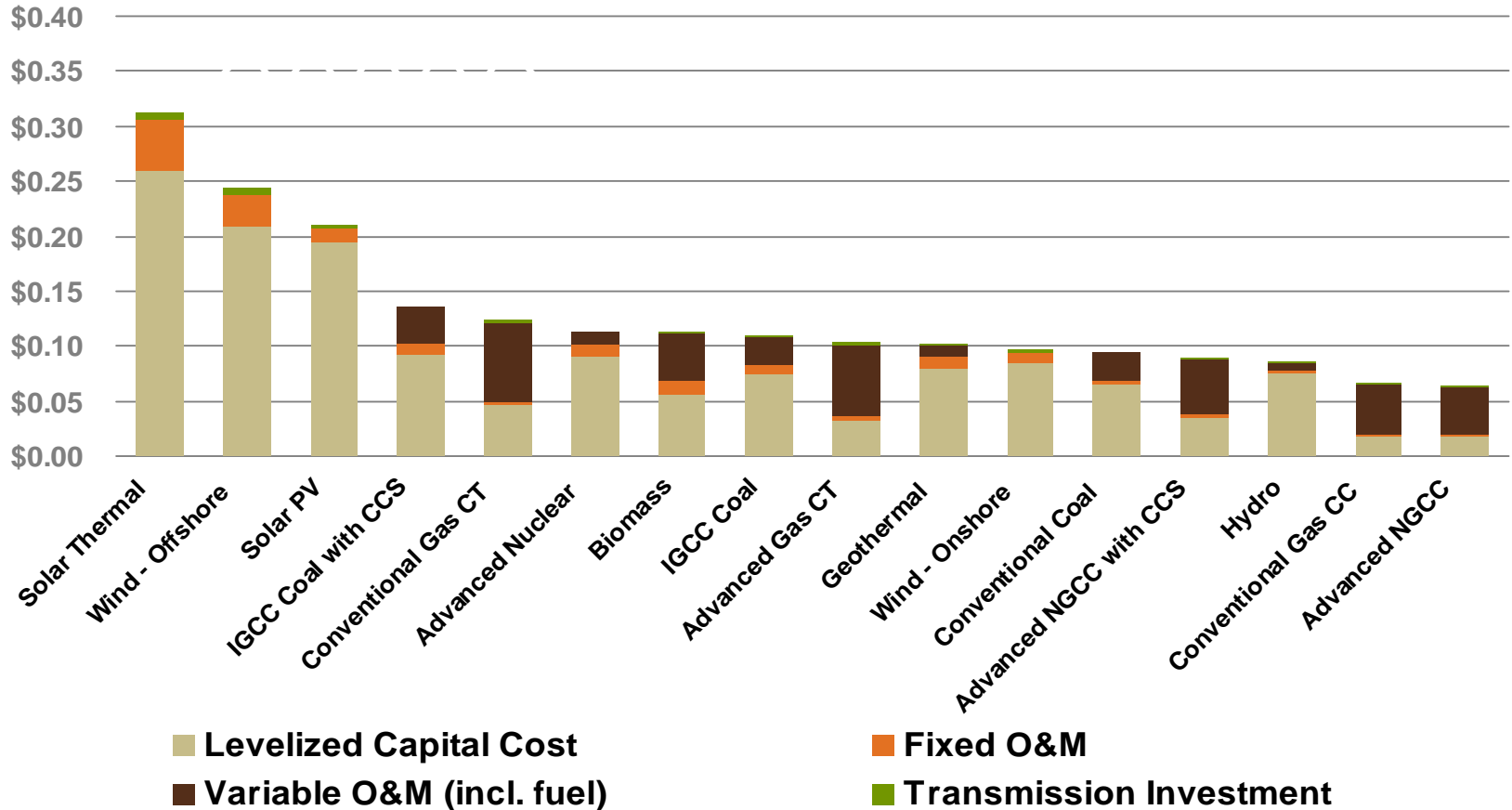
(Compares 'apples to apples' based on output energy)

