



Examining Key Natural Gas Market Influences for 2010 and Beyond

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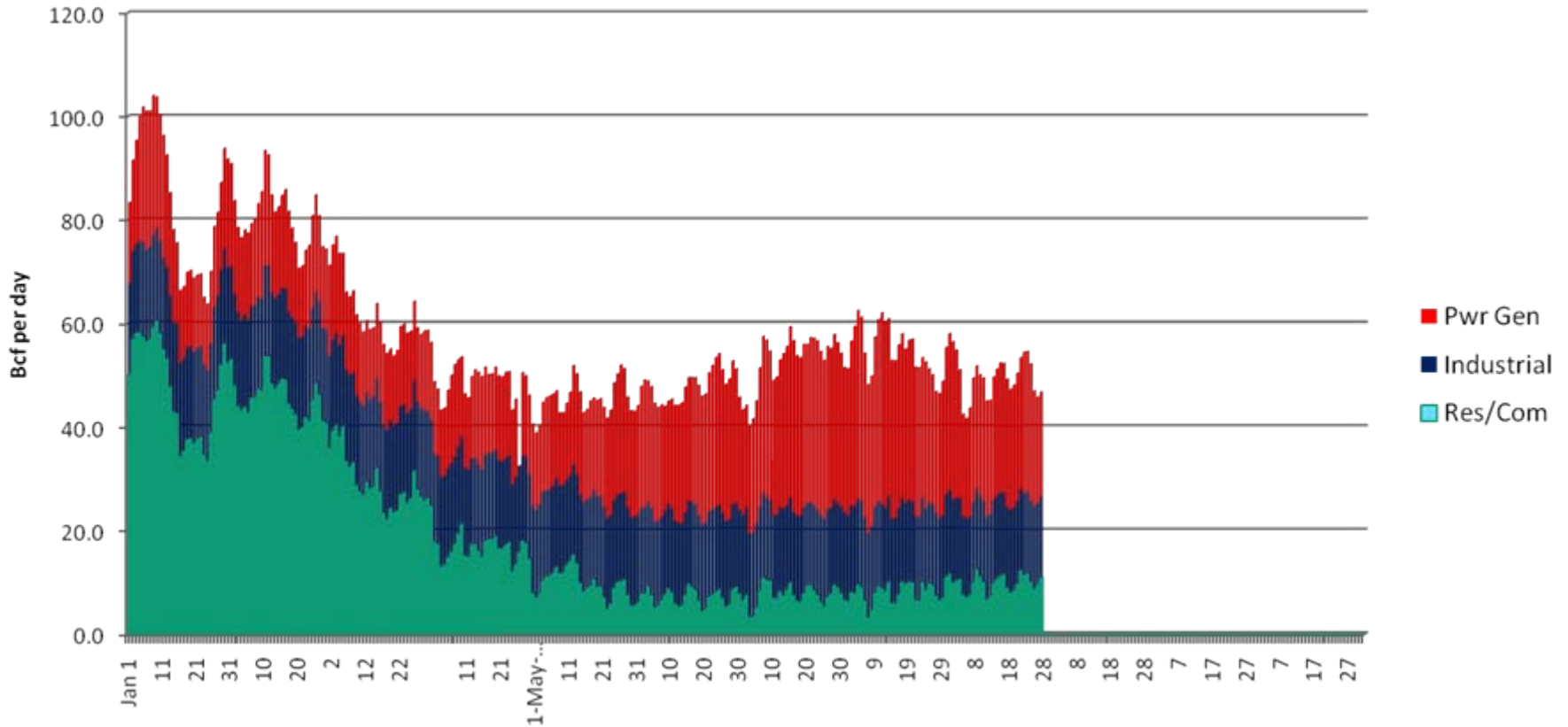
A simple question:

**Why is there such optimism
regarding natural gas in our energy
economy today?**

**The simple answer:
Fundamentals.**

Daily Natural Gas Consumption by Sector

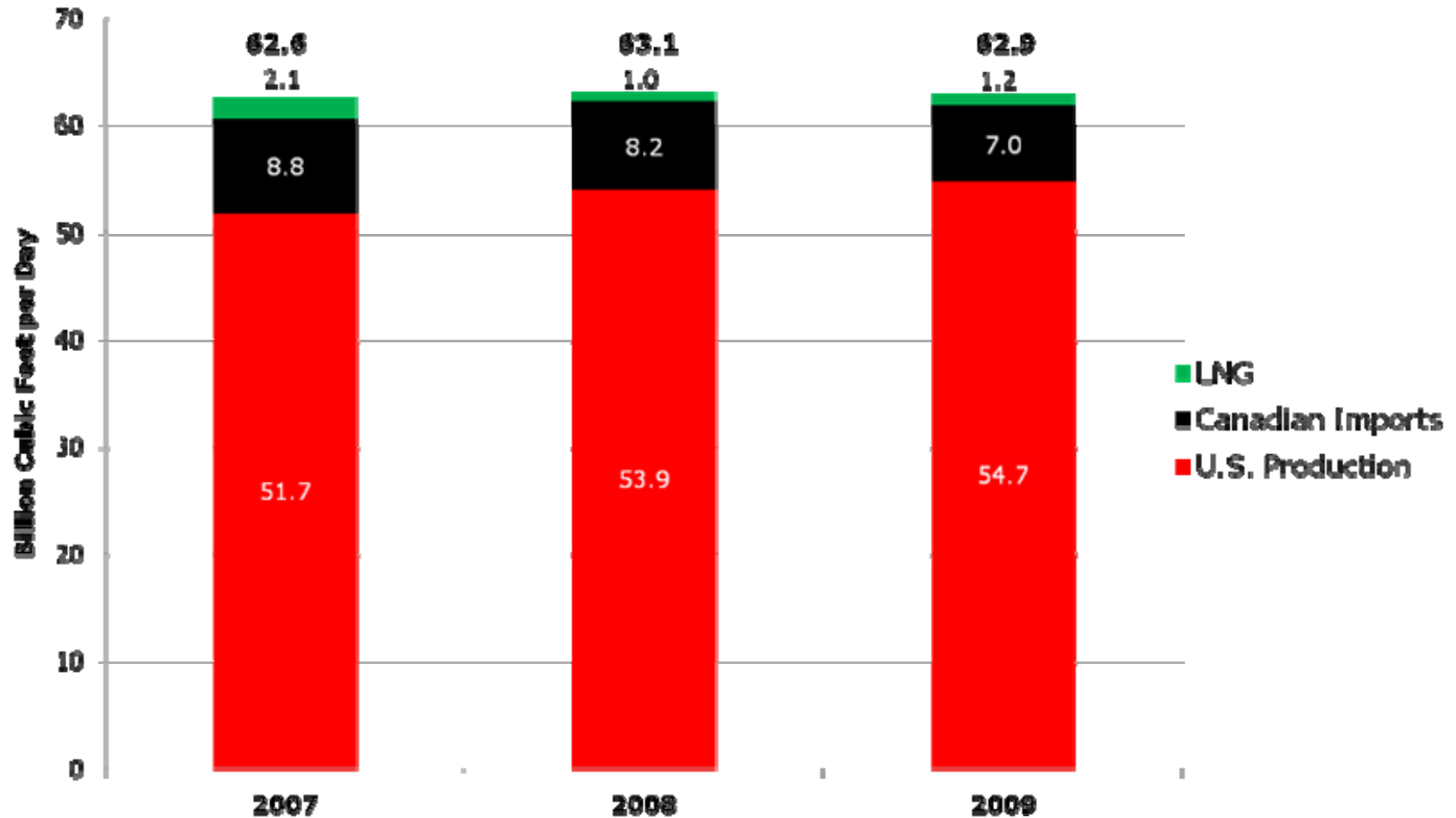
January 1-September 27, 2010



Source: Bentek Energy LLC, *Energy Market Fundamentals*, September 27, 2010.

U.S. NATURAL GAS SUPPLY (2007 - 2009)

Average Daily U.S. Natural Gas Supply



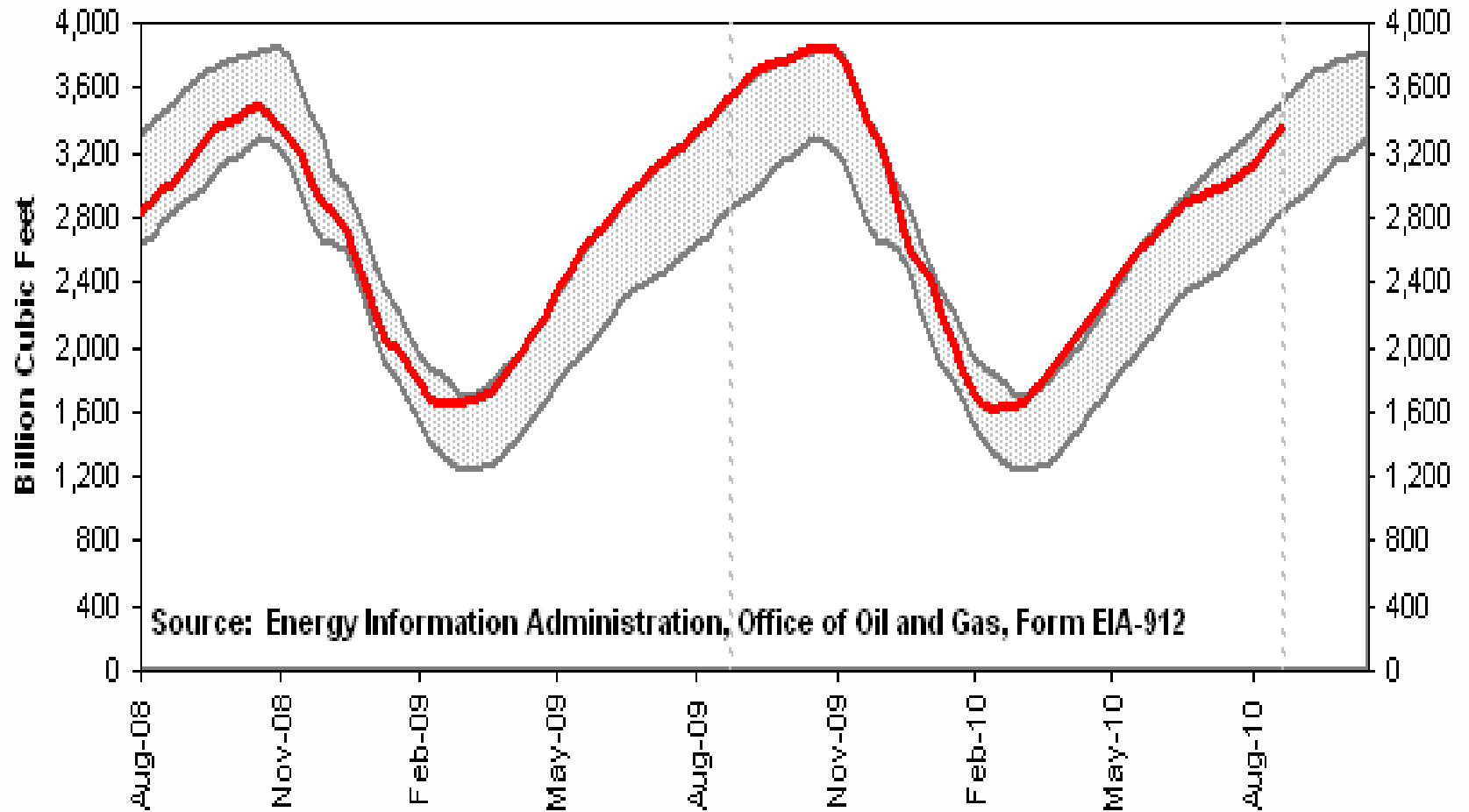
2010 Daily Dry Natural Gas Production

January 1-September 27, 2010 (after extraction losses)



