



# 2006 EIA Energy Outlook & Modeling Conference

March 27, 2006

*Panel: The Future Relationship of Oil & Natural Gas Prices in  
the US*

John B. Parry (VP/Senior Analyst)

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**John S. Herold, Inc**



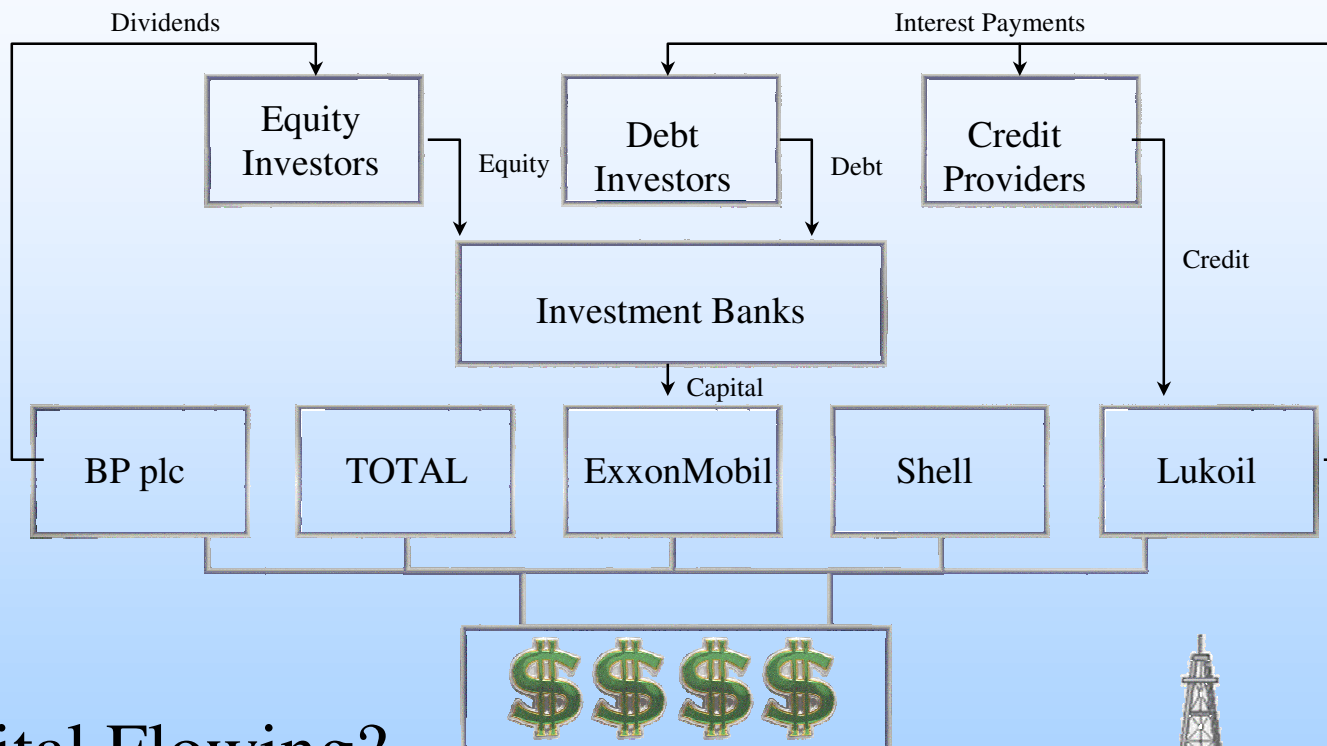
# What does John S. Herold Do?

## OUR CLIENTS

Capital Providers

Financial Intermediaries

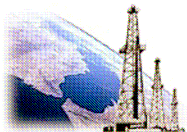
Oil Companies



Where is Capital Flowing?

What Have the Returns Been?

What Will the Returns Be?



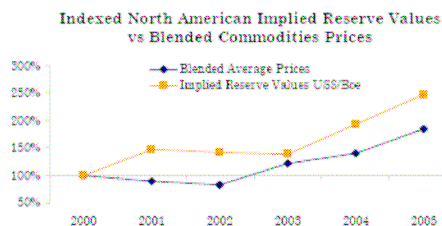
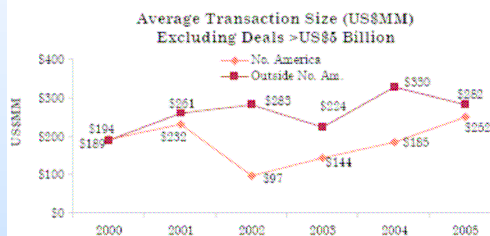
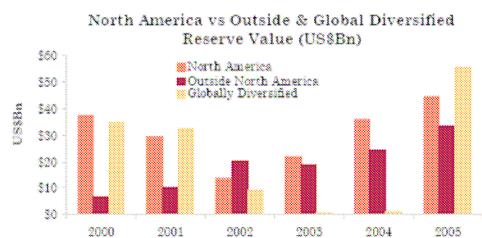
# Herold M&A Transaction Review Upstream

## Year End 2005 Statistical Snapshot

### M&A Insights

January 25, 2006

Christopher W. Sheehan  
Brian P. Ferguson



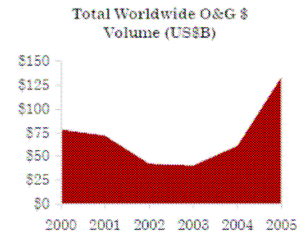
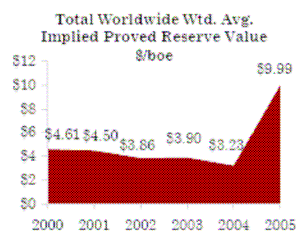
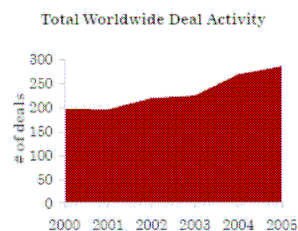
#### Upstream Scoreboard - Total Worldwide