- The average cost of the energy produced from an electric power generator over its service life, considering all costs in the lifecycle of the plant, including the following:
 - Capital expenditure and construction costs
 - Fuel costs
 - Maintenance and other charges
 - *(think of a fixed mortgage payment over the energy produced)*

Economics of NEW Power Generation

AEO 2011 Reference Case – Reflects \$15/ton CO2 Price

US\$/kWh

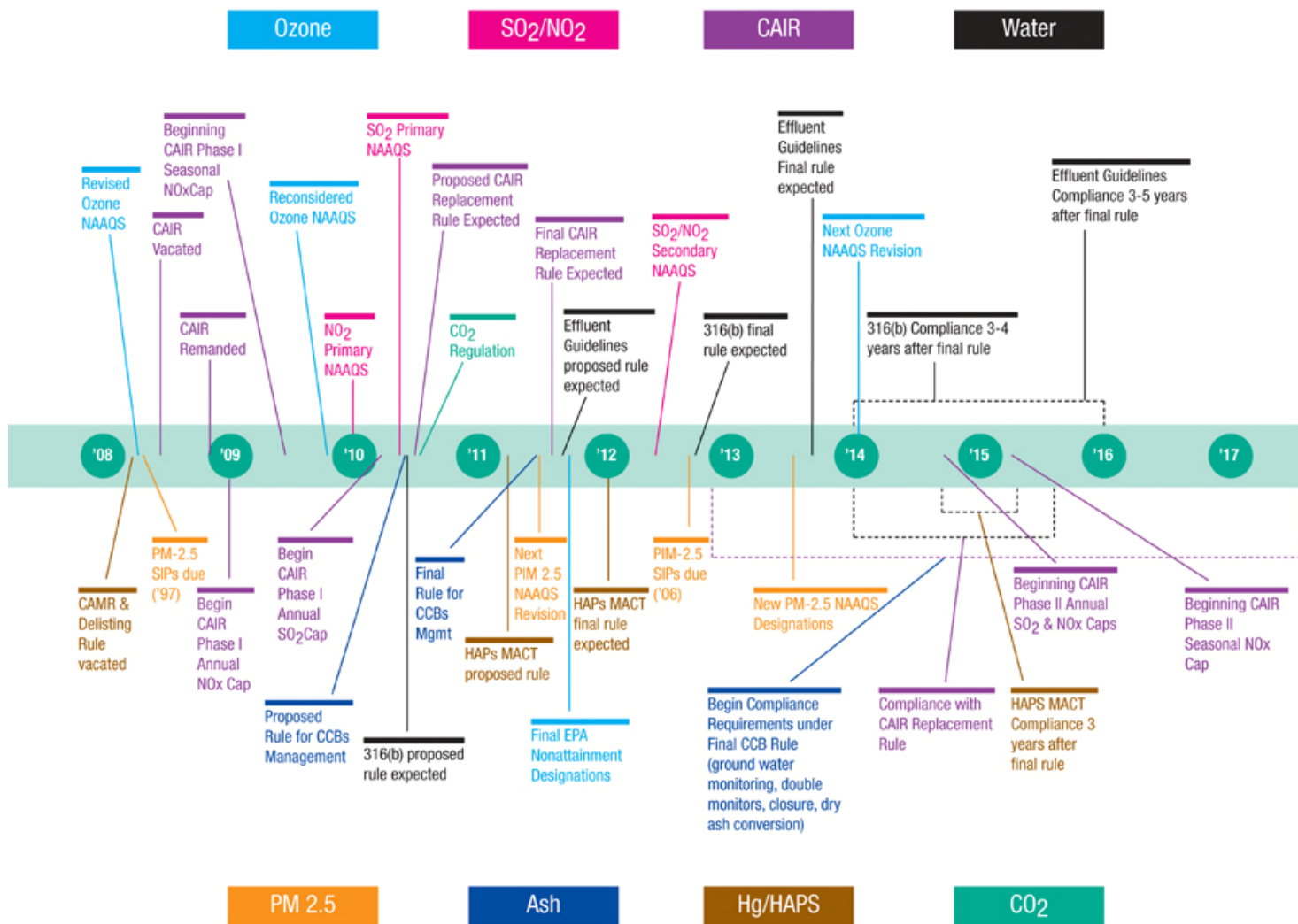


Sources: EIA, Annual Energy Outlook 2011.

