

# **The Challenge of Energy Policy**

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# Who is Devon?

Proved reserves:	≈ 2.1 Billion BOE
Current production:	≈ 684,000 BOED ≈ 2.45 BCFD (60% gas) ≈ 275 MBOD (40% liquids)
Production profile:	87% North American
Enterprise value:	≈ \$24 Billion

Note: Proved reserves as of 12/31/03. Production based on second quarter 2004 results. BOE represents barrels of oil equivalent at a ratio of 6:1. BOED represents barrels of oil equivalent per day.

# Industry Perspectives

- Where are we?
  - Precariously tight supply/demand fundamentals
- How did we get here?
  - What happened in the natural gas sector that contributed to the situation?
- Why we have to avoid conflicting policy objectives
- How industry conservation efforts can help



# Crude Oil Supply

- Supply of oil is plateauing:
  - 1980's excess crude > 10 MMBOD
  - 1999 excess crude  $\approx$  5 MMBOD
  - 2004 excess crude  $\approx$  1.5 MMBOD
- Non-OPEC, Non-FSU supply flat for five years
- Most production increases came from FSU during that time



# Crude Oil Demand

- 1999 – 2004 global demand increase  $\approx$  7 MMBOD
- Largest increase in demand occurred in last 24 months
- Biggest contributors – China, India, South Korea and Vietnam
- Staggering growth in China – over 1 MMBOD between November 2003 and July 2004

# Crude Oil Demand

- China automobile ownership up tenfold in last decade
- India just starting to move
- Economic growth in developing nations will continue to fuel demand
- 5-year projected increase in world oil demand 1.4 to 2.0 MMBOD per year

# Longer-Term Crude Oil Prices



# Natural Gas Supply

- US natural gas production decreasing
- Canadian gas production leveling off
- Little supply response from 2001 – 2004 drilling boom
- Unconventional supplies (deep offshore gas, Arctic gas, LNG) take years to develop





# Why Has Supply Levelled Off?

The causes:

- Rapidly escalating production declines across North America
- The “myth” of growth in Canada
- Restriction of access to resource
- Fundamental restructuring of industry
- Public market focus on near-term results – the “business of investing”

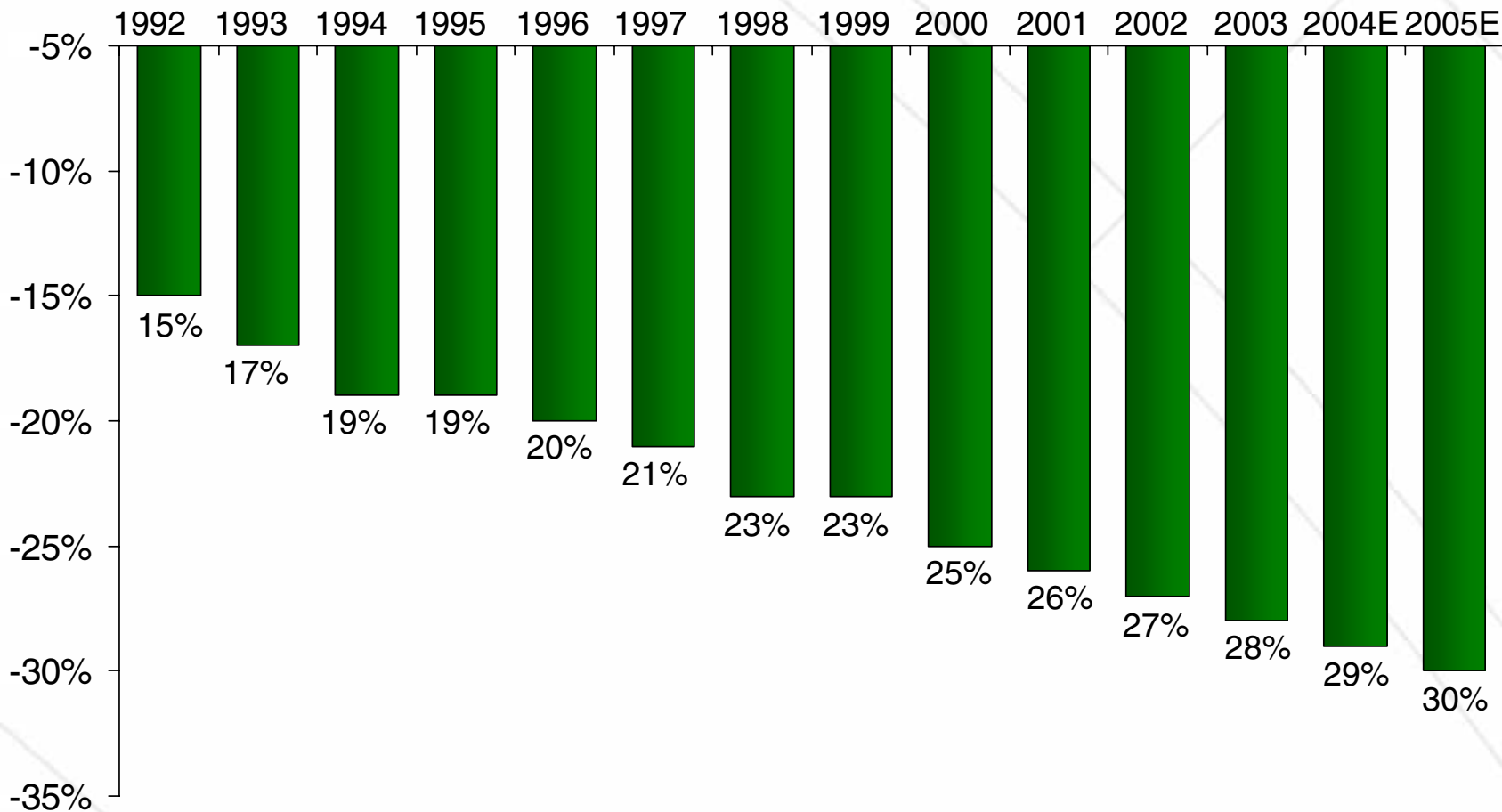
# Why Has Supply Levelled Off?

