

BALANCING NATURAL GAS POLICY

Fueling the Demands of a Growing Economy

**5th NARUC/CEER ENERGY REGULATORS'
ROUNDTABLE**

**W. Robert Keating
Commissioner, MA. D.T.E**

**February 12, 2005
Hyatt Regency on Capitol Hill**

Washington, D.C.

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The Study Could Not Be More Timely

National Petroleum Council

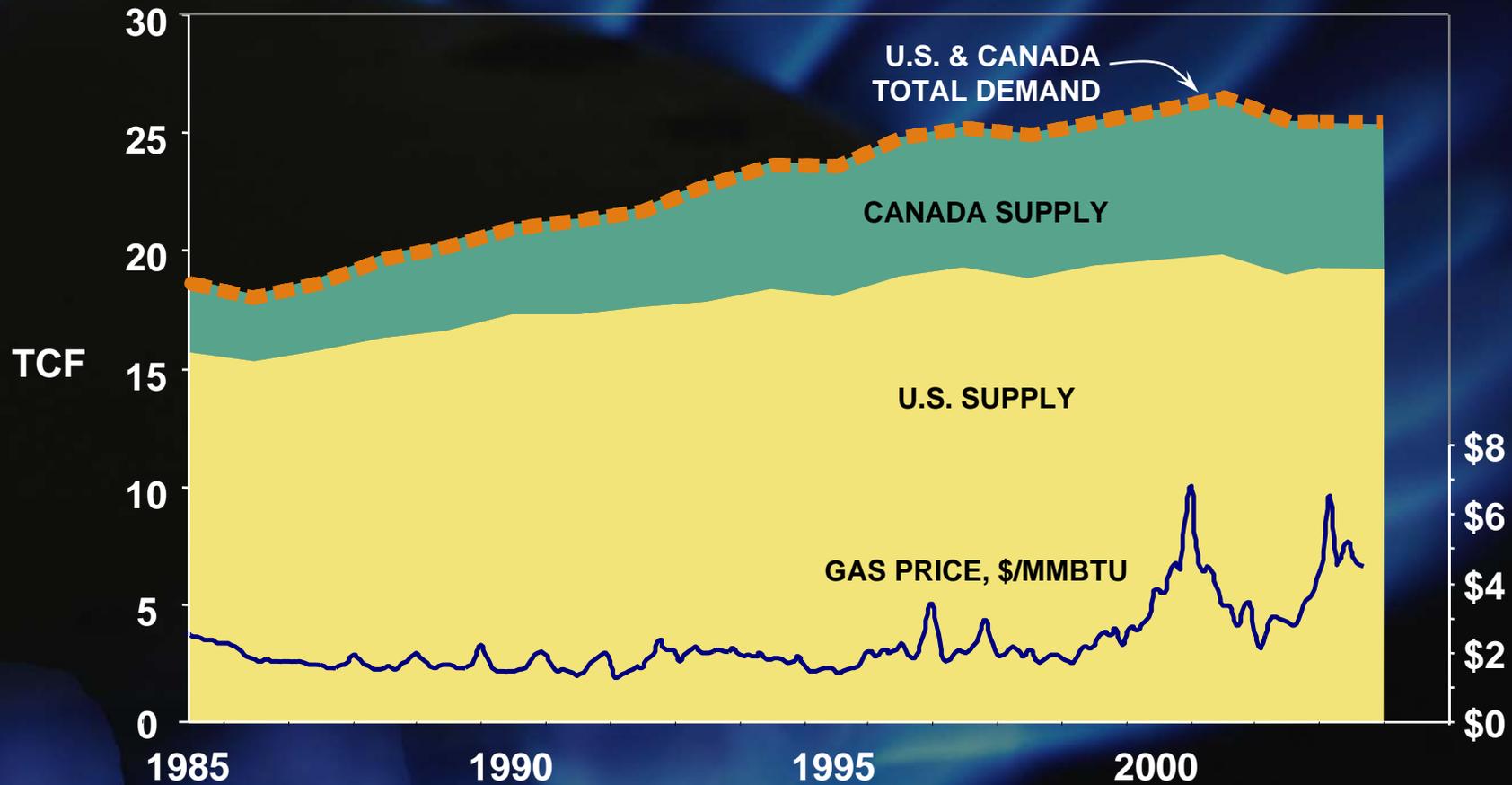
- Federally chartered, privately funded advisory committee
- Sole purpose is to advise and make recommendations to the Secretary of Energy
- Operates under Federal Advisory Committee Act
- Council comprised of ~175 members

Secretary Abraham, March 2002

“Examine the potential implications of new supplies, new technologies, new perceptions of risk, and other evolving market conditions that may affect the potential for natural gas demand, supplies, and delivery through 2025 ... provide insights on energy market dynamics, including price volatility and future fuel choice, and an outlook on the longer-term sustainability of natural gas supplies ... advice on actions that can be taken by industry and Government to increase the productivity and efficiency of North American natural gas markets and to ensure adequate and reliable supplies of energy for consumers.”

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Higher Prices Reflect a Fundamental Shift in Supply & Demand



The NPC Considered Two Paths Beyond the Status Quo

Reactive Path

Public policies remain in conflict, encouraging consumption while inhibiting supply ... resulting in higher prices and volatility