Coal Electricity Generation Train Wreck

encana.

Uncertainty of environmental regulation has dramatically increased the cost of new and *existing* coal fired generation, creating massive capital costs.



Pending EPA Health and Environmental Regulations

- **2011**

- Clean Air Transport Rule (June 2011)
- Utility MACT HAPS (Hg) (November 2011)

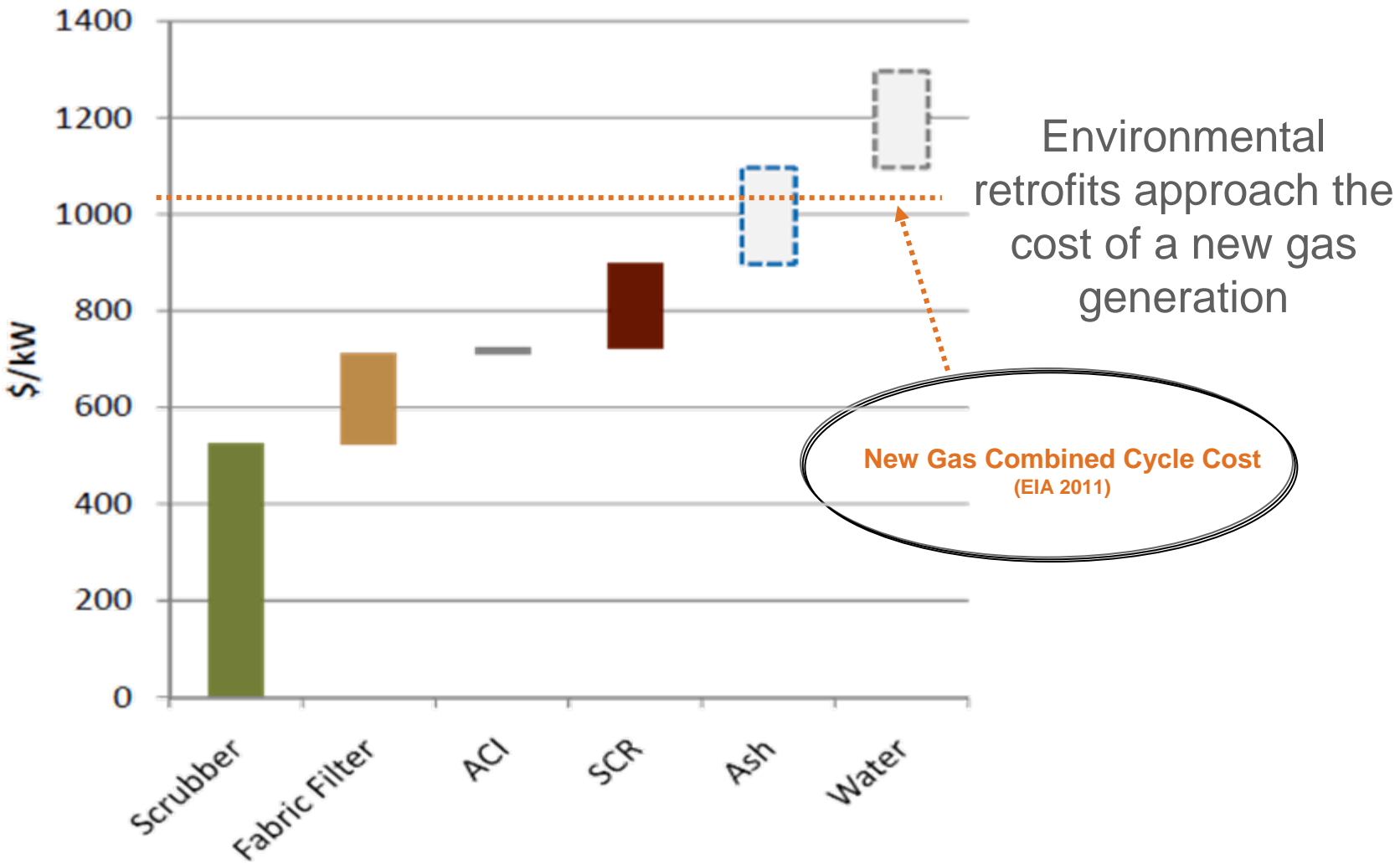
- **2012**

- Green House Gas Rules (May 2012)
- Coal Combustion Residuals - Ash (July 2012)
- Cooling Water Regulations (July 2012)