The result:

- Multi-year focus on exploitation rather than exploration
- Diminishing new pool discoveries
- Little incentive to invest in longer-term projects



# Total U.S. Production Decline Rates

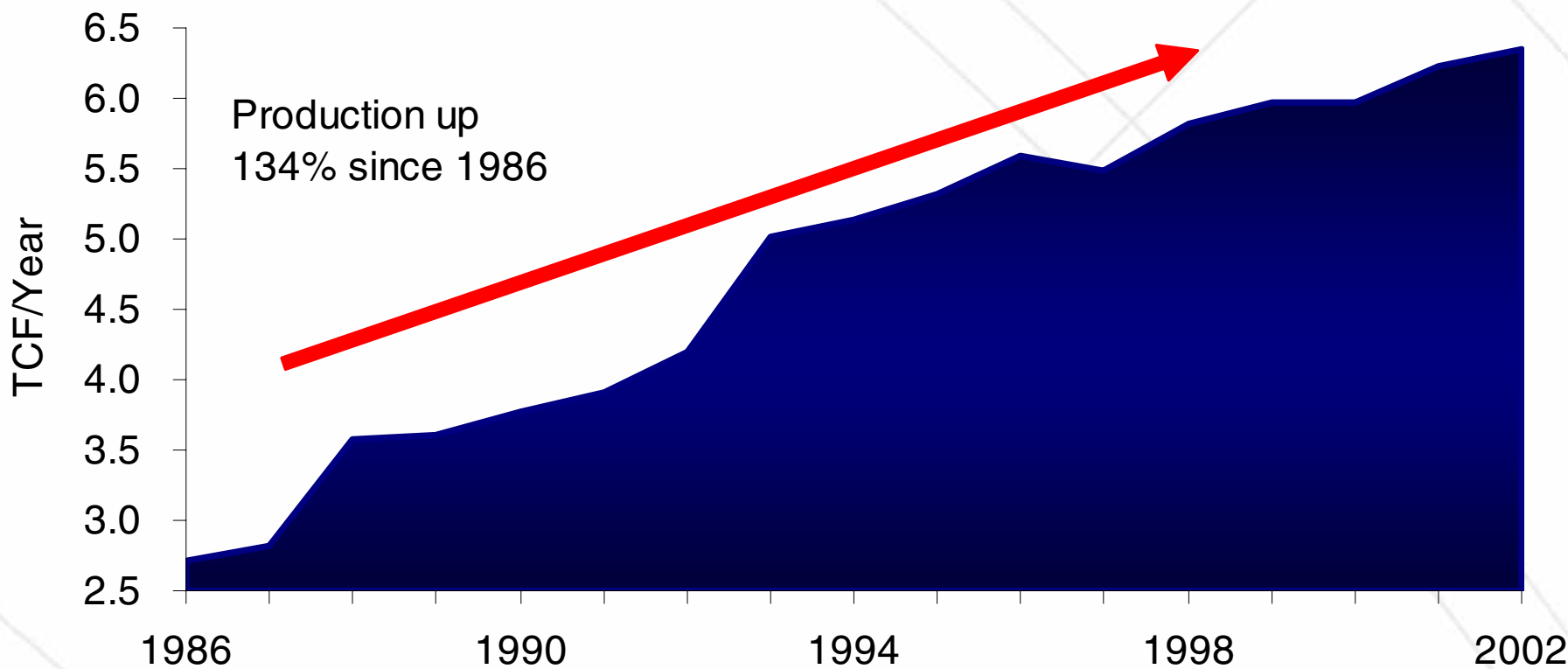