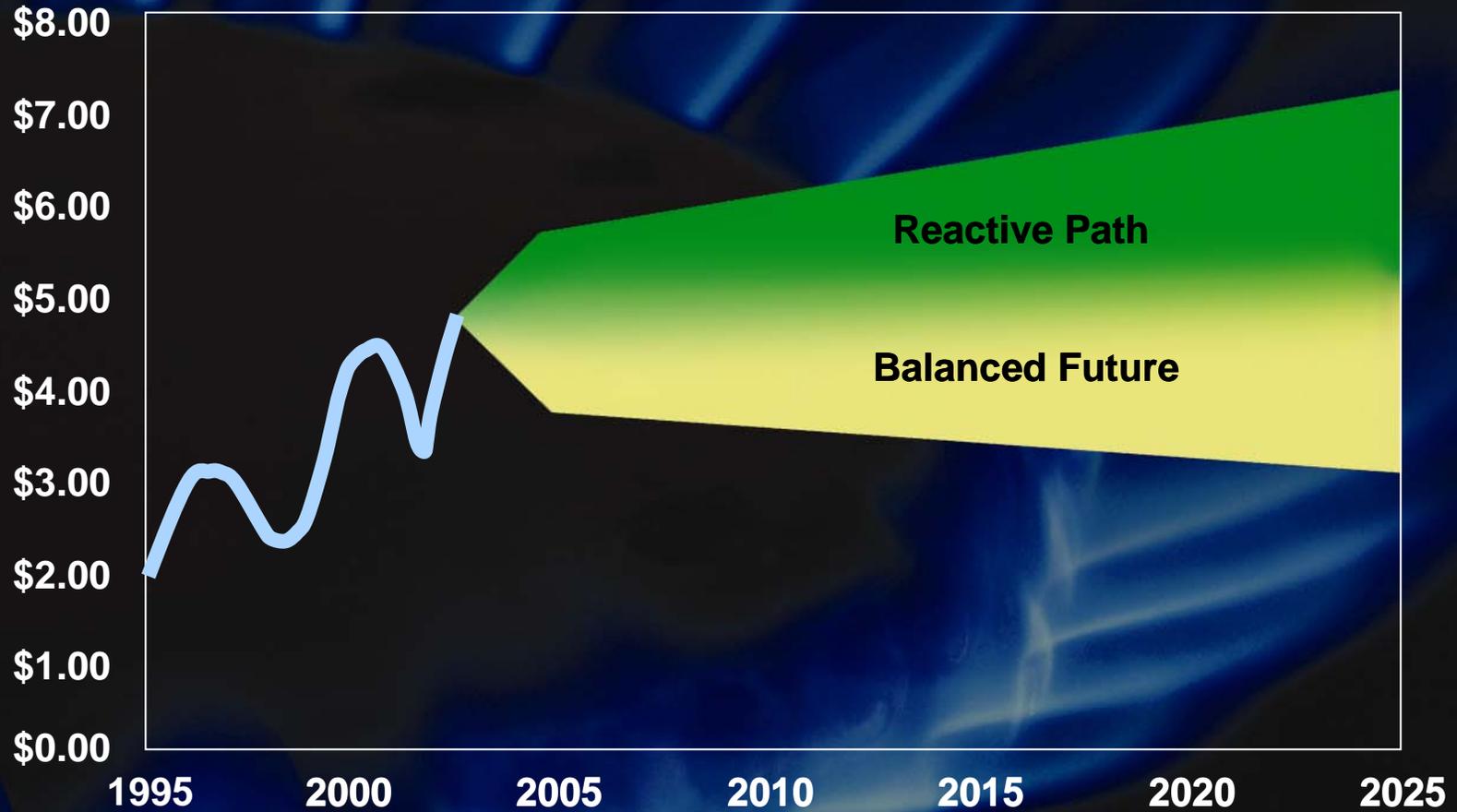
Balanced Future

Public policies aligned: alternate fuels and new natural gas supply sources compete to ensure lowest consumer cost

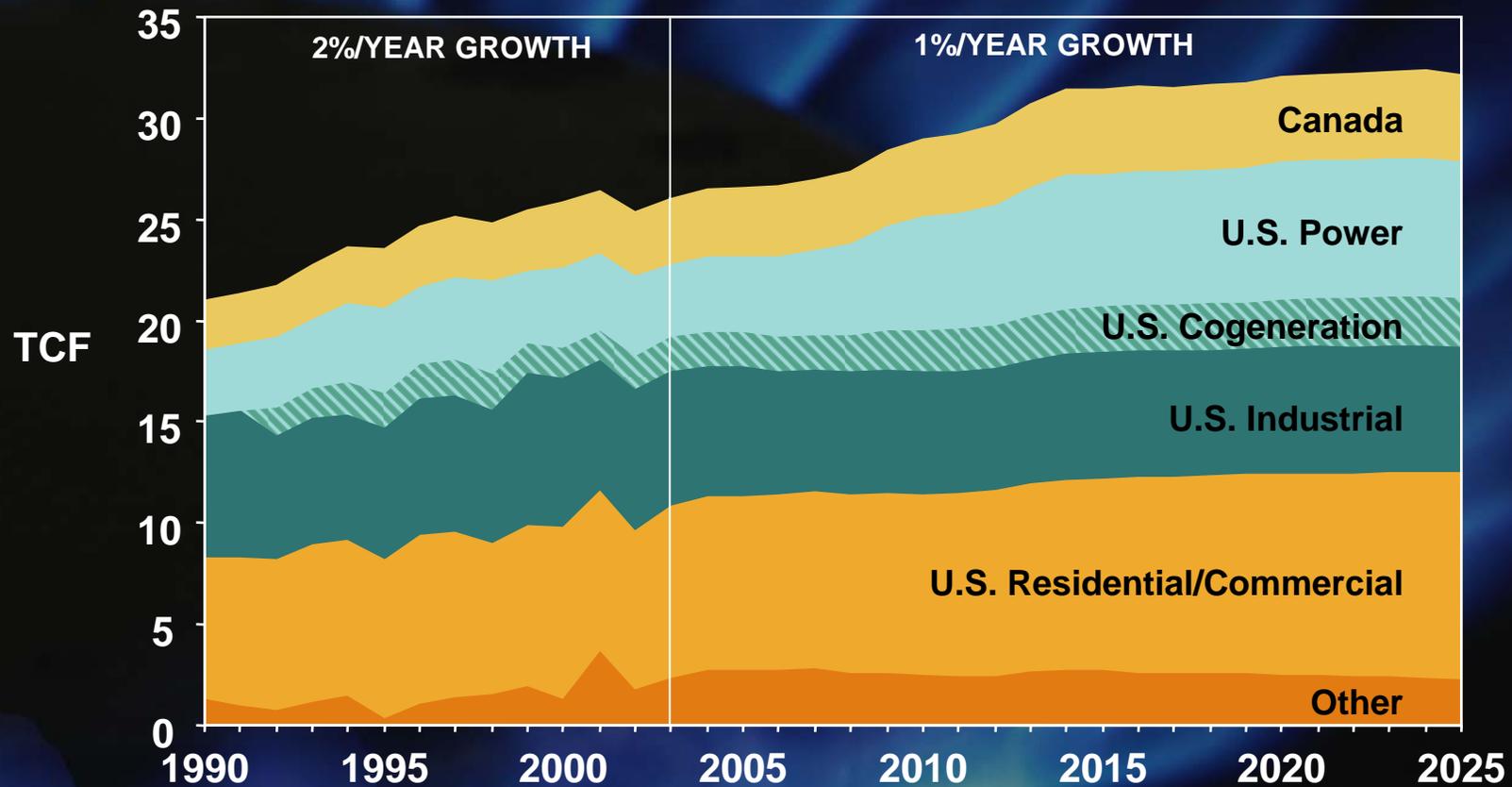
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Potential Price Range