Region	Deal Count	Total Deal Value (US\$MM) <sup>1</sup>	O&G Reserve Value (US\$MM) <sup>2</sup>	Implied Reserve Value (US\$/boe) <sup>2</sup>
United States	98	\$29,393.6	\$26,149.5	\$12.77
Canada	95	\$18,936.3	\$18,275.4	\$20.38
Africa	12	\$1,771.5	\$1,724.2	\$6.20
Asia	20	\$3,208.0	\$2,942.6	\$7.52
Austr./Oceania	12	\$906.7	\$786.5	\$3.19
Cent./So. Am.	7	\$2,590.0	\$2,163.3	\$5.66
Europe	18	\$8,453.7	\$8,338.6	\$16.16
From Soviet Un	19	\$27,432.4	\$17,511.8	\$3.89
Global Diversifd.	6	\$66,565.3	\$55,677.5	\$10.66
<b>2005 Total</b>	<b>287</b>	<b>\$159,257.6</b>	<b>\$133,569.2</b>	<b>\$9.99</b>
<b>2004 Total</b>	<b>270</b>	<b>\$67,085.6</b>	<b>\$61,196.8</b>	<b>\$3.23</b>
<b>2003 Total</b>	<b>226</b>	<b>\$45,604.2</b>	<b>\$40,684.1</b>	<b>\$3.80</b>

<sup>1</sup> Figures represent all transactions >US\$10MM, including transactions with no disclosure on reserves and/or production

<sup>2</sup> Implied reserve values reflect weighted averages associated with proved reserves

- Global upstream M&A deal value rose to a five-year high driven by a number of Globally Diversified corporate transactions that represented more than 40% of the total transaction value.
- Aggressive acquisition and merger activity by Canadian Royalty Trusts and strong commodities prices underpinned a new peak in North American implied reserve costs.
- U.S. deal activity was highlighted by several European majors and overseas E&Ps acquiring stakes in shallow and deepwater Gulf of Mexico assets at strong implied values.
- Chinese national oil companies (NOC) shed their historically low-key image with a number of high-profile international acquisitions (and unsuccessful bids) primarily targeting Asia, Africa and South America.
- With the addition of a controlling stake in Gazprom and Gazprom's subsequent takeover of Sibneft, the Russian government increased its control of the country's oil industry.
- A scramble to add producing and development-grade assets in Kazakhstan during the year shed some light on an ongoing competition among Asian NOCs.