# The “Myth” of Growth in Canada

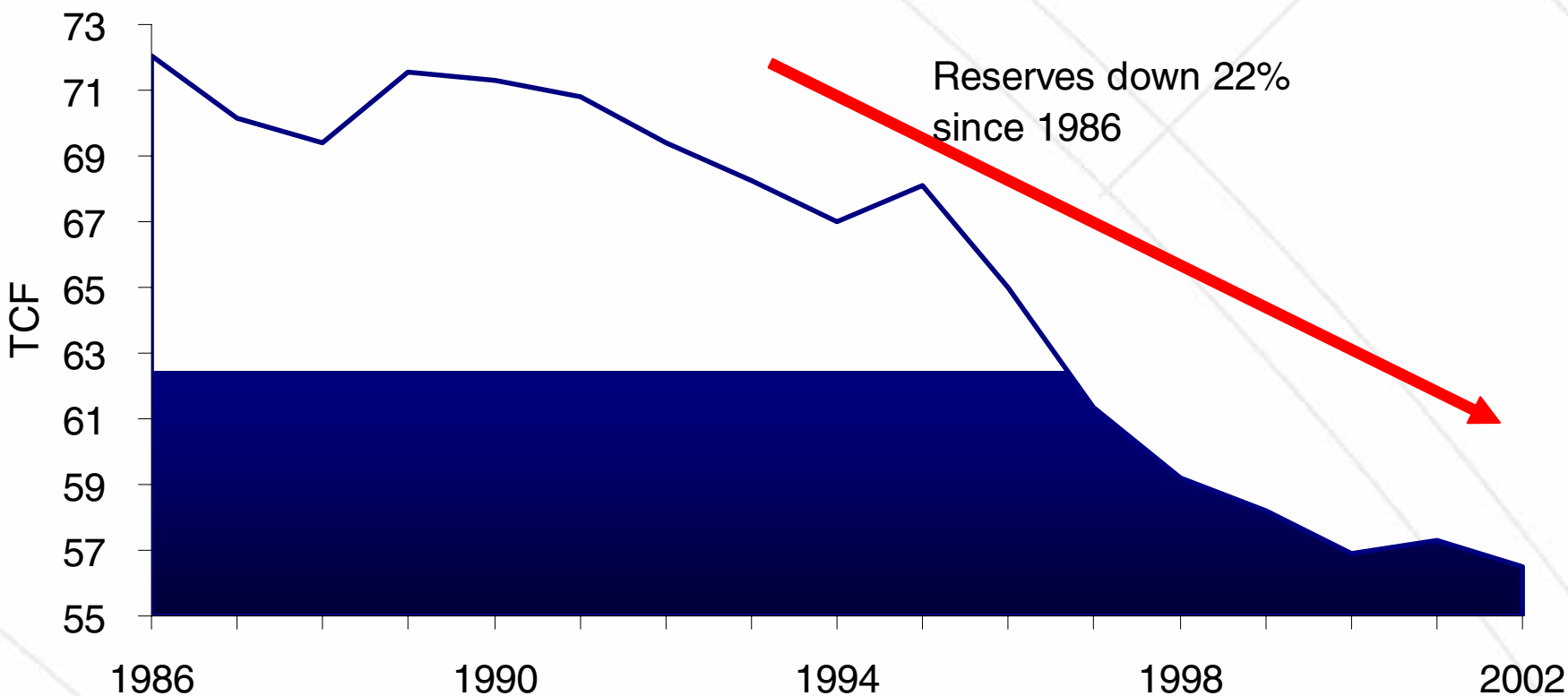
- 15 year focus on exploitation
- Sharply increasing production gave appearance of expanding supply
- Significant rate acceleration without corresponding reserves additions
- Modest exploration efforts