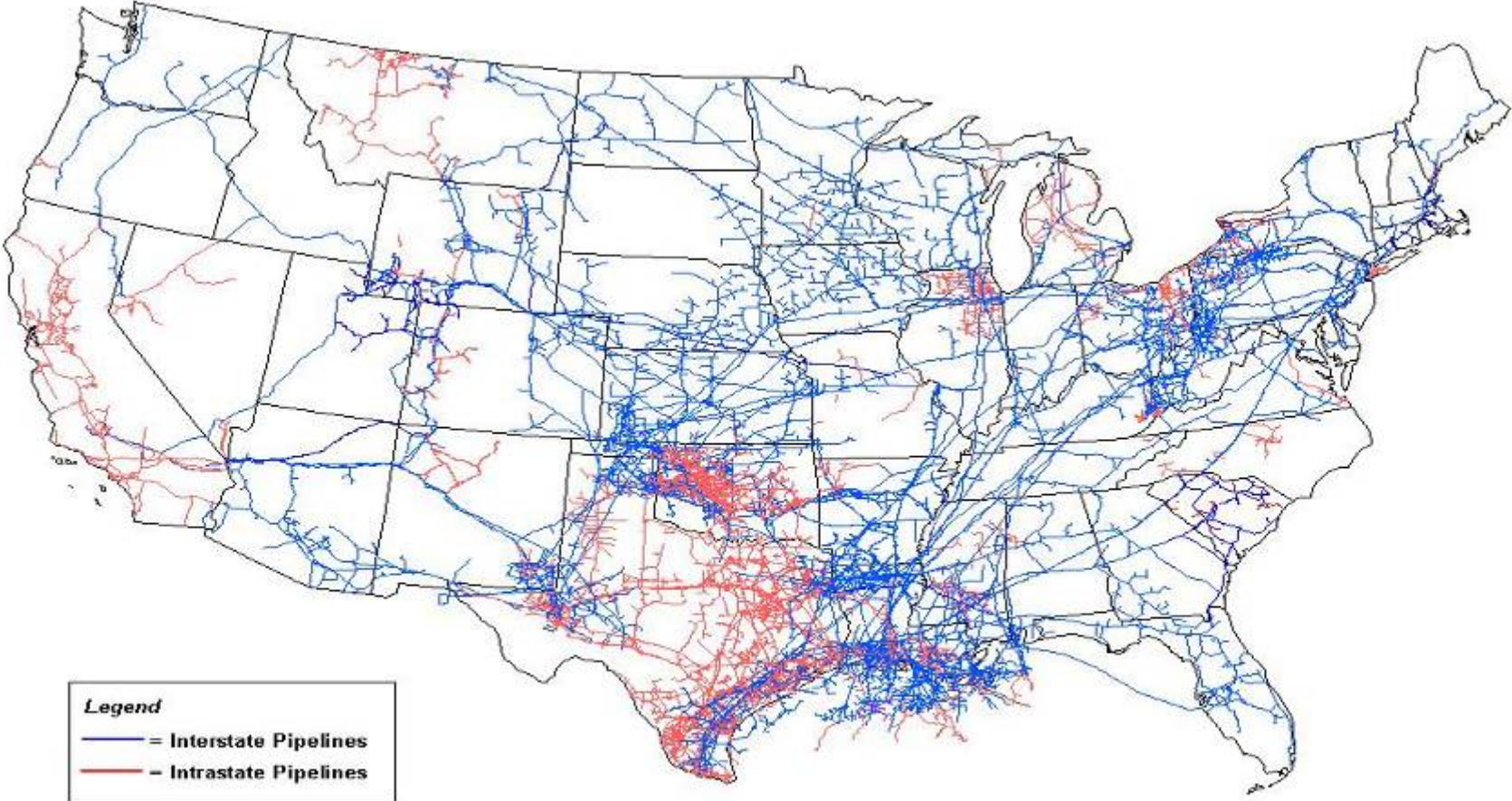
Source: Bentek Energy LLC, *Energy Market Fundamentals*, September 27, 2010.

Working Gas in Underground Storage Compared with 5-Year Range



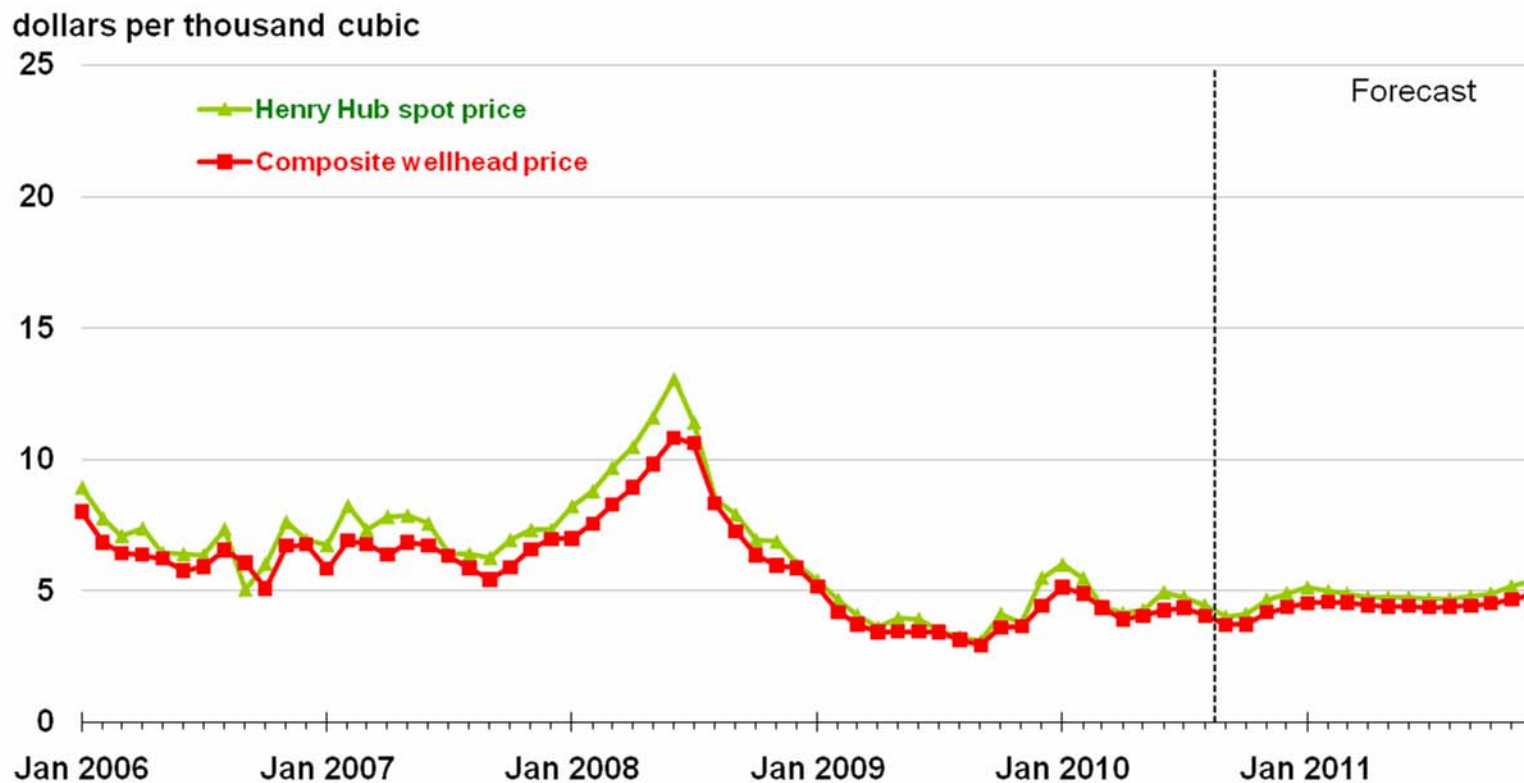
Source: Energy Information Administration, Office of Oil and Gas, Form EIA-912