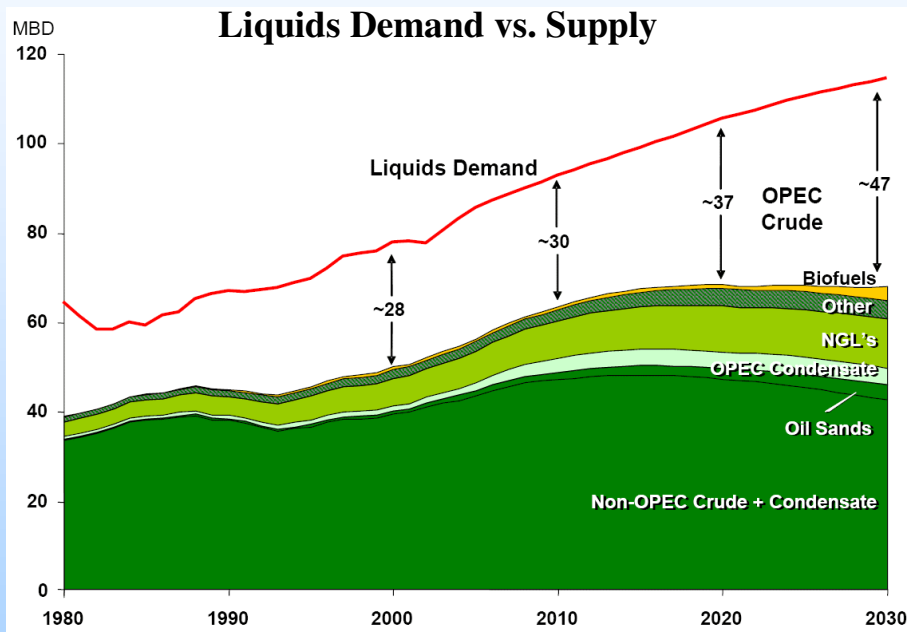


# Summary

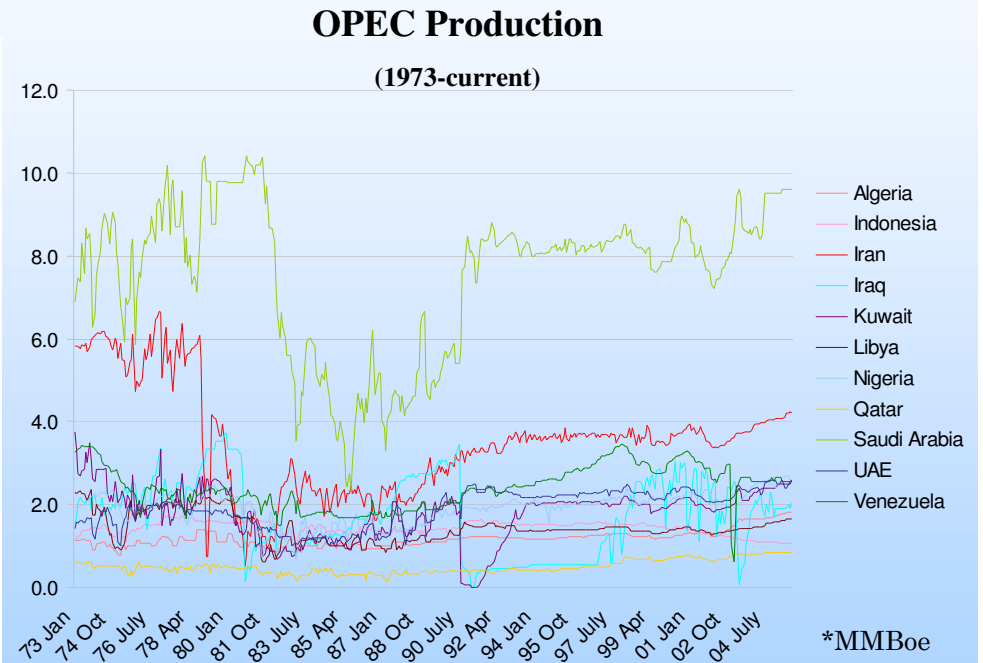
- Tightened spare world crude oil & refining capacity expected to maintain ALL energy price levels near 2004/05 levels in near to medium term
- Short-term US oil/gas price ratio likely to average in upper range of past ten years; longer term ratio expected to trend upwards if LNG successfully bridges widening US supply/demand gap at competitive prices