# 1986 – 2002 Annual Production

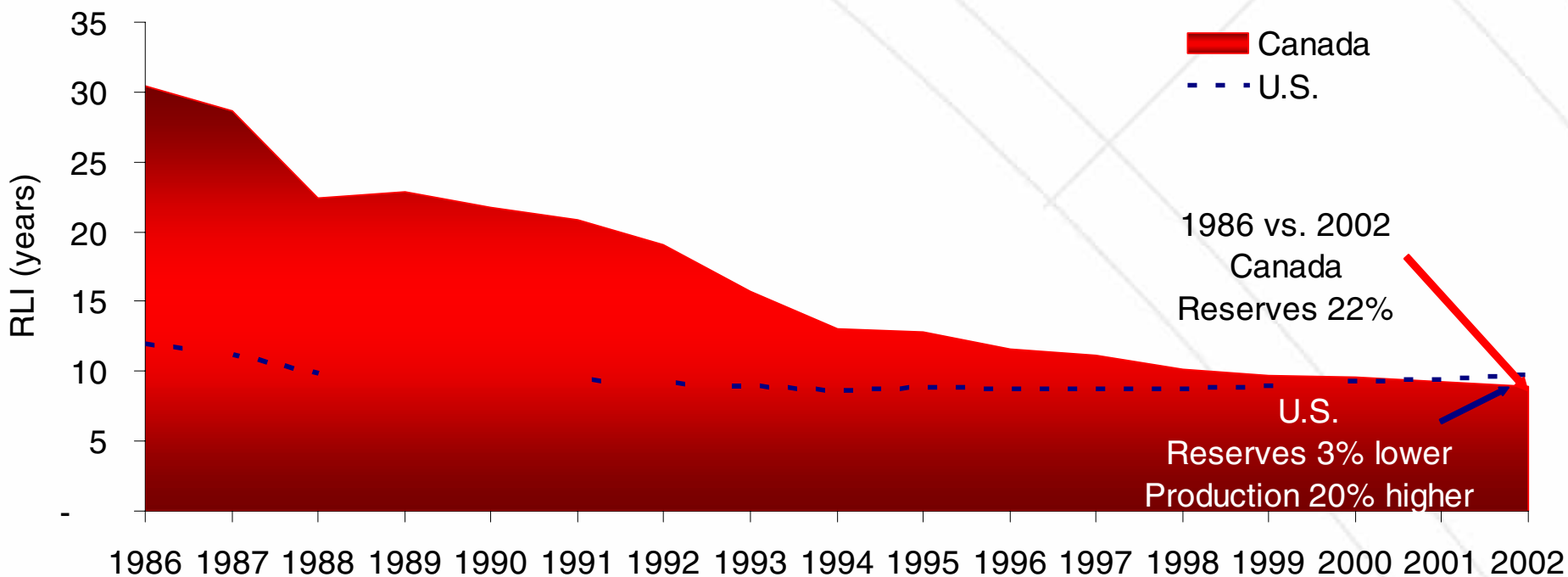


# 1986 – 2002 Established Reserves



# 1986 – 2002 Reserve Life Index – Western Canadian Conventional vs. U.S.

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