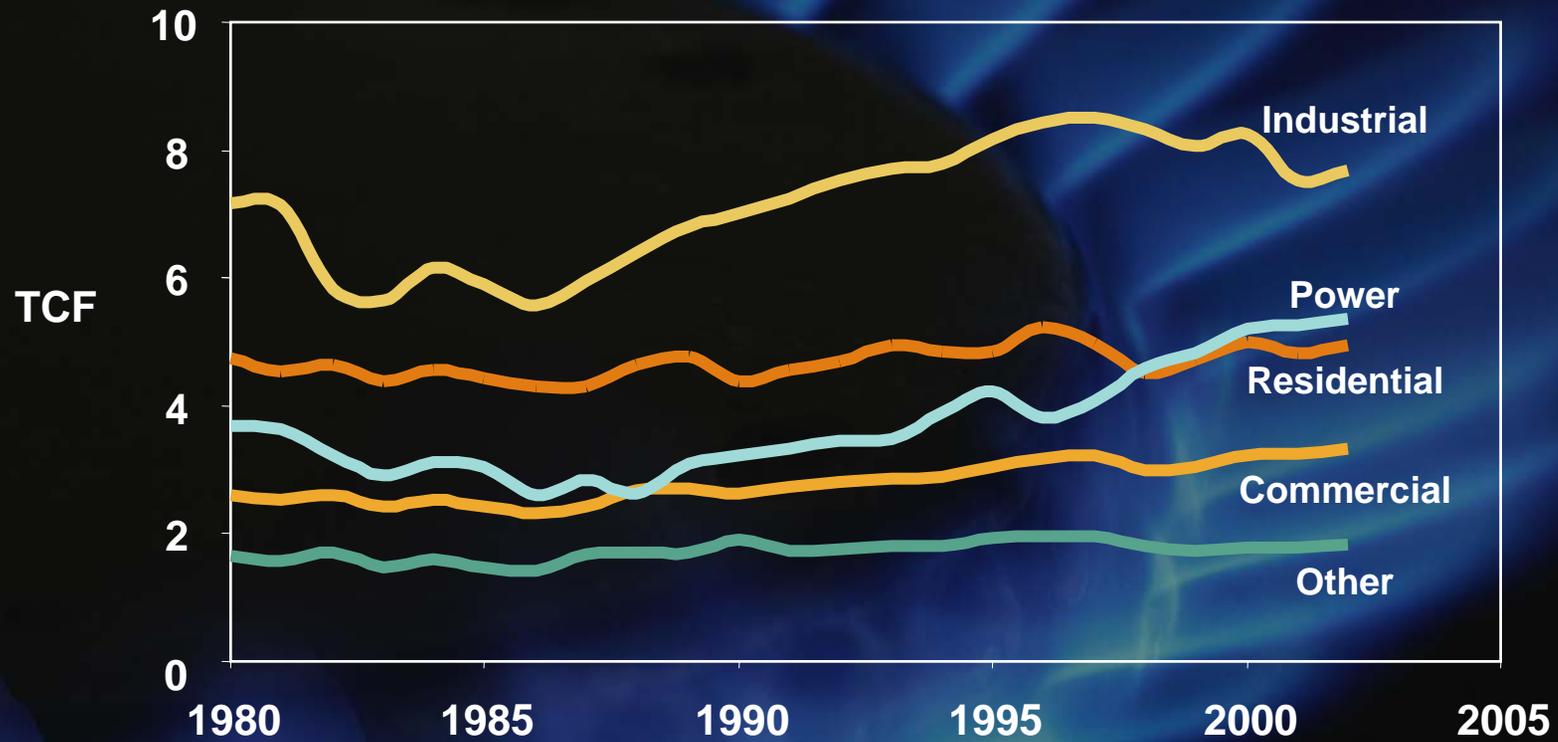
Annual Average Henry Hub Prices, \$/MMBTU