- Above ground inventories will continue to influence shorter-term price swings for US oil & gas; post-hurricane(s) price spike driven by future inventory concerns
- Oil-indexed pricing for European gas means strong competition for LNG supply to the US for the foreseeable future – Atlantic Basin/Middle East LNG economics expected to be increased factor in future US oil/gas price ratio



# Call on OPEC



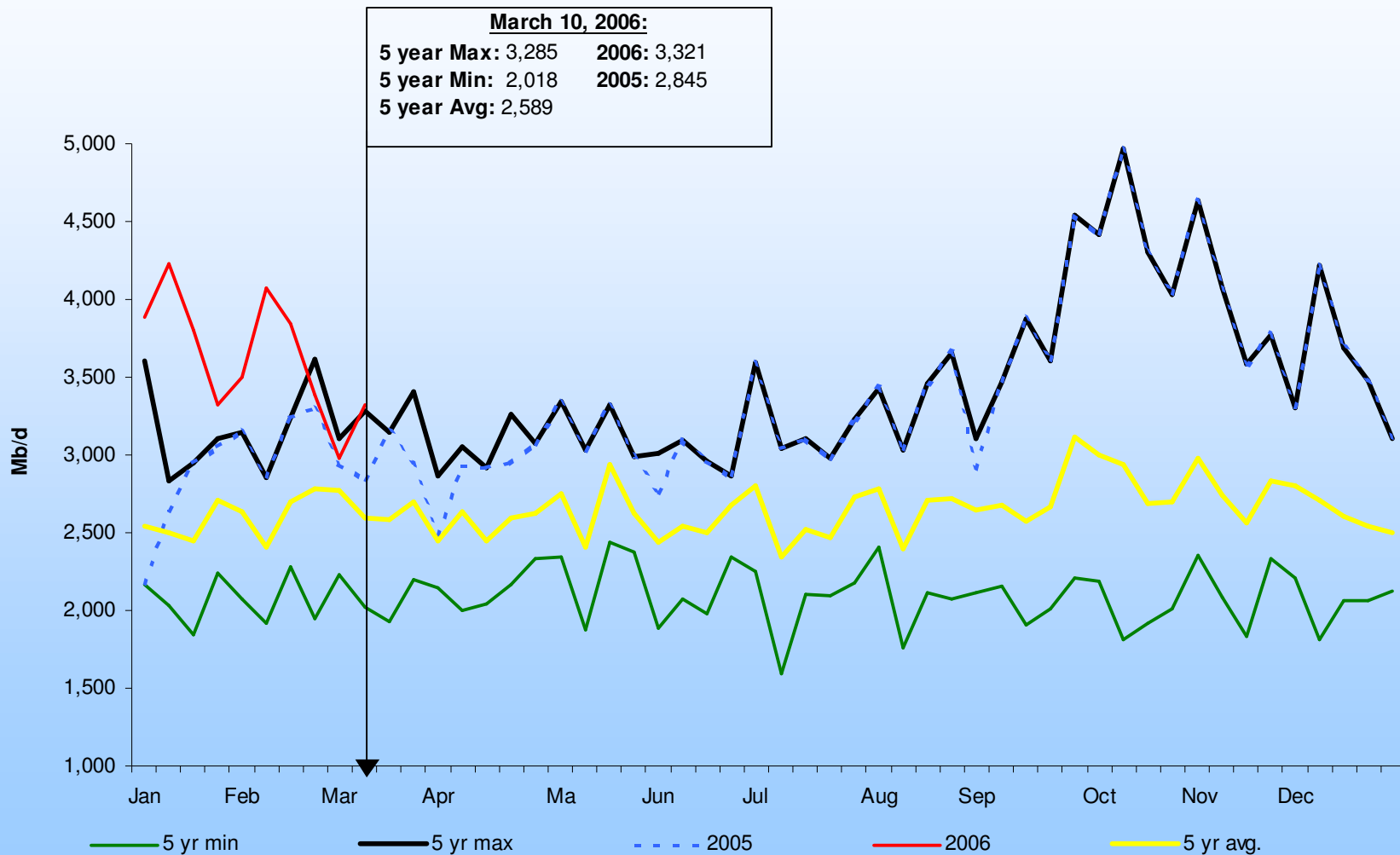
Source: ExxonMobil Energy Outlook Dec. 2005