U.S. Natural Gas Pipeline Infrastructure



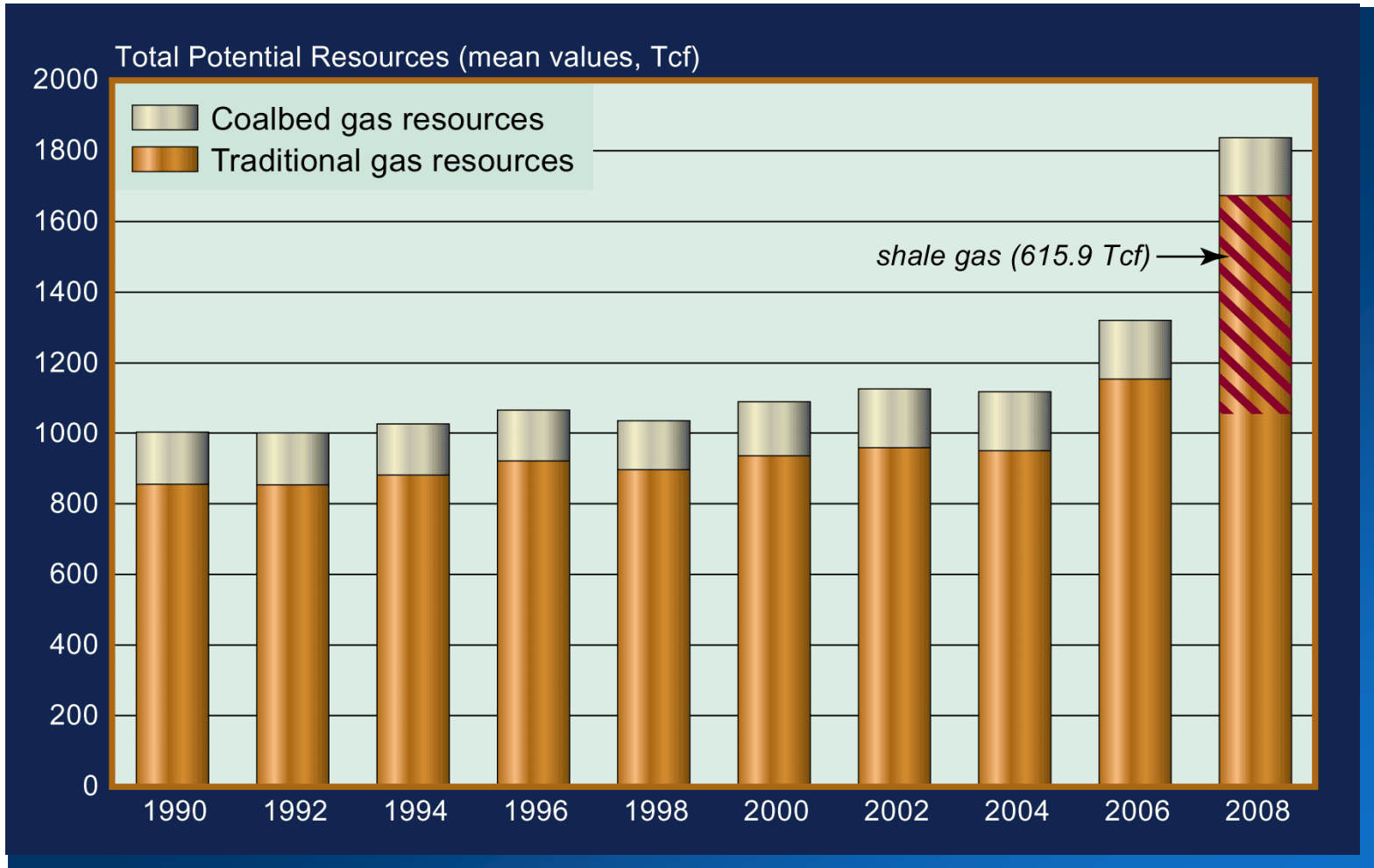
Source: Energy Information Administration, Office of Oil & Gas, Natural Gas Division, Gas Transportation Information System

U. S. Natural Gas Prices



PGC Resource Assessments, 1990-2008

Total Potential Gas Resources (mean values)

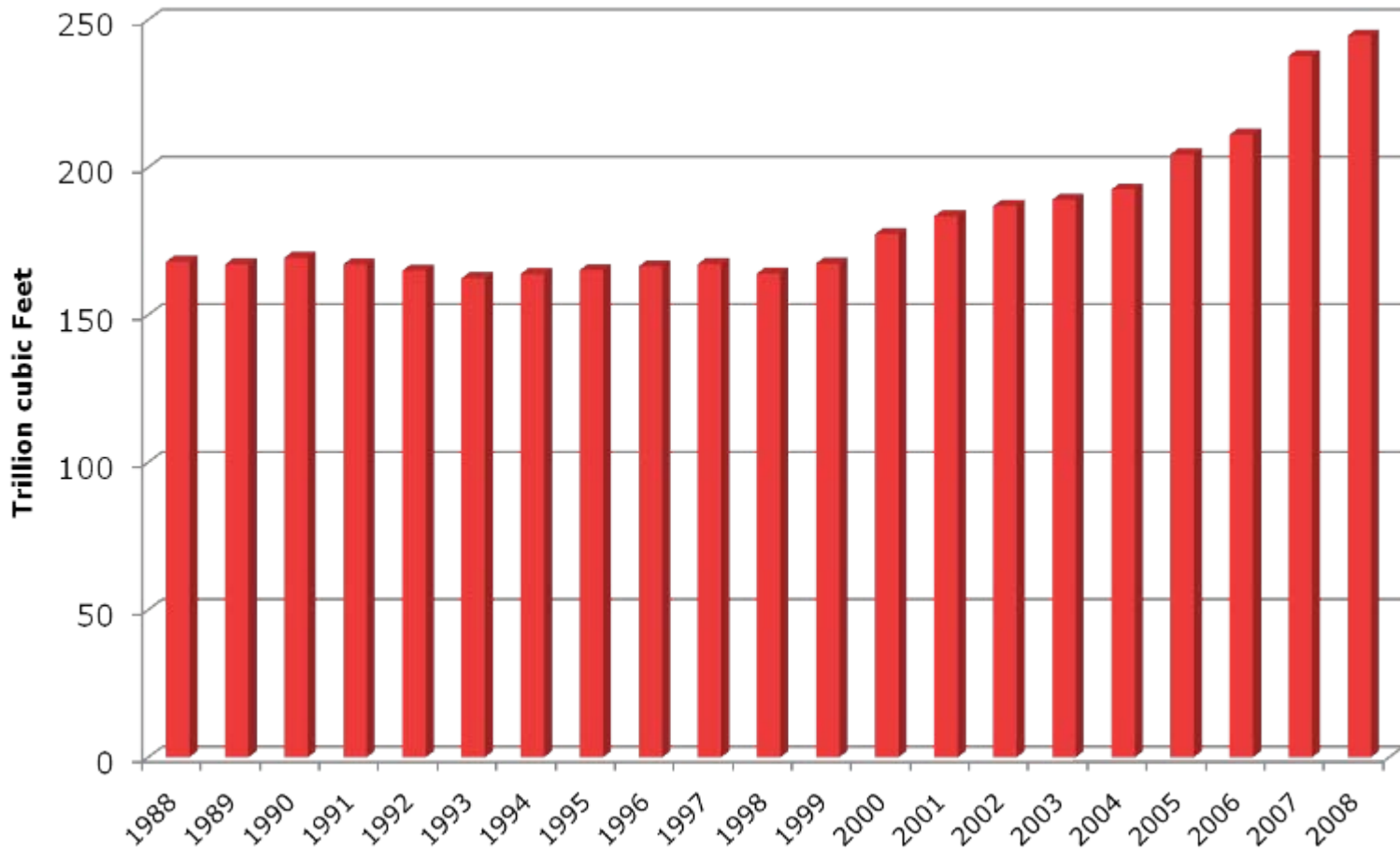


Potential Gas Committee

Determination of Future Supply of Natural Gas in the United States (TCF)