Demand is Diverse and Power Generation Will Drive Growth

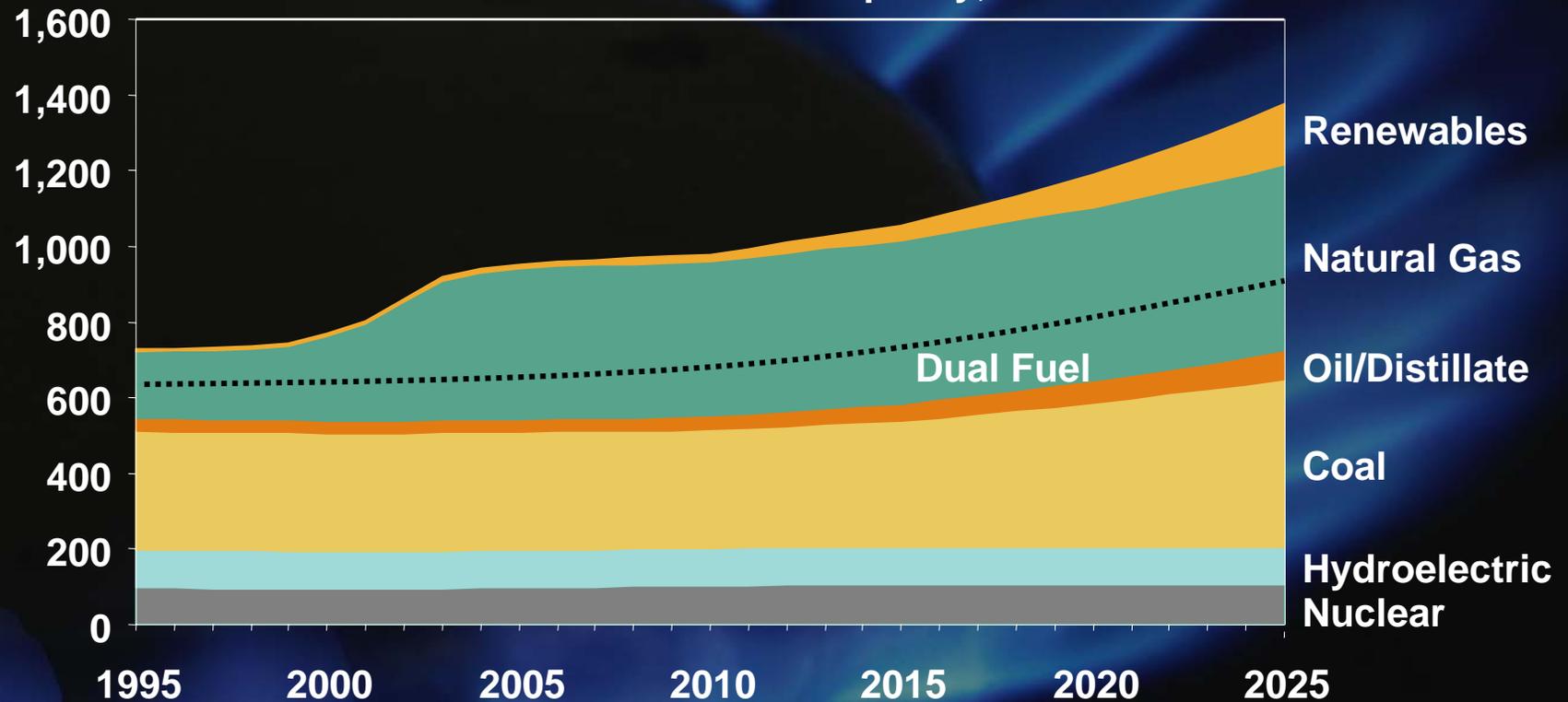


Key Demand Sectors are Consuming More Gas

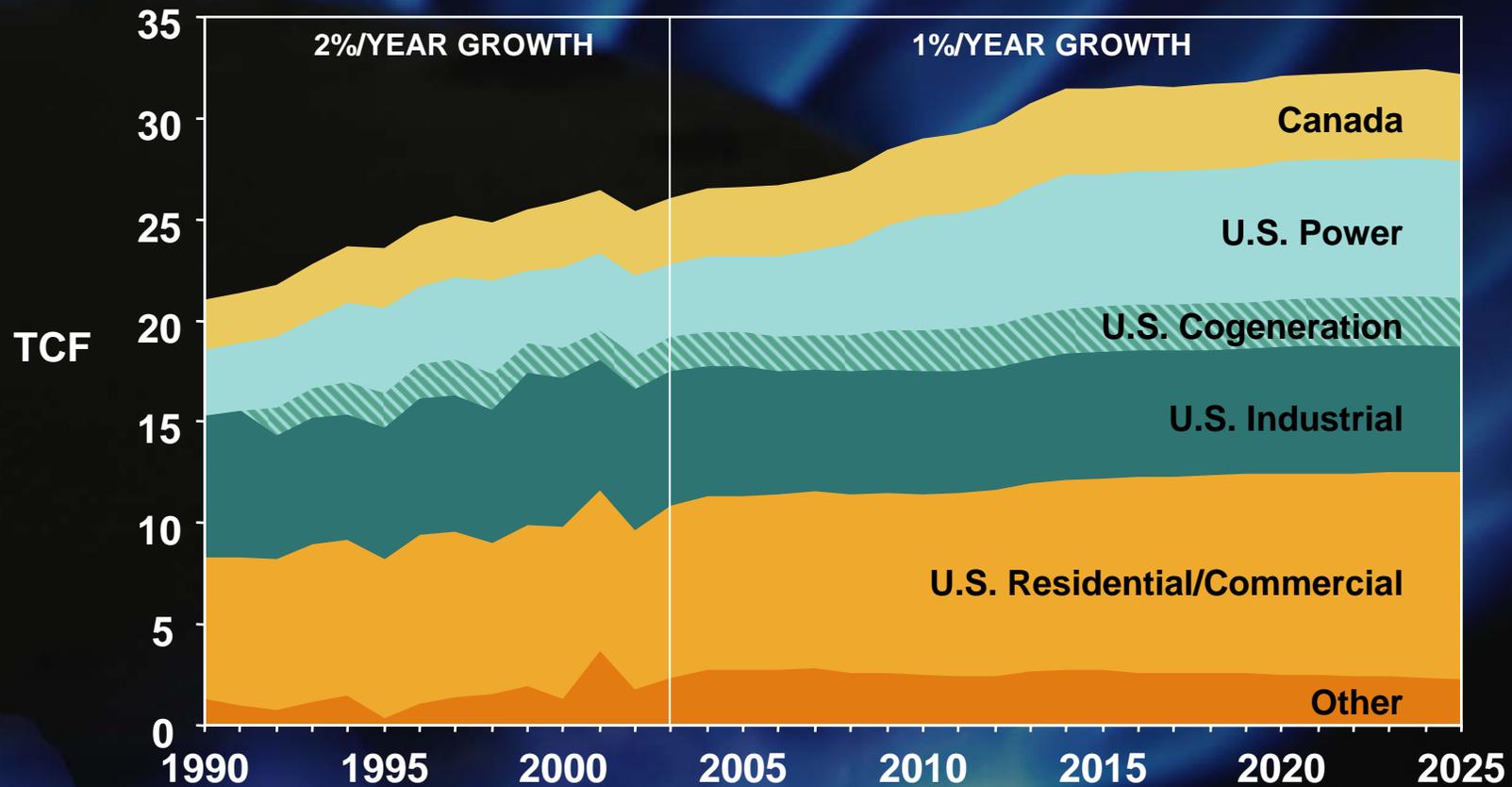


The Gas-Fired Generation Buildup Has Reshaped Demand