Source: EIA



# US Refined Product Imports

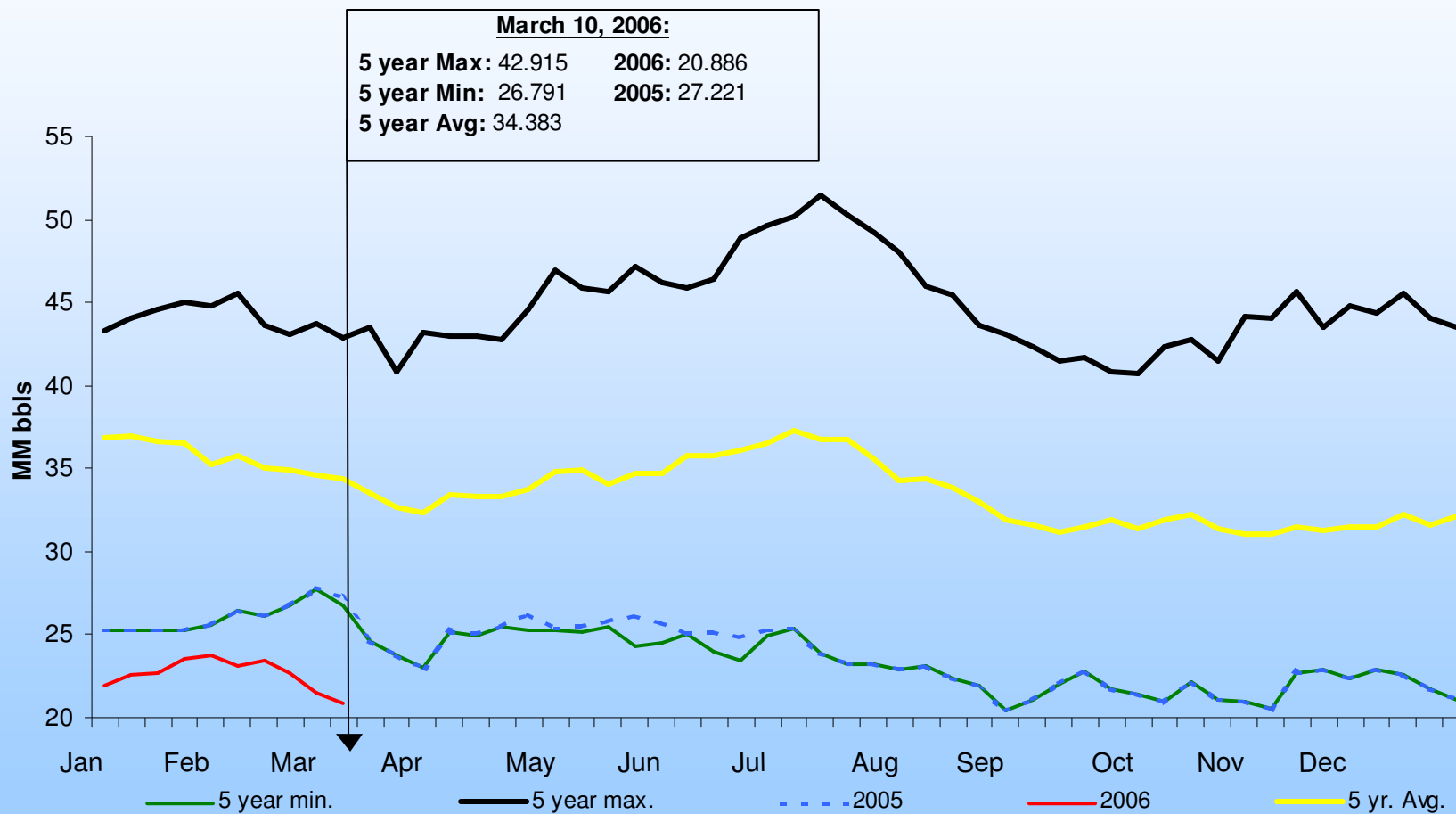


Source: EIA

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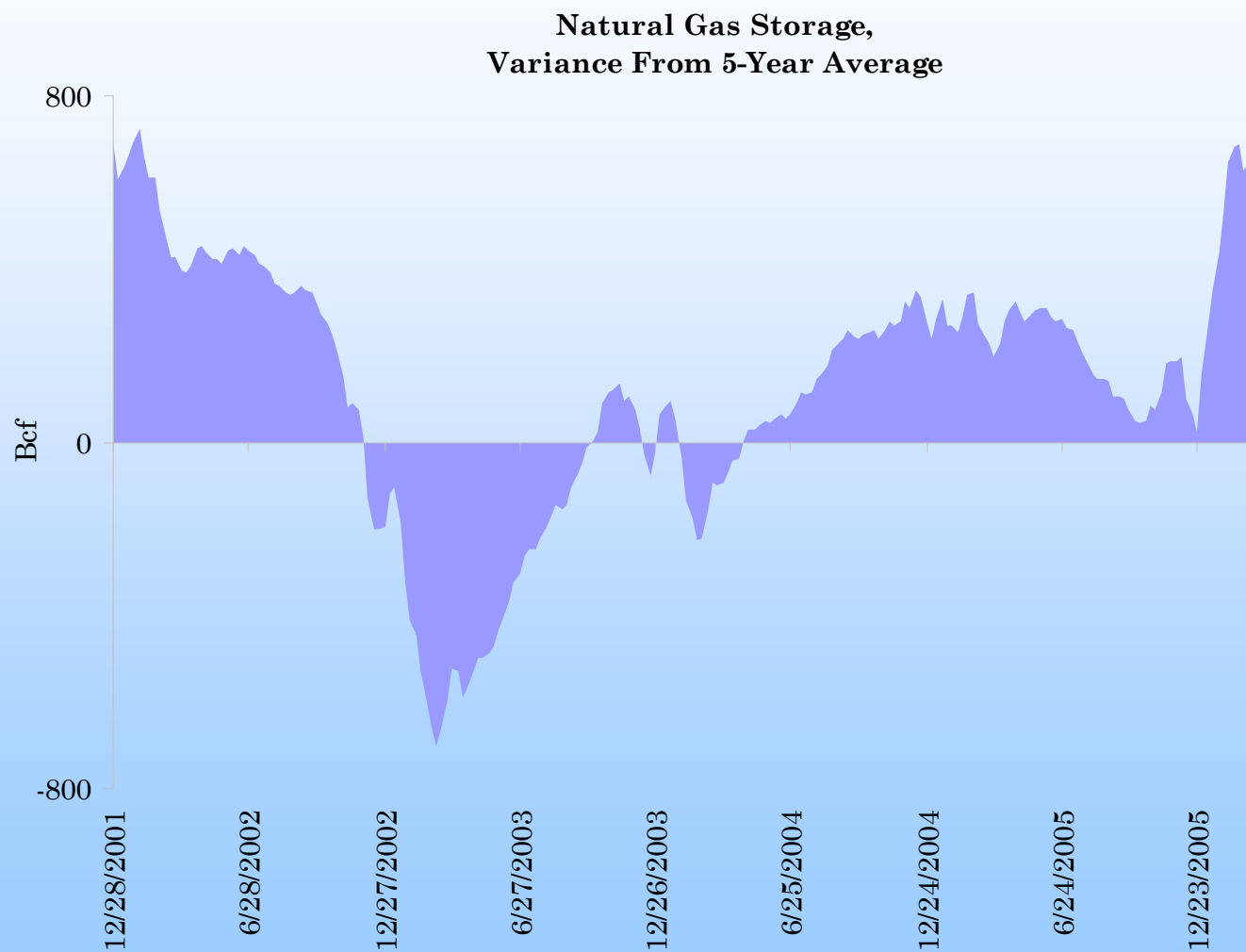
# US Reformulated Gasoline Inventories