	DOE Reserves	+	Traditional Resources	+	Coal Gas	=	Future Supply	+	Cumulative Production	=	Ultimate Resource
1990	169		855		147		1,172		777		1,949
1992	165		854		147		1,166		815		1,981
1994	164		881		147		1,192		853		2,045
1996	166		921		146		1,234		893		2,127
1998	164		896		141		1,202		933		2,134
2000	177		936		155		1,268		973		2,241
2002	187		958		169		1,314		1,013		2,327
2004	193		950		169		1,312		1,053		2,364
2006	211		1,155		166		1,532		1,091		2,623
2008	238		1,673		163		2,074		1,132		3,206

U.S. Dry Natural Gas Reserves (1988-2008)



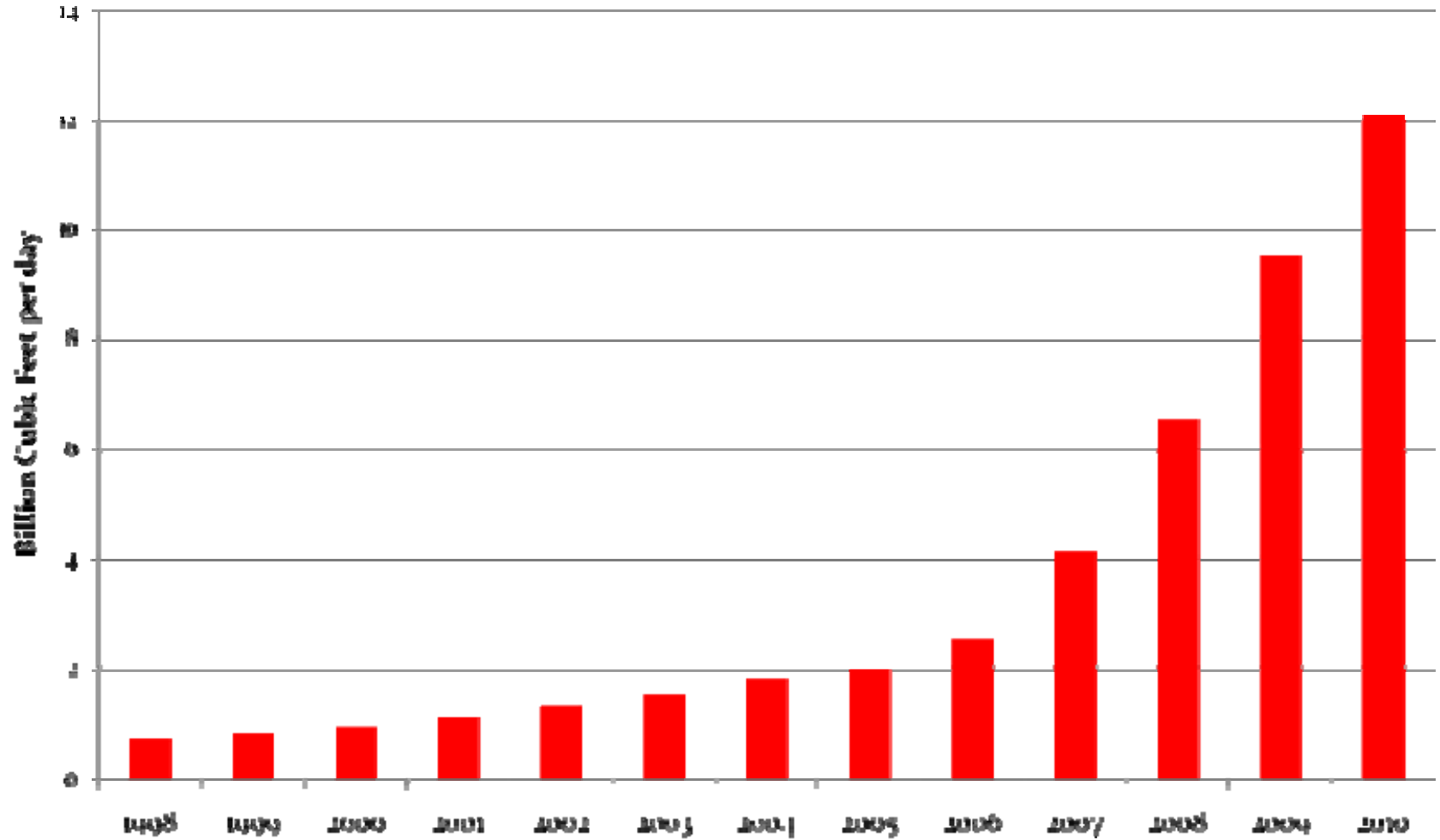
Source: Energy Information Administration.

Energy Information Administration

Reserves and Production of Dry Natural Gas in the United States (TCF)