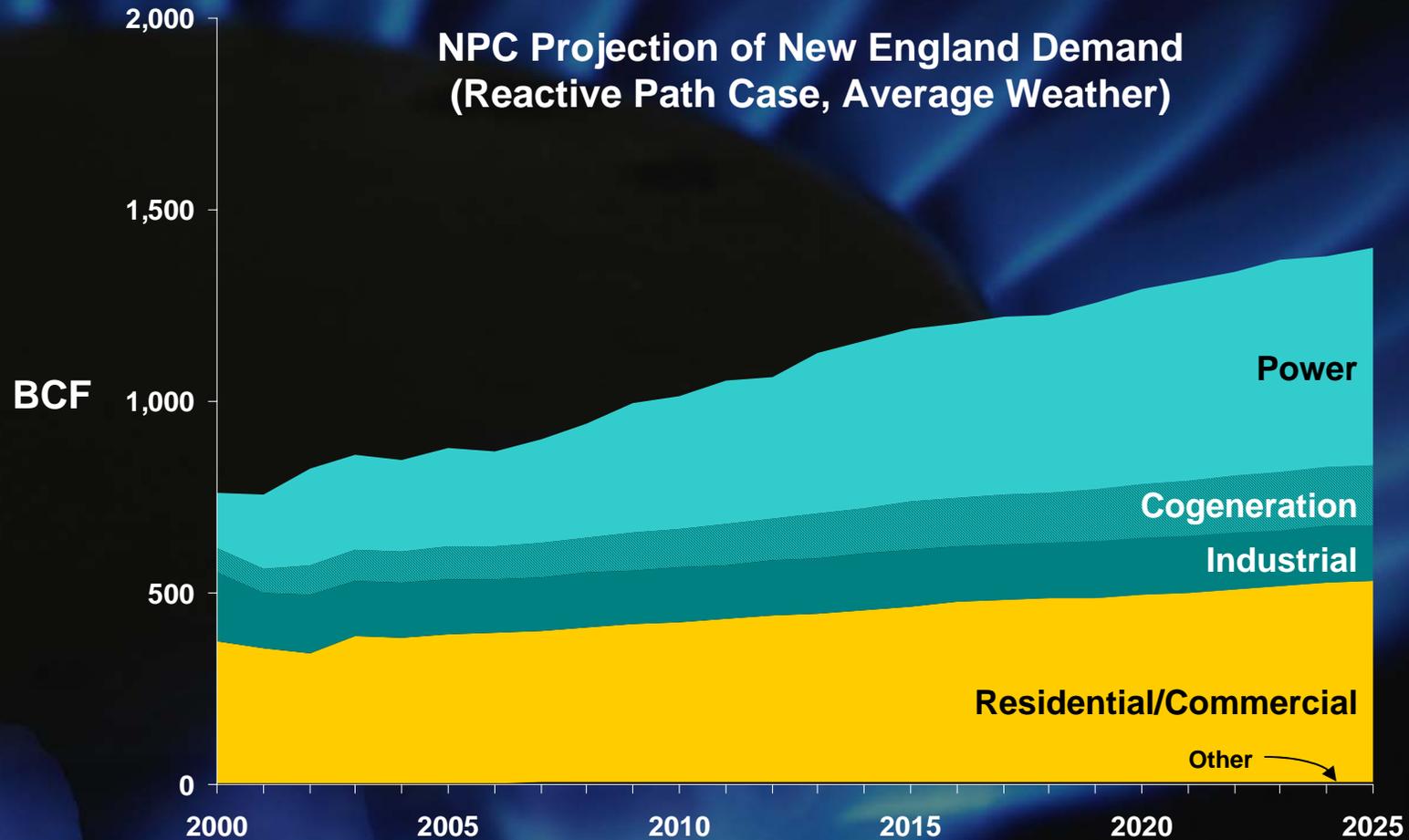
U.S. Power Generation Capacity, GW



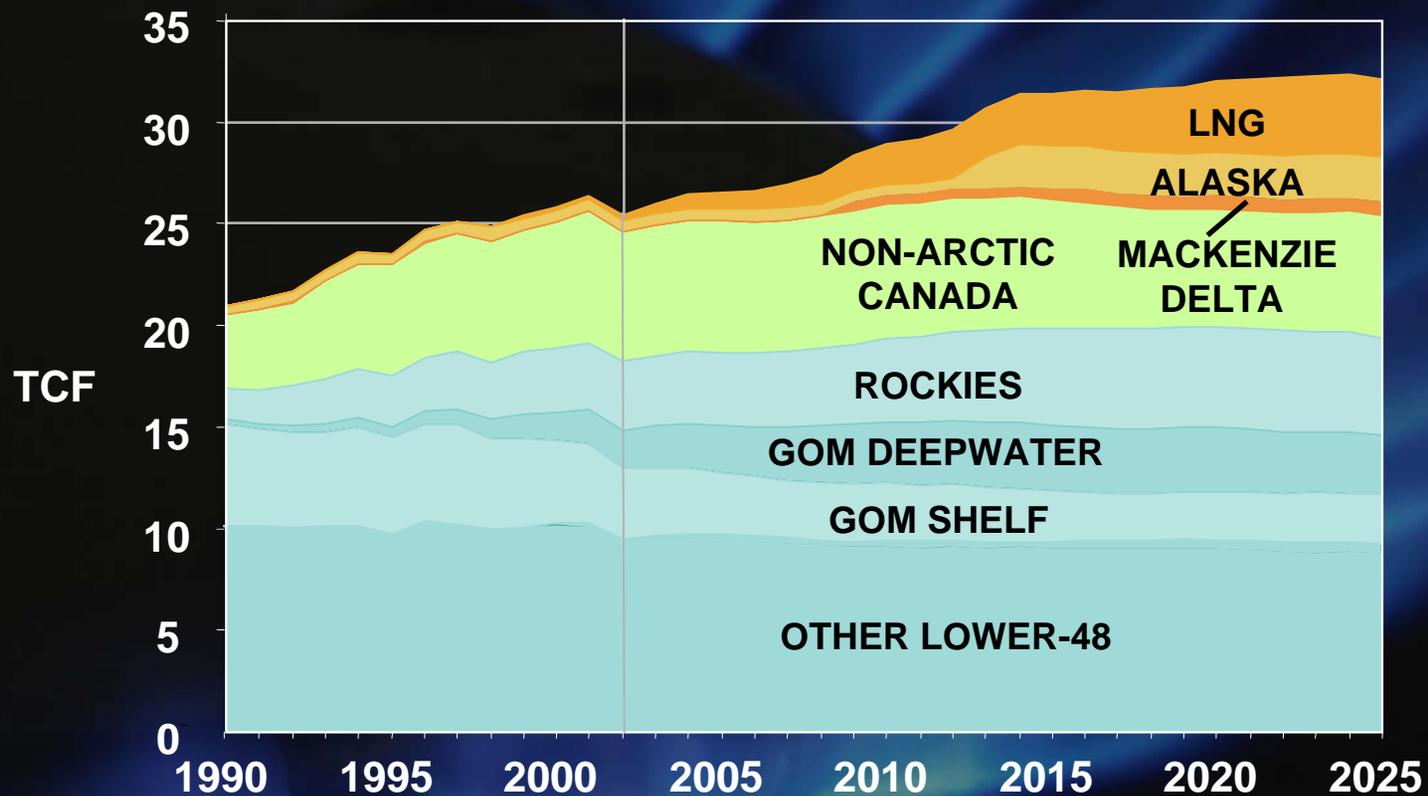
Overall Demand Growth Will Moderate, While the Power Sector Drives Growth