Source: EIA



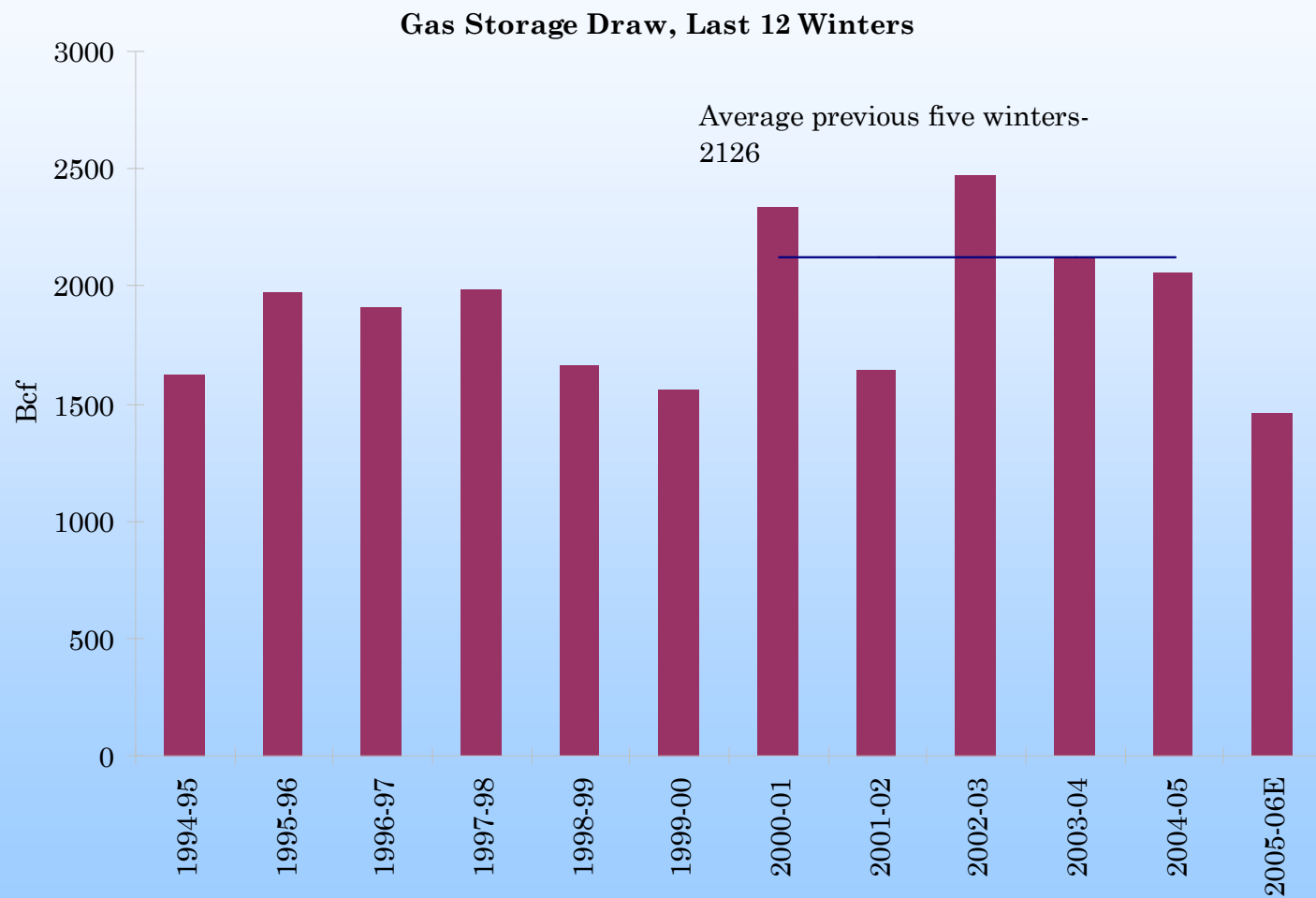
# Storage at Seasonal Highs





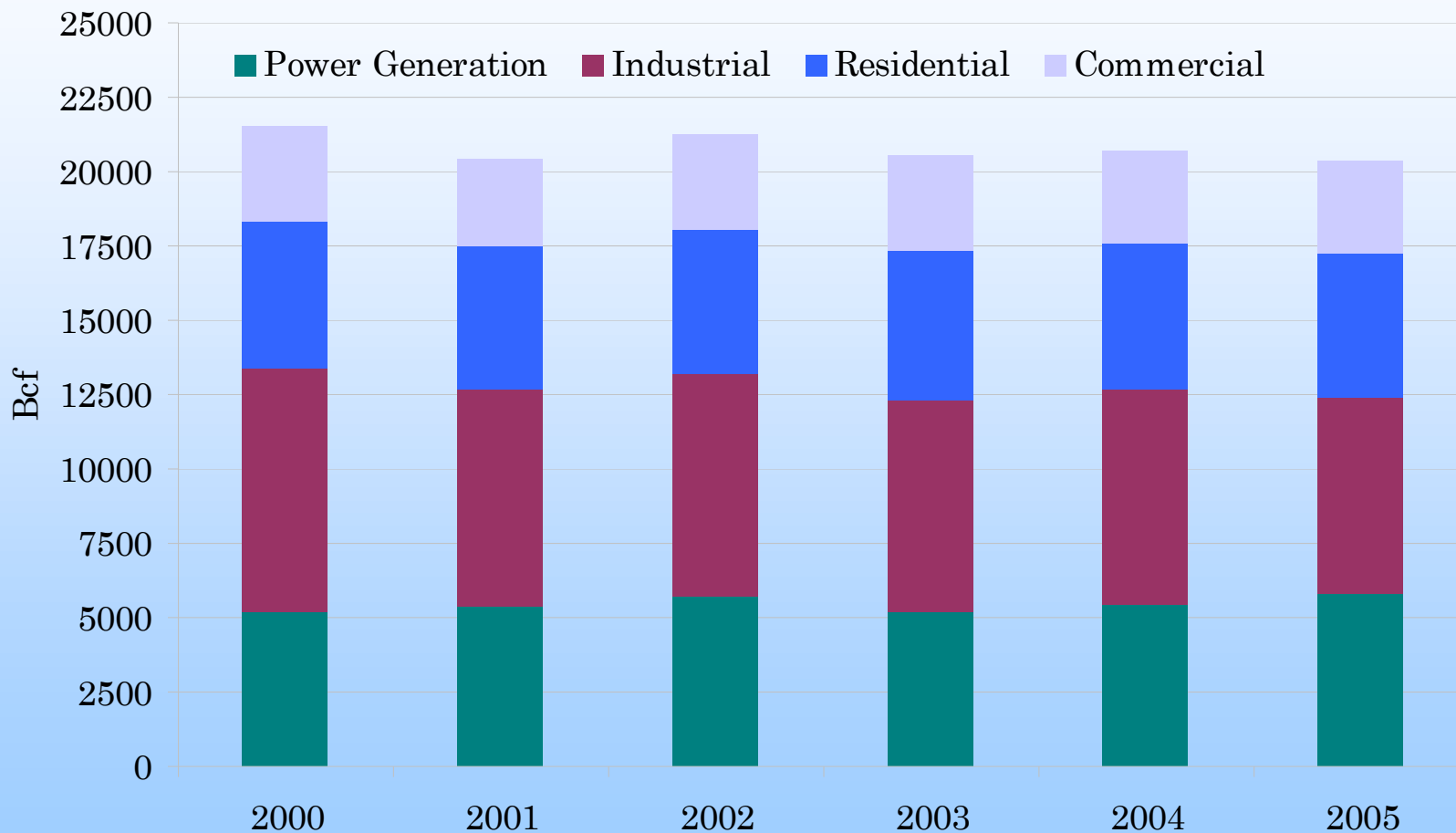


# Storage Drawdown