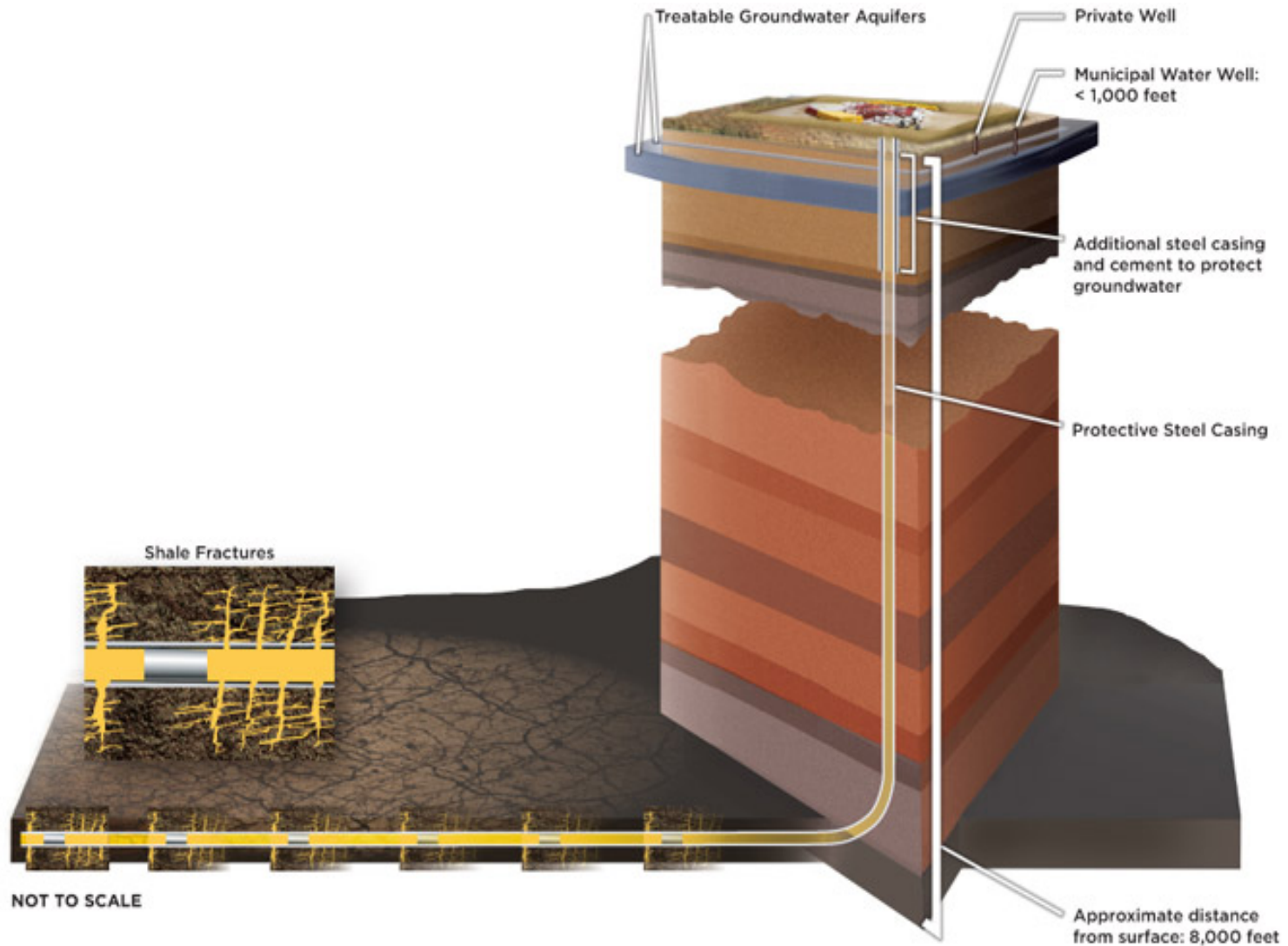
Year	EIA Reserves	Dry Gas Production
1990	169	17.8
1992	165	17.8
1994	164	18.8
1996	166	18.9
1998	164	19.0
2000	177	19.2
2002	187	18.9
2004	193	18.6
2006	211	18.5
2008	245	20.4

U.S. SHALE GAS PRODUCTION



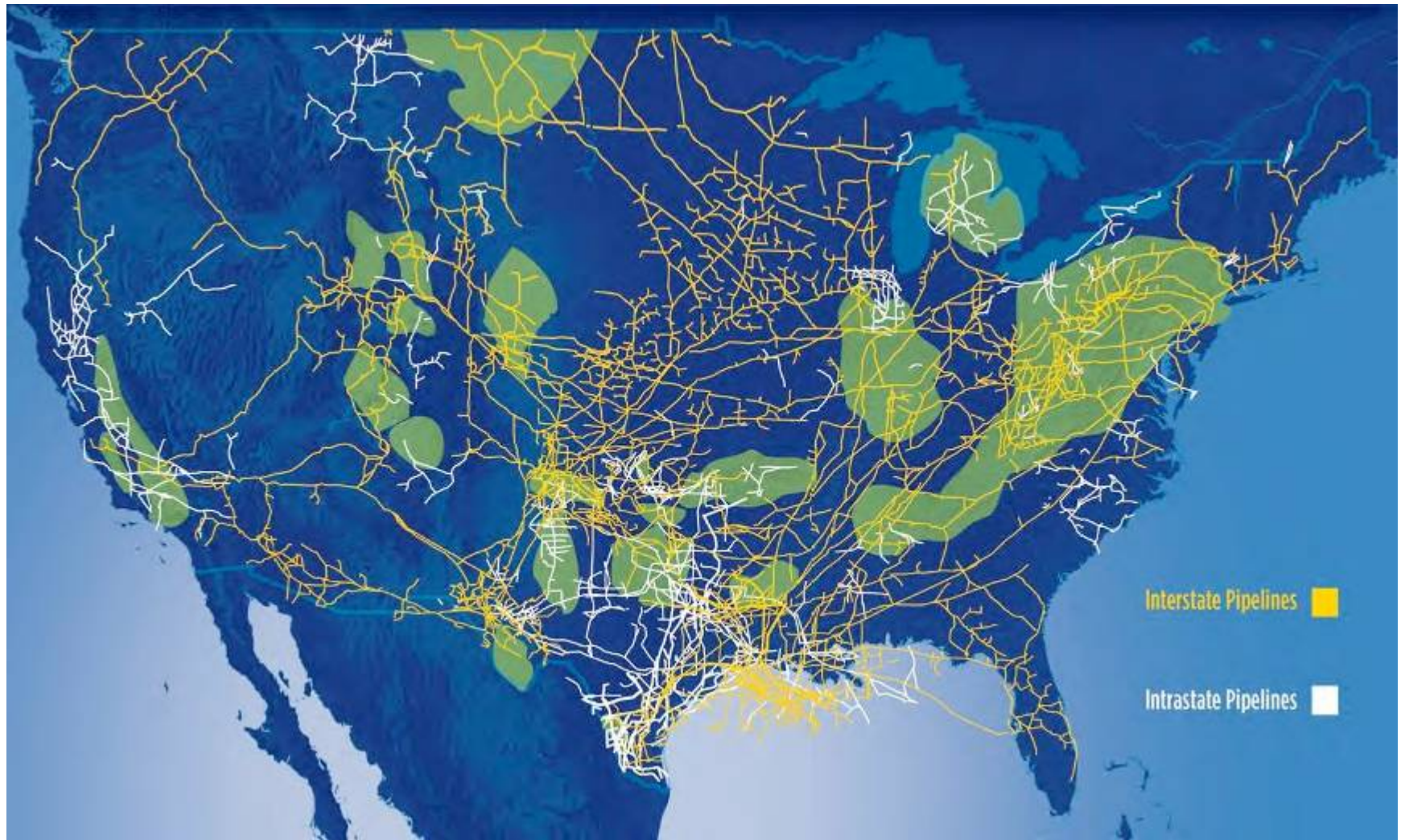
Source: Navigant Consulting, Inc.