New England: Power Demand Growth, Low/No Industrial Demand Growth

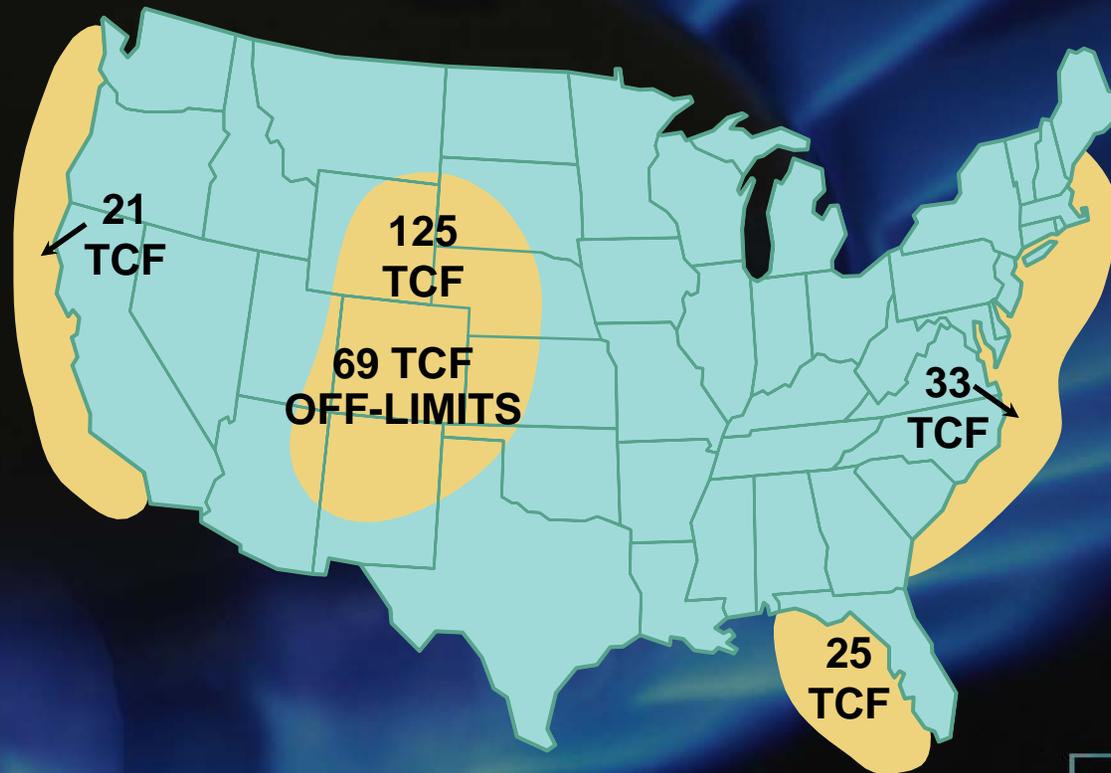


Future Supplies Come from Traditional and New Sources



Indigenous Resources Are Not Fully Utilized

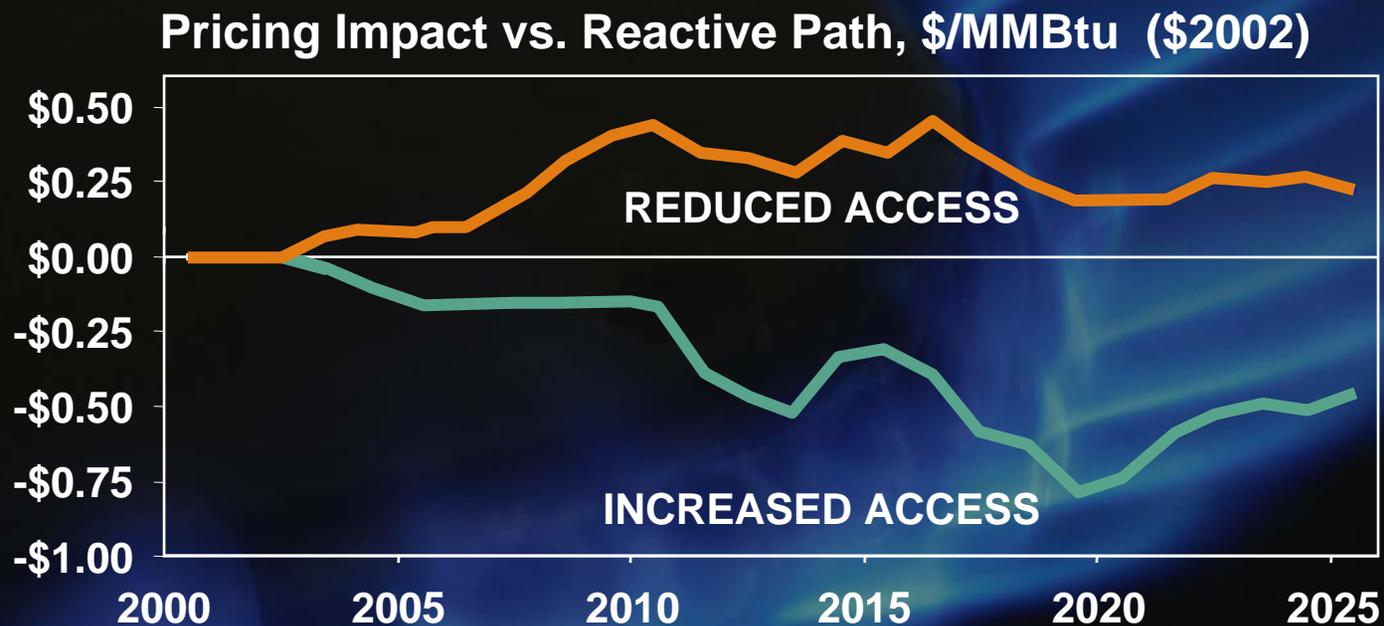
Technical Resource Impacted by Access Restrictions



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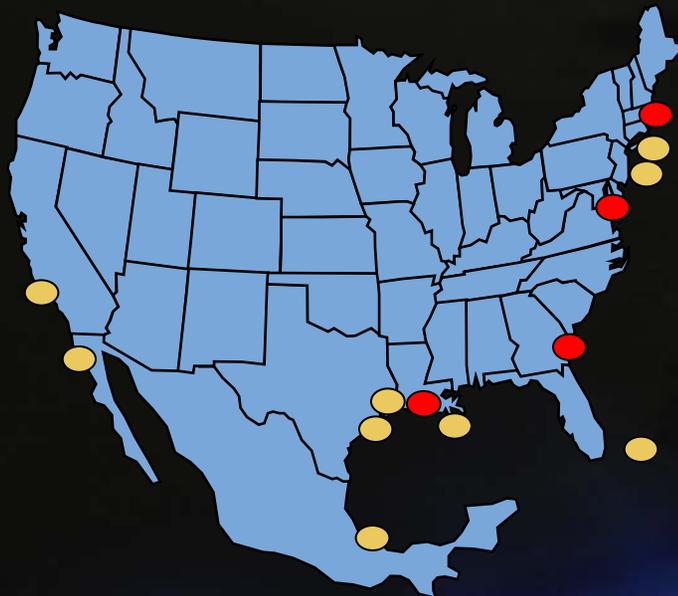
Increased Access Lowers Costs to Consumers

Recommendation: Increase access and reduce permitting impediments to development of Lower-48 natural gas resources.