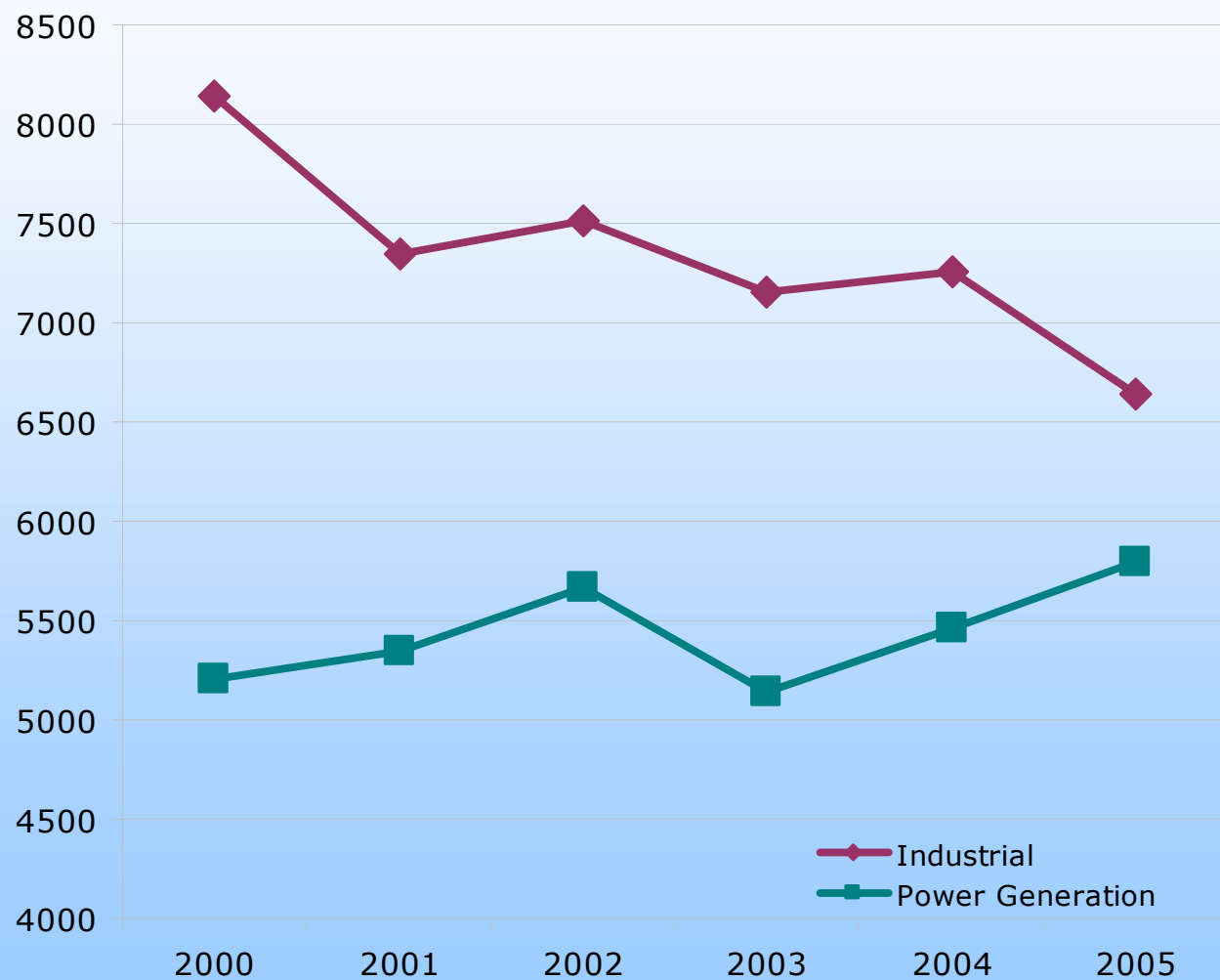
# US Natural Gas Consumption by Sector



Source: EIA

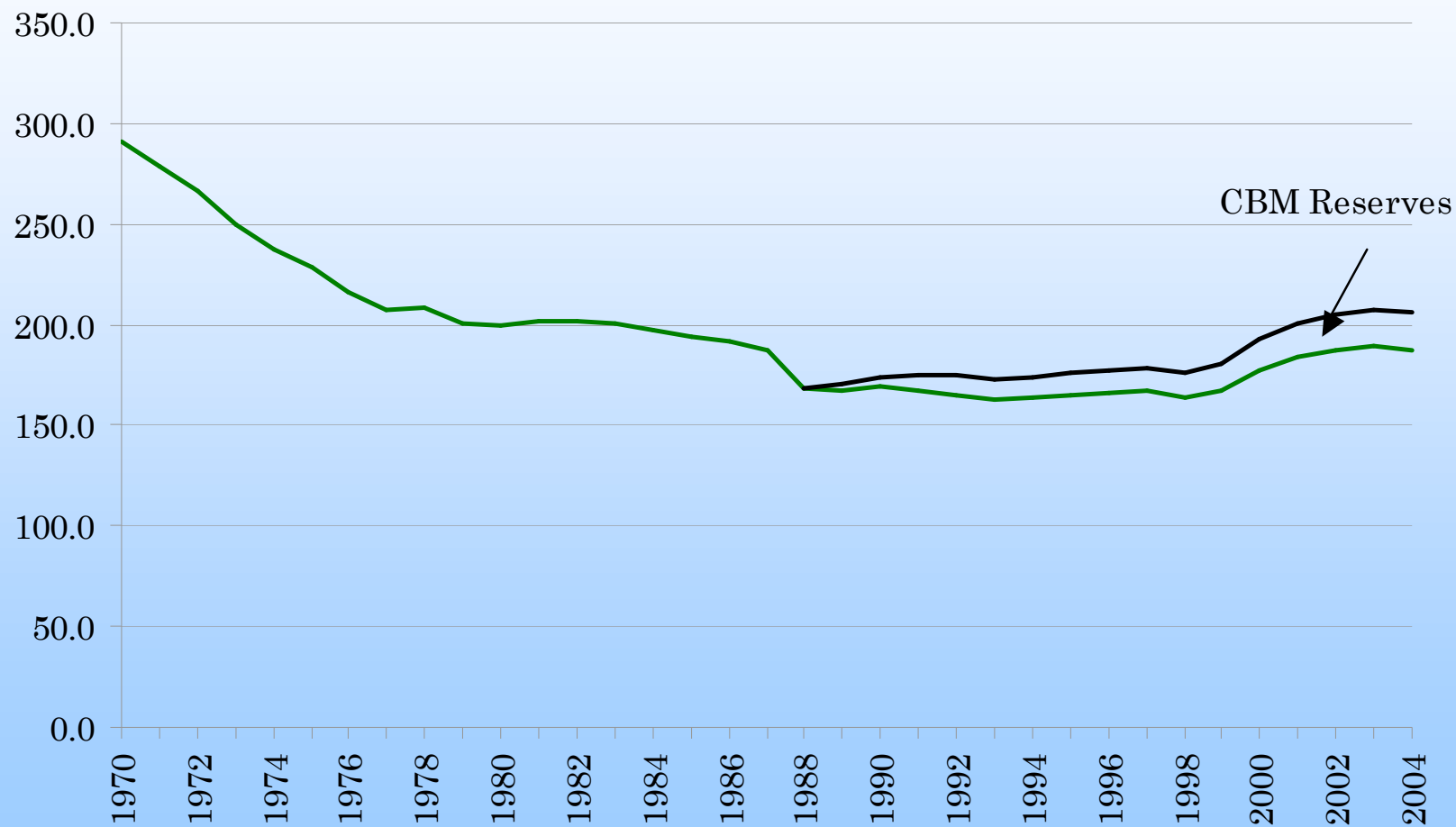


# Industrial vs. Power Gas Consumption