Incremental Coal Unit Retrofit Costs

No Carbon Cost

Compliance Cost Components

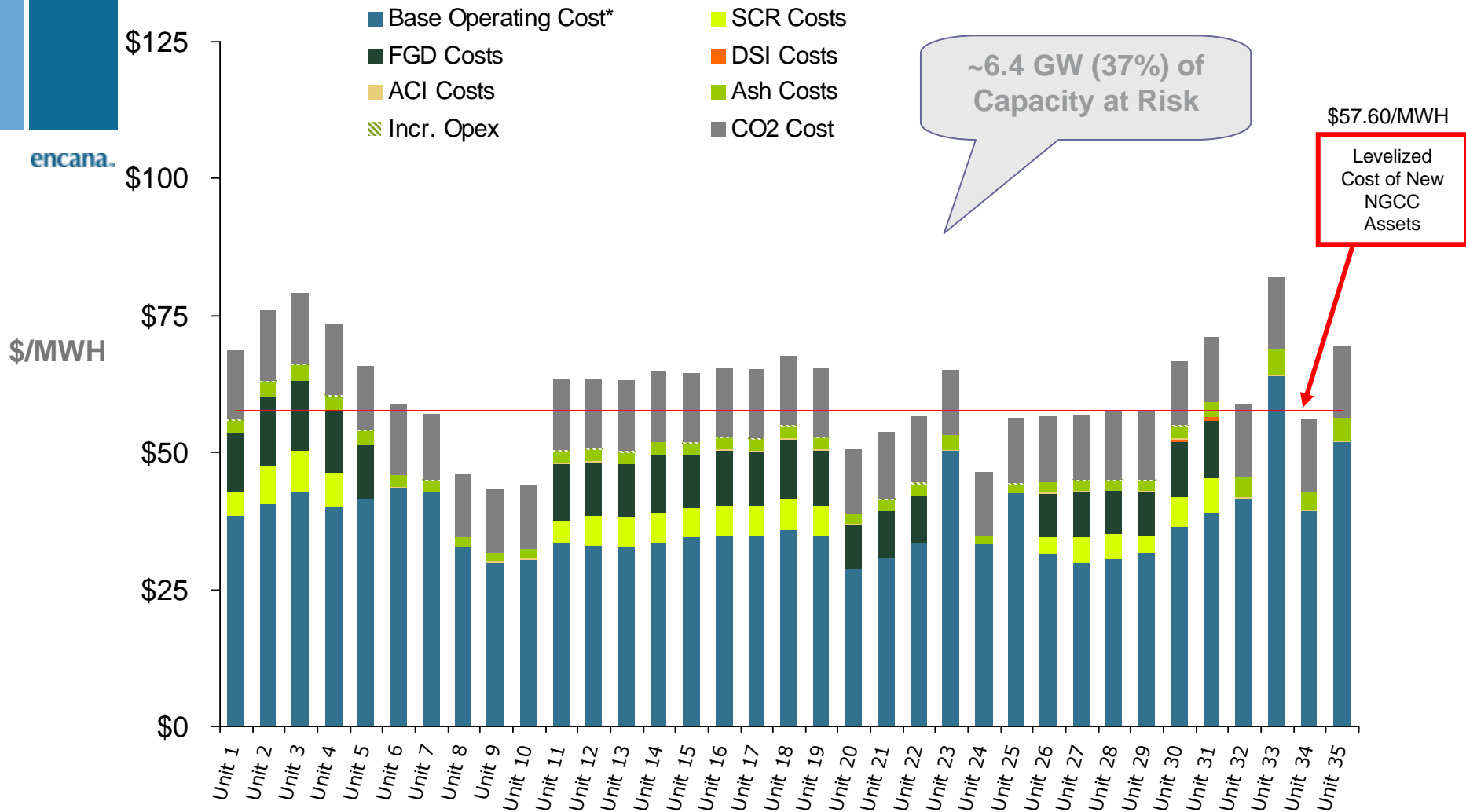


encana.