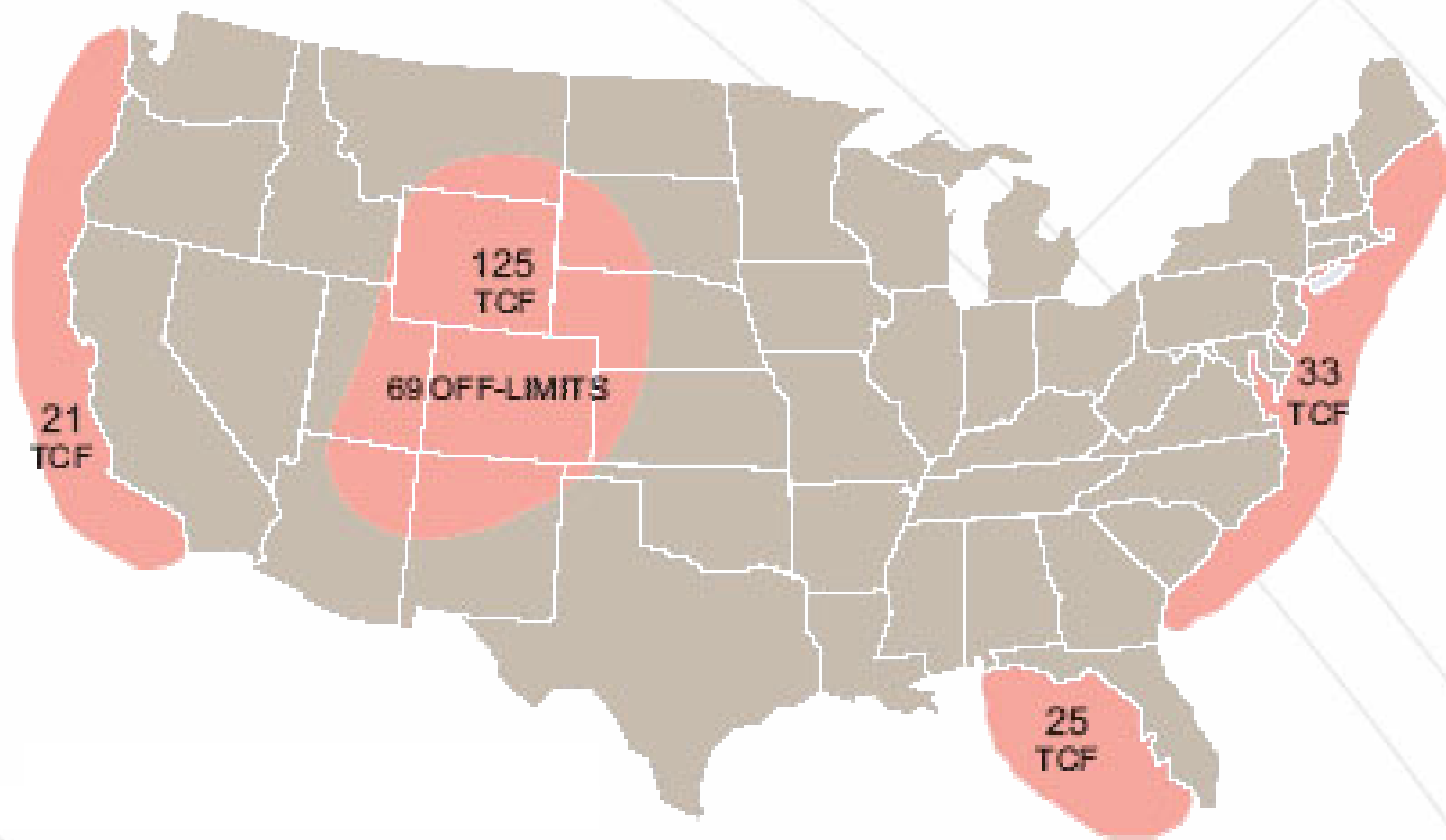


RLI is defined as year end reserves divided by annual production.

Note: Canadian reserves are established while U.S. reserves are proven only.

Excludes East Coast, Arctic and Mackenzie Delta gas reserves.