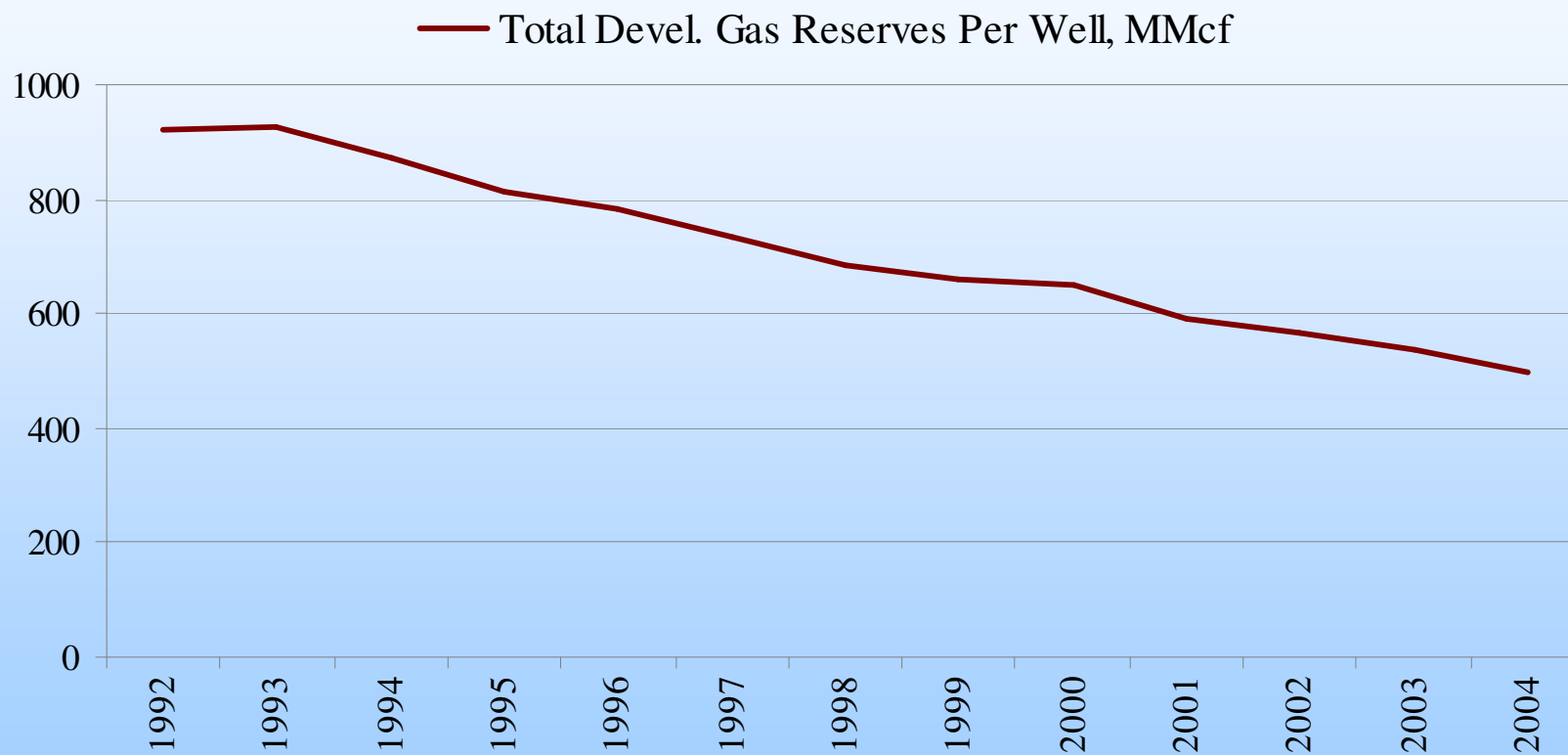
# US Proved Natural Gas Reserves





# Declining Natural Gas Well Productivity in NA

**Total Devel. Gas Reserves Per Well, MMcf**