Source: ICF International Estimates

Levelized Power Cost

Regulatory - Light

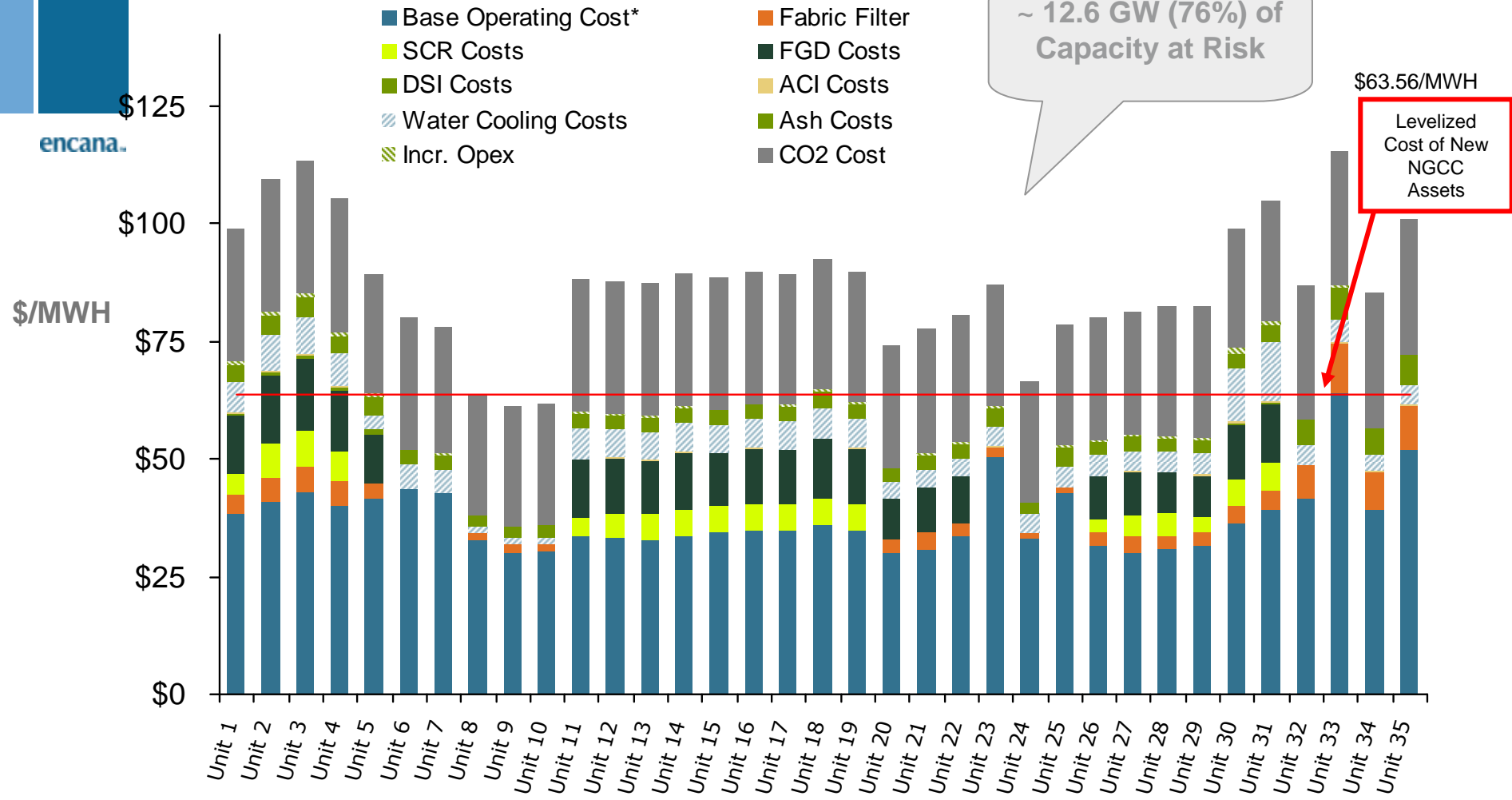


*Includes fixed, variable and fuel costs

Source Data: AEO 2011, Ventyx, Andover Technology Partners

Levelized Power Cost

Regulatory - Heavy



*Includes fixed, variable and fuel costs

Switching Opportunity

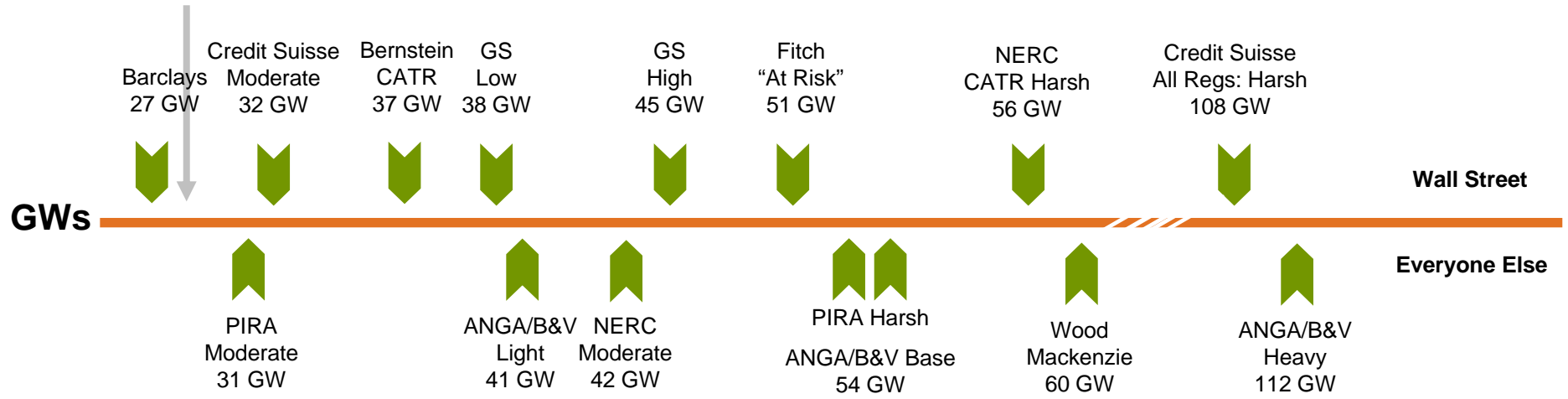
Total US Coal Capacity: 314 GW (Net Summer)

30-50 GWs of coal (10-16%) likely to shutdown representing enormous gas demand potential. (3.5 -4.0 Bcf/day)

encana.

ANNOUNCED
28 GW

Retirement Studies



1 GW of capacity can produce enough power for 750,000 homes

Canadian Coal Generation

- **Opportunities for Natural Gas Generation**

- Nearly all coal plants nationally will retire by 2020 due to Federal regulations
- Total Potential Demand Creation from Coal to Gas: 1.7 Bcf/d

encana.