# Restrictions on Access to Resource

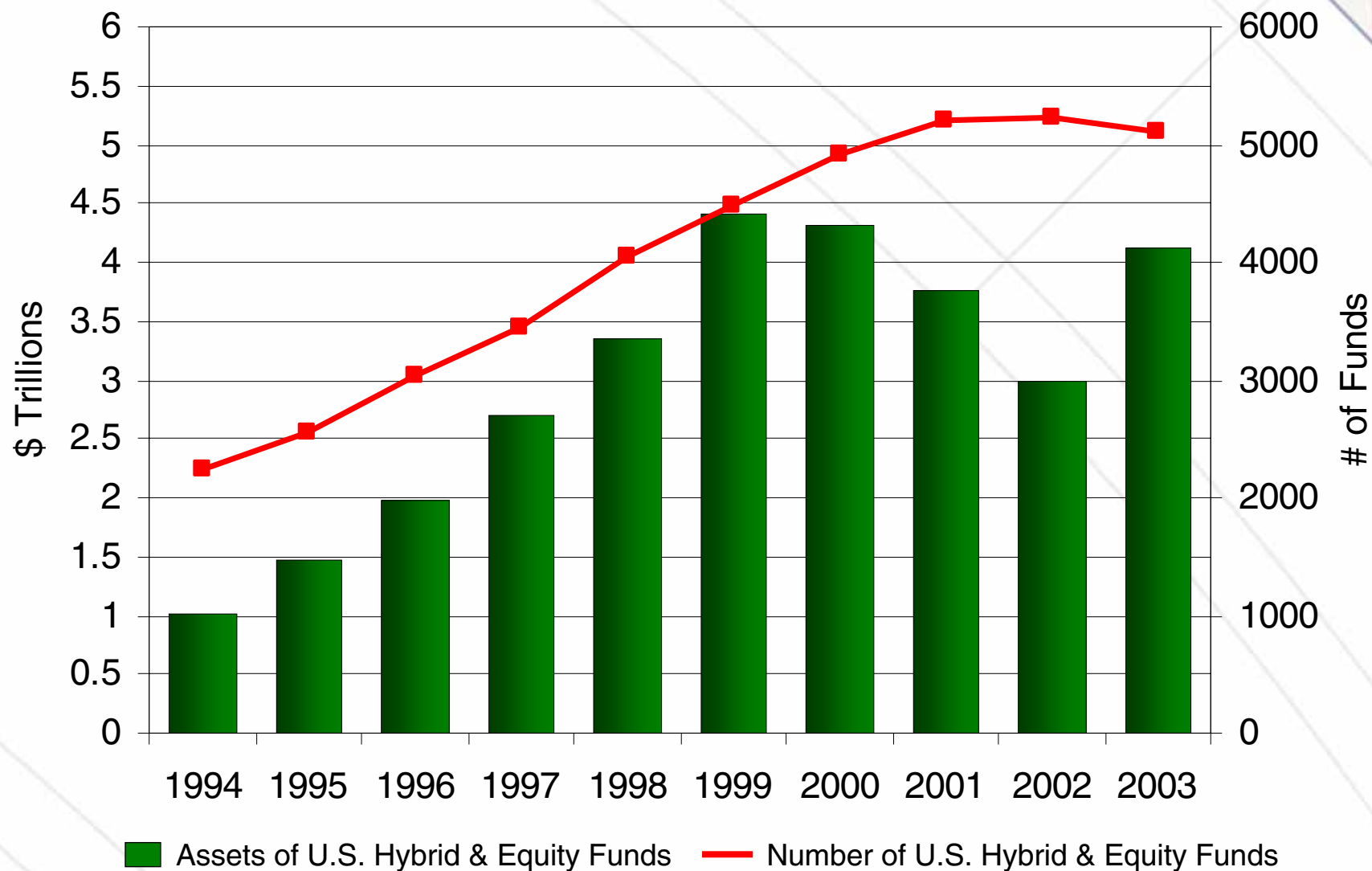




# Restructuring of Industry

- Over 400 publicly-traded companies 10 years ago
- Slightly over 100 today
- Result is fewer companies with much greater size disparity:
  - Larger companies have many investment choices
  - Capital has to compete globally
  - Smaller companies tend to focus more on exploitation