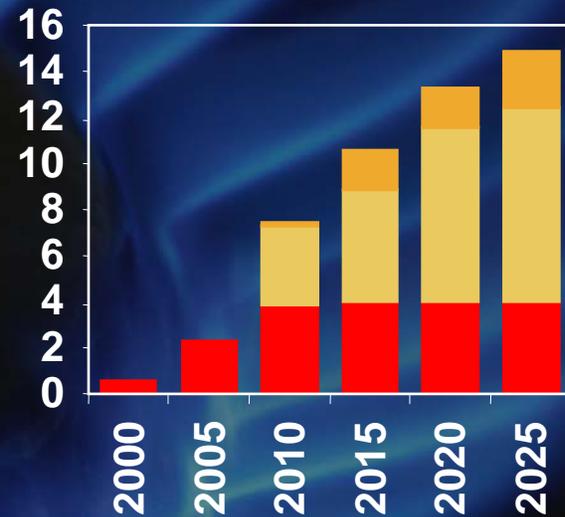
LNG Imports Are Needed, But Face Obstacles

Import Terminals



- Existing
- Potential

Projected Imports BCFD



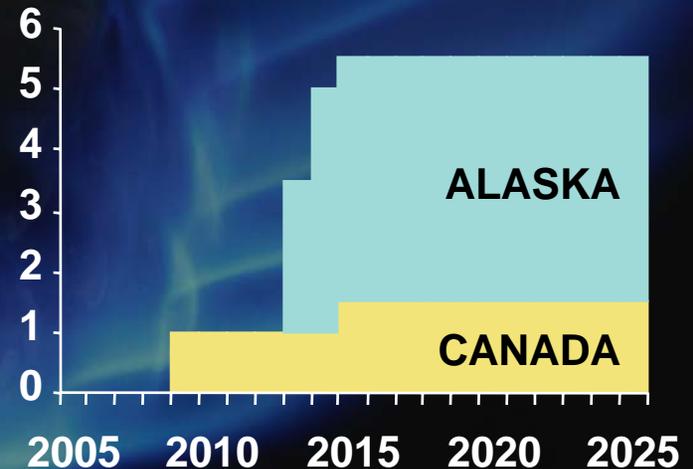
- New - Balanced Future
- New - Reactive Path
- Existing & Expansions

Arctic Pipeline Projects Can Deliver Important New Supplies

Recommendation: Enact enabling legislation in 2003 for an Alaska gas pipeline.

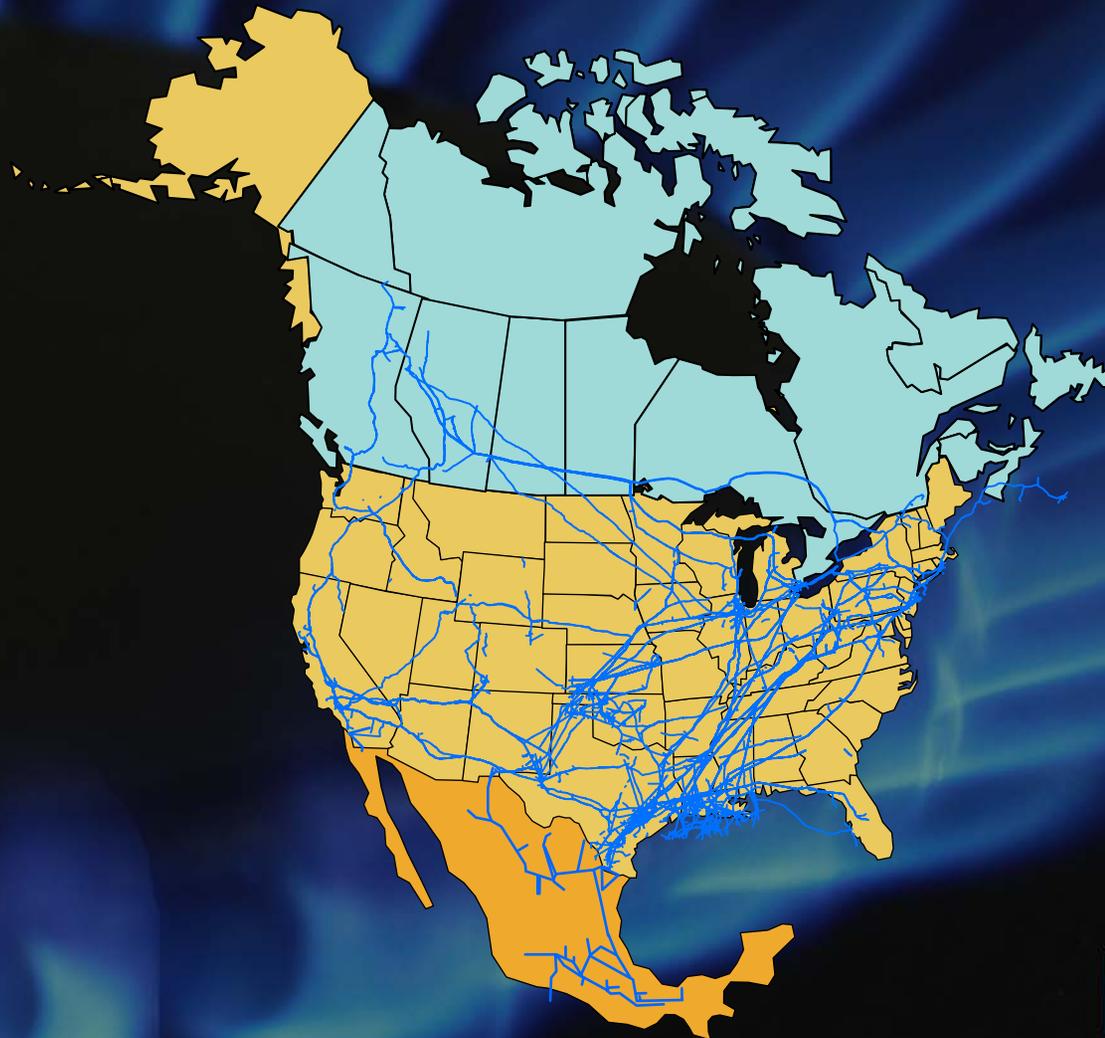


Projected Production, BCFD



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North America's Extensive Infrastructure Must Be Maintained



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Findings

“There has been a fundamental shift in the natural gas supply/demand balance that has resulted in higher prices and volatility in recent years. This is expected to continue, but can be moderated.”