Hydraulic Fracturing

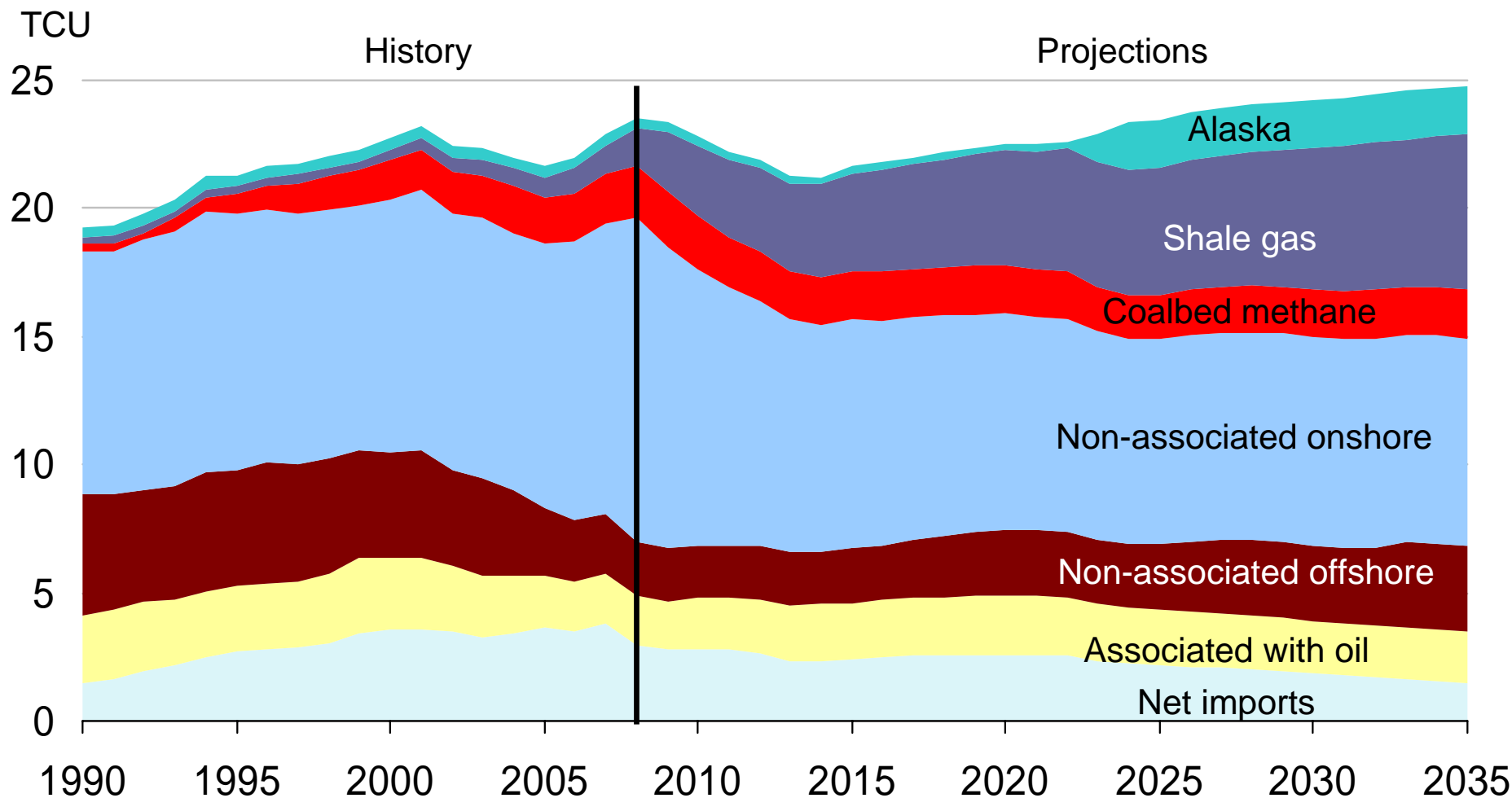


Source: Chesapeake Energy.

Shale Basins and the U.S. Pipeline Grid



Shale gas and Alaska production offset declines in supply to meet consumption growth and lower import needs



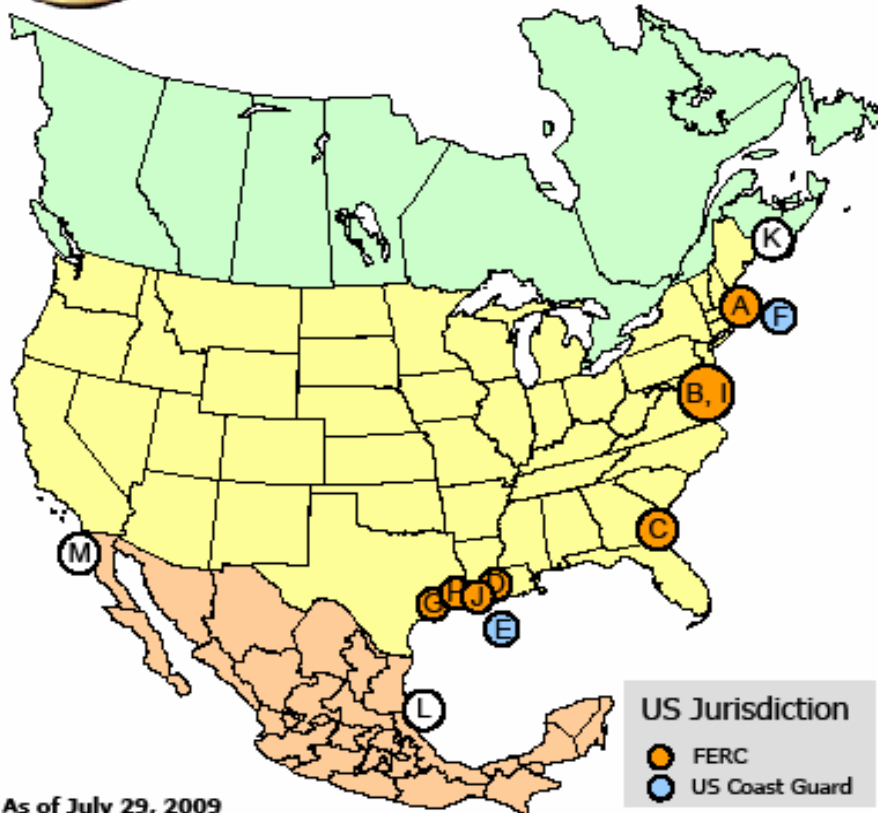
Richard Newell, SAIS,
December 14, 2009

Source: *Annual Energy Outlook 2010*



North American LNG Terminals

Existing



As of July 29, 2009

Note: There is an existing import terminal in Peñuelas, PR. It does not appear on this map since it can not serve or affect deliveries in the Lower 48 U.S. states.