# The "Business of Investing"

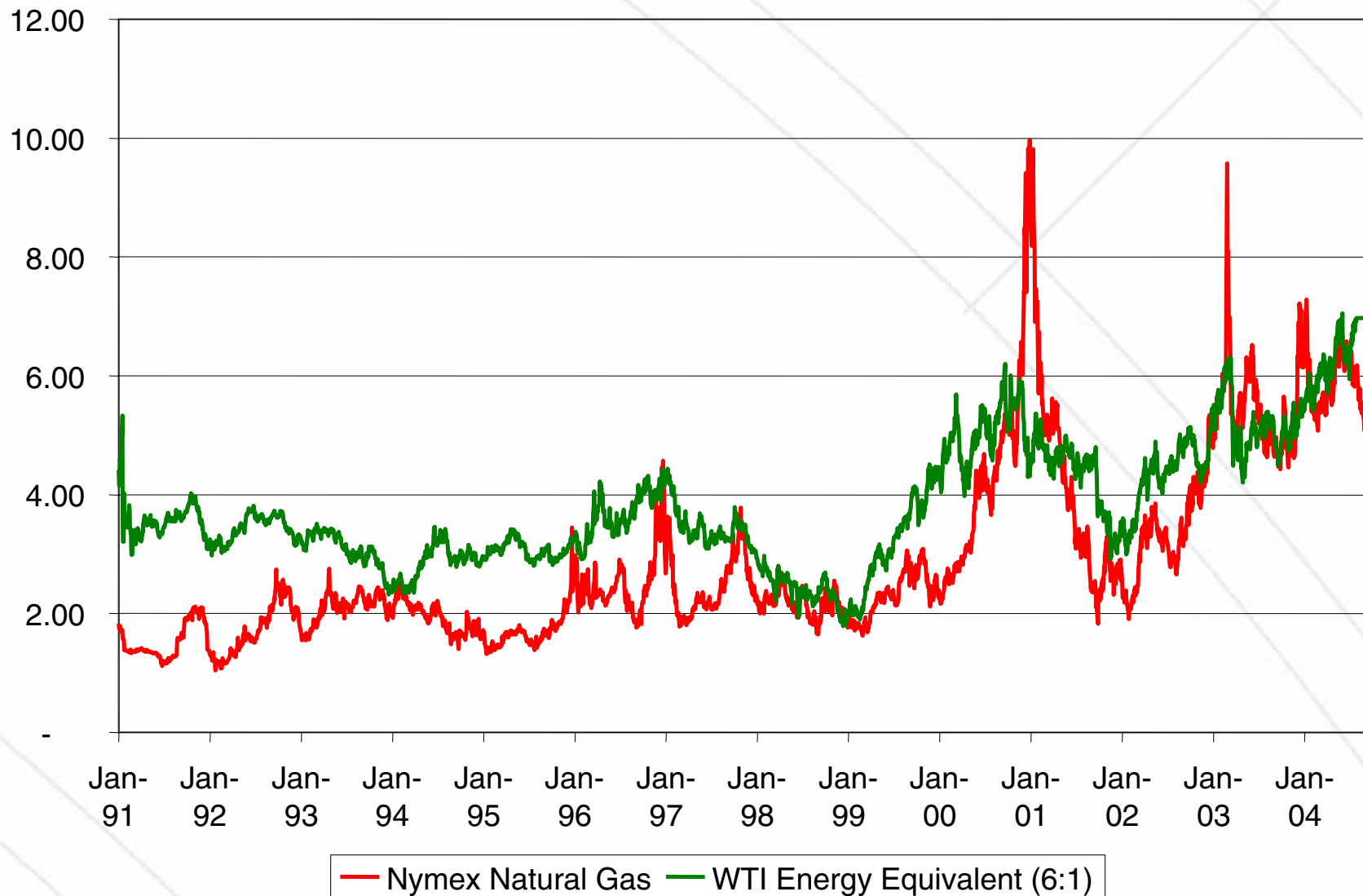


# The “Business of Investing”

- Enormous fee pool
  - How do fund managers get their piece?
- Many fund managers have very short-term investment horizons
- Encourages short-term focus in E&P sector
- Little incentive for publicly-traded companies to invest for the long-term