Demand

Greater energy efficiency and conservation are vital near-term and long-term mechanisms for moderating price levels and reducing volatility.”

“Power generators and industrial consumers are more dependent on gas-fired equipment and less able to respond to higher gas prices by utilizing alternate sources of energy.”

“Gas consumption will grow, but such growth will be moderated as the most price-sensitive industries become less competitive, causing some industries to relocate outside North America.”

Supply

“Traditional North American producing areas will provide 75% of long-term U.S. gas needs, but will be unable to meet projected demand.”

“Increased access to U.S. resources (excluding wilderness areas and national parks) could save consumers \$300 billion in natural gas costs over the next 20 years.”

“New, large-scale resources such as LNG and Arctic gas are available and could meet 20-25% of demand, but are higher-cost and have long lead times.”

Infrastructure

“Pipeline and distribution investments will average \$7.6 billion/year, with an increasing share required to sustain the reliability of existing infrastructure.”

“Regulatory barriers to long-term contracts for transportation and storage impair infrastructure investment.”

Markets

“Price volatility is a fundamental aspect of the market, reflecting the variable nature of demand and supply; physical and risk management tools allow many market participants to moderate the effects of volatility.”

“A balanced future that includes increased energy efficiency, immediate development of new resources, and flexibility in fuel choice, could save \$1 trillion in U.S. natural gas costs over the next 20 years. Public policy must

support these objectives.”

INPG

Recommendations

A balanced future that includes increased energy efficiency, immediate development of new resources, and flexibility in fuel choice, could save \$1 trillion in U.S. natural gas costs over the next 20 years. Public policy must support these objectives.

Demand

Improve demand flexibility and efficiency

Encourage increased efficiency and conservation through market-oriented initiatives and consumer education.

Increase industrial and power generation capability to utilize alternate fuels.

Supply

Increase supply diversity

Increase access and reduce permitting impediments to development of Lower-48 natural gas resources.

Enact Enabling Legislation in 2003 for an Alaska gas pipeline.

Process LNG project permit applications within one year.

Infrastructure

Sustain and Enhance Infrastructure

Provide regulatory certainty by maintaining a consistent cost-recovery and contracting environment and remove regulatory barriers to long-term capacity contracting.

Permit projects within a one-year period utilizing a "Joint Agency Review Process".

Markets

Promote Efficiency of Markets

Improve transparency of price reporting.

Expand and enhance natural gas market data collection and reporting.

Action is Required in All These Areas

Improve demand
flexibility & efficiency

and

Increase supply
diversity

and

Sustain and enhance
infrastructure

and

Promote efficient
markets



Higher economic
growth

Higher employment

Stronger industrial
activity

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**BALANCING
NATURAL GAS
POLICY**

**Fueling the Demands of a Growing
Economy**

**National Petroleum Council
Natural Gas Study**

2003

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Demand Task Group Participants

Demand Task Group: Working Group Team Composition

<u>Task Group Leaders</u>	<u>Economy & Demographics</u>	<u>Industrial Consumers*</u>	<u>Power Generation*</u>	<u>Residential/ Commercial</u>
KeySpan David Manning Hal Chappelle	Shell Trading Les Deman	PGC Dena Wiggins	AEP Keith Barnett	KeySpan Ron Lukas
DOE Mark Maddox Wade Murphy	BP Burlington Resources ConocoPhillips Dominion El Paso ExxonMobil KeySpan Southern Company Unocal Williams	Alcoa BP Chemical Dow Chemical CERA ExxonMobil Chemical KeySpan PCS Nitrogen PPG Praxair Procter & Gamble Temple-Inland	Bonneville Power Burlington Resources CERA Dominion Edison Electric Institute Exelon ExxonMobil Power Florida Power & Light Seminole Electric Southern Company Southern Company Gas	NiSource Sempra

**Substantial additional participation from regional power workshops and industrial sector workshops*

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Supply Task Group Participants

Subgroups

<u>Task Group</u>	<u>Resource*</u>	<u>LNG</u>	<u>Technology*</u>	<u>Envir/Reg/ Access</u>	<u>Arctic P/L</u>
<u>Leaders</u>					
ExxonMobil	ExxonMobil	Shell	ChevronTexaco	Burlington	ExxonMobil
Mark Sikkel	Gerry Worthington	John Hritcko	Bob Howard	David Blackmon	Robbie Schilhab
Bill Strawbridge	Gary Stone				BP
DOE	Anadarko				Ken Konrad
Elena Melchert	Bob Stancil				ConocoPhillips
					Joe Marushack
<u>Members</u>					
Alcorn	Anadarko	BP	Baker-Hughes	ARI	Anadarko
Anadarko	BP	ChevronTexaco	BP/Shell - Workshop	BLM	ChevronTexaco
BP	ChevronTexaco	ConocoPhillips	ChevronTexaco	Burlington	Imperial
Burlington	ConocoPhillips	DOE/FERC	ConocoPhillips	ChevronTexaco	
ChevronTexaco	Devon	El Paso	DOE	ConocoPhillips	
ConocoPhillips	El Paso	ExxonMobil	El Paso	DOE	
DOE	EnCana	KeySpan	ExxonMobil	ExxonMobil	
El Paso	ExxonMobil	Sempra LNG	Gas Tech Institute	Forest Service	
ENSCO	Kerr-McGee	Shell US GP	Halliburton	Marathon	
Marathon	Marathon		Landmark	MMS	
Ocean Energy	Nabors		Marathon	Shell	
Shell	Parker				
	Shell				
	USGS/MMS/CGPC				

**Additional participants from regional workshops*

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T&D Task Group Participants

<u>Task Group</u>	<u>Transmission</u>	<u>Distribution</u>	<u>Storage</u>
<i>Leads</i>			
Chair–Kinder Morgan Scott Parker	El Paso Pat Johnson	NiSource Mark Maassel	Kinder Morgan Ron Brown
Assist–Kinder Morgan Ron Brown			
	<i>Members</i>		
DOE	ANR Pipeline	Memphis Light and Gas	BP Energy Dominion Energy Inc.
Mark Maddox Sara Banaszak	BP Energy		EIA
	BP N Am Gas & Power	NiSource Inc.	EIPaso Pipeline Group
	Burlington Resources	Northwest Natural Gas	EnCana Corp.
	Columbia	Peoples Energy	Duke Energy
	ConocoPhillips	Wisconsin Public Service Corp.	Falcon Gas Storage
	Dominion Energy Inc.		FERC
	Duke Energy		Kinder Morgan
	EIPaso Pipeline Group		PB Energy Storage Services
	ExxonMobil		
	Kinder Morgan Inc.		
	TransCanada Pipeline		

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