U.S.

- A. Everett, MA : 1.035 Bcfd (SUEZ LNG - DOMAC)
- B. Cove Point, MD : 1.0 Bcfd (Dominion - Cove Point LNG)
- C. Elba Island, GA : 1.2 Bcfd (El Paso - Southern LNG)
- D. Lake Charles, LA : 2.1 Bcfd (Southern Union - Trunkline LNG)
- E. Gulf of Mexico: 0.5 Bcfd, (Gulf Gateway Energy Bridge - Exceleerate Energy)
- F. Offshore Boston: 0.8 Bcfd, (Northeast Gateway- Exceleerate Energy)
- G. Freeport, TX: 1.5 Bcfd, (Cheniere/Freeport LNG Dev.)
- H. Sabine, LA: 2.6 Bcfd (Sabine Pass Cheniere LNG)
- I. Cove Point, MD : 0.8 Bcfd (Dominion - Expansion)*
- J. Hackberry, LA: 1.8 Bcfd (Cameron LNG - Sempra Energy)

Canada

- K. St. Johns, NB: 1.0 Bcfd, (Canaport - Irvin Oil)

Mexico

- L. Altamira, Tamaulipas: 0.7 Bcfd, (Shell/Total/Mitsui)
- M. Baja California, MX: 1.0 Bcfd, (Sempra)

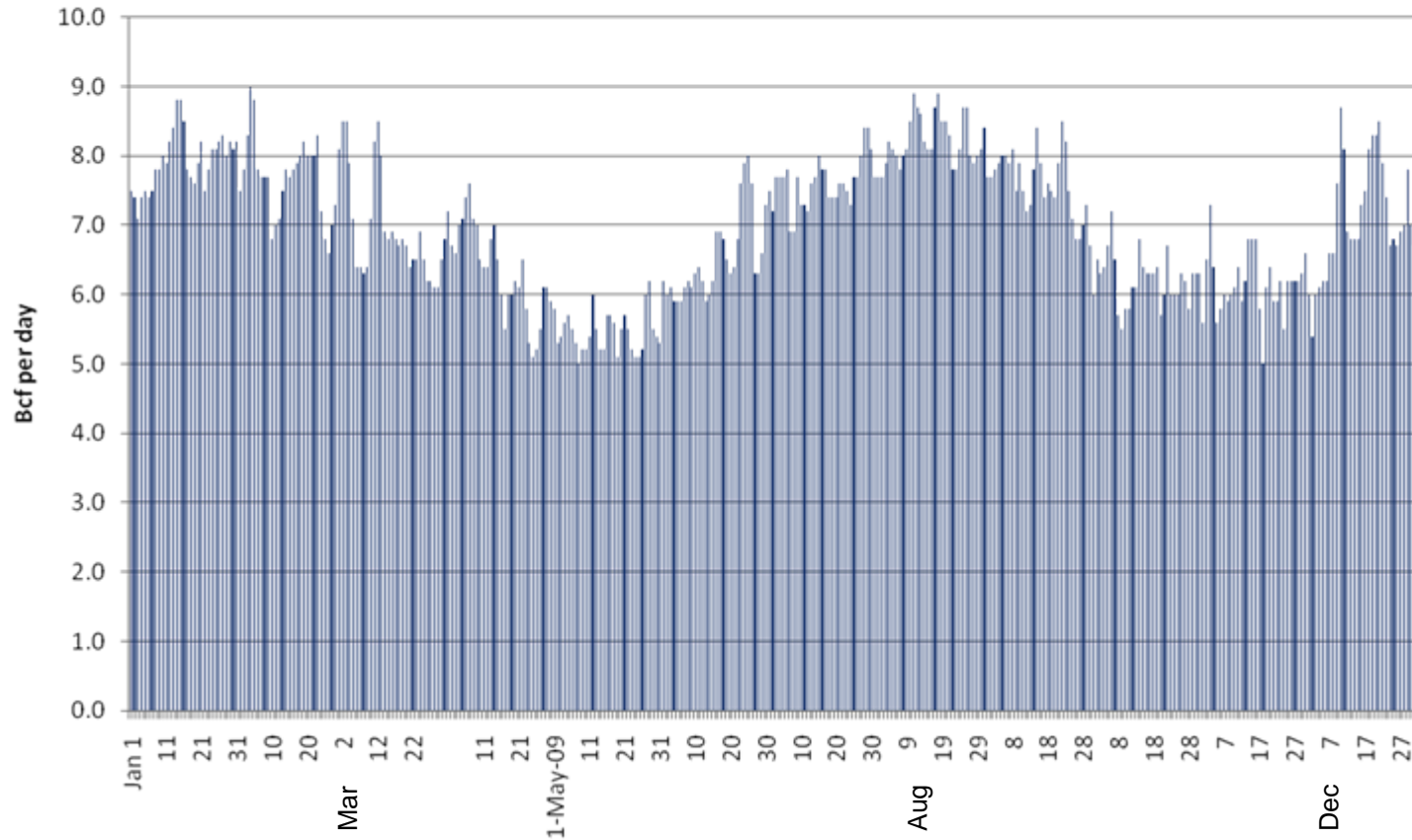
Office of Energy Projects

NORTH AMERICA LNG IMPORT CAPACITY 2010

Everett, MA	1.035 Bcfd
Cove Point, MD	1.800 Bcfd
Elba Island, GA	1.200 Bcfd
Lake Charles, LA	2.100 Bcfd
Gulf Gateway, LA	0.500 Bcfd
Northeast Gateway, MA	0.800 Bcfd
Freeport, TX	1.500 Bcfd
Sabine, LA	4.000 Bcfd
Hackberry, LA	1.800 Bcfd
Other North America	2.700 Bcfd
<i>Total</i>	<i>17.435 Bcfd</i>

Net Gas Imports from Canada

January 1- December 31, 2009



Source: *Bentor Energy LLC, December 31, 2009.*

Short-Term Natural Gas Supply/Demand Balance Influences- 2010

- Weather – NOAA currently anticipating below normal temperature outlook for upper plains and Pacific northwest ; above normal conditions for south, south central and southwest; more normal conditions for New England, Atlantic coast, central plains and southern California for December – February, 2010-11
- Natural gas demand expected to grow in industrial and power generation sectors 2010 over 2009

Short-Term Natural Gas Supply/Demand Balance Influences (cont.)

- Modest demand increases coupled with strong domestic production and solid storage inventories by November 1, 2010
- Strong or weak LNG, Canadian imports
- Degree of coal to gas switching in power generation sector

Recurring Natural Gas Energy Themes

- Market Stability
- Seasonal, Peak Month and Peak Day Reliability
- Energy Efficiency



Thank You!

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