# Long-Term NYMEX Natural Gas Prices



# Natural Gas Prices

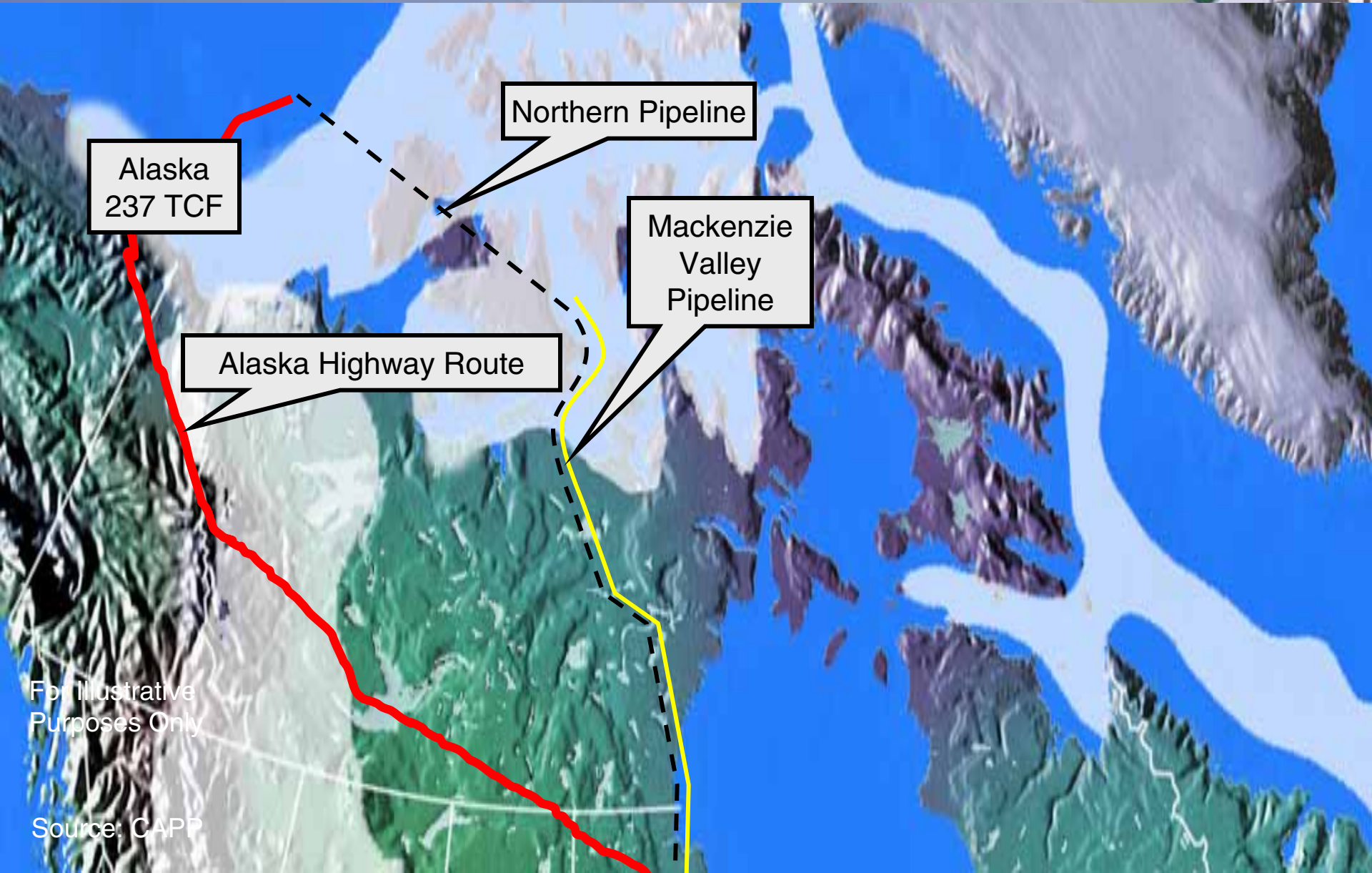
- Primarily influenced by North American production declines, increased oil prices (less substitution) and slight demand growth
- Future prices heavily dependent upon supply availability and weather
- Prices will remain volatile in both short and longer-term due to tight supply/demand balance
- With declining supply, we will need all the natural gas that we can get!



# LNG Helps in Longer-Term

- Currently 3 BCFD of North American receipt capacity
- Growth expectation – 9 to 10 BCFD by 2010
- High capital costs (export facilities, transportation, import capacity)
- Competition for cheap natural gas from China, India and Western Europe
- NIMBY

# Northern Gas



Alaska  
237 TCF

Northern Pipeline

Mackenzie  
Valley  
Pipeline

Alaska Highway Route

For illustrative  
Purposes Only

Source: CAPP

# Renewable Energy Sources

- Hold some promise
- Are currently only partial substitutes for fossil fuels
- Are generally complex and longer-term in nature





# Where Do We Go From Here?

- No “silver bullet” for short-term solution
- Most meaningful supply additions have multi-year horizon
- Need overarching energy policy that avoids competing policy objectives



# Competing Policies = Confusion = Delays

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- Use more natural gas
- Increase production from the vast oil sands resource
- Bring on more supply of oil and natural gas faster
- Restrict access to lands with more natural gas
- Environmental restrictions on refinery reconfiguration
- Require higher standards for regulatory approvals and longer regulatory processes

# How Do Conservation Efforts Help?

- Voluntary programs to reduce methane emissions provide economic and environmental benefits
- Natural Gas STAR is working!
  - Methane emissions down 10% since 1990
  - Success of program motivates existing participants and attracts new players



# Why Does Natural Gas STAR Work?

- Broad industry participation:
  - 111 oil and gas company participants
  - Represent 60% of all natural gas production, processing, transmission and distribution
- Encourages cost-efficient best management practices to reduce losses of natural gas
- Promotes effective technology transfer



# Why Does Natural Gas STAR Work?

- Makes good business sense – economics work!
- Not command and control – participants determine reduction opportunities
- Raises the profile of conservation efforts
- Encourages new ideas and innovation



# Innovation – The Key to Success

*We usually find oil in new places with old ideas. Sometimes, we find oil in an old place with a new idea, but we seldom find much oil in an old place with an oil idea.*

*Several times in the past we have thought that we were running out of oil, when actually we were running out of ideas.*

*Parke A. Dickey  
September 15, 1958*