- **Saskatchewan 4000 MW (300 MMcf/d Potential)**

- Expectation that inexpensive mine-mouth coal poses a challenge to gas economics
- Only 3 coal plants exist, 2 of which are “young” (30 or less years)

- **Ontario 31,300 MW (500 MMcf/d Potential)**

- Has plans to retire all coal by 2014
- All coal is marginally economic with no retrofits
- Applying similar US air quality rules in Canada would cause all units to retire (except for 2 Lambton units which are marginally positive)

- **Alberta 12,800 MW (800 – 1,000 MMcf/d Potential)**

- Very inexpensive mine-mouth coal (\$1.20/MMBTU or less)
- Relatively high power prices (\$60/MWH for Generation)
- Even with a CATR-like standard, no coal would economically retire
- Need to reduce carbon emissions may increase cost significantly

Encana's Advocacy for Natural Gas

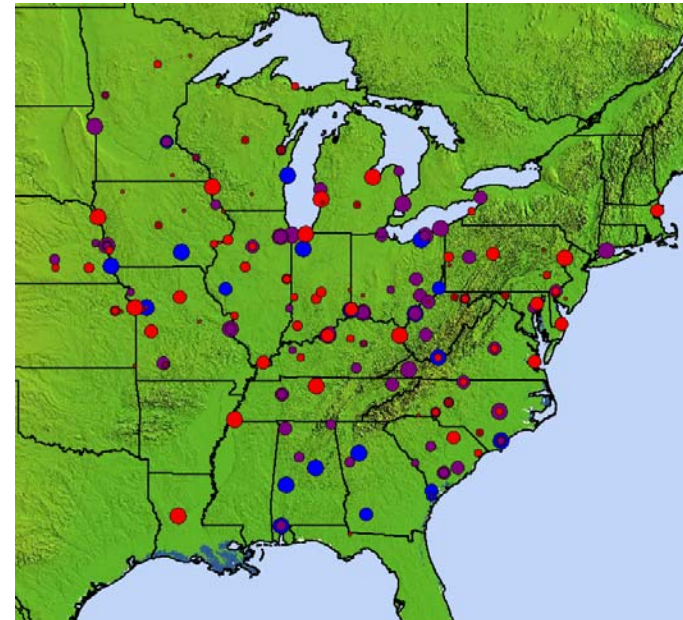
- **Colorado 1365: Clean Air Clean Jobs Act**
 - Led successful industry coalition
 - Retirement of 900 MW of coal fired electricity generation capacity
 - New demand for ~150 mmcf/d of gas
 - Landmark result to influence other jurisdictions

- **Coal to Gas Switching Strategy**
 - Quantitative analysis identified U.S. opportunity
 - 3.7 – 8.3 Bcf/day – varies with regulatory scenario
 - Venue analysis identified “high value” targets
 - Michigan, Tennessee Valley Authority
 - Collaborative and Industry Regulations Approach

- **Other Advocacy**
 - Provincial / Municipal efforts
 - Alberta, Saskatchewan, Ontario
 - Federal Canadian and U.S. efforts
 - Rebuttal on pending regulations in Canada on Coal Generation retirement regulations
 - Collaboration with U.S. Merchant Coal generators
 - Providing comment and rebuttal on US EPA rules

encana.

Quantitative Analysis: Coal Unit Shutdown Potential



- Strong shutdown risk
- Moderate shutdown risk
- Weak shutdown risk

North American Opportunities and Challenges

- New abundance of natural gas will change North America's energy portfolio.
 - Natural gas will displace coal for power generation.
- Benefits of increased natural gas demand
 - Economic Development benefits
 - Jobs and spinoff (70,000 jobs per 1bcf/d)
 - Natural gas economy and energy security
 - Air quality and climate change benefits
- **Challenges**
 - Lack of and misinformation on coal vs benefits of gas fired generation
 - Technology to drill wells is poorly understood throughout society. Industry needs to take ownership
 - Communicate and regulate towards best practices

encana.



Questions?



twitter.com/encanacorp



facebook.com/encana



youtube.com/encana

www.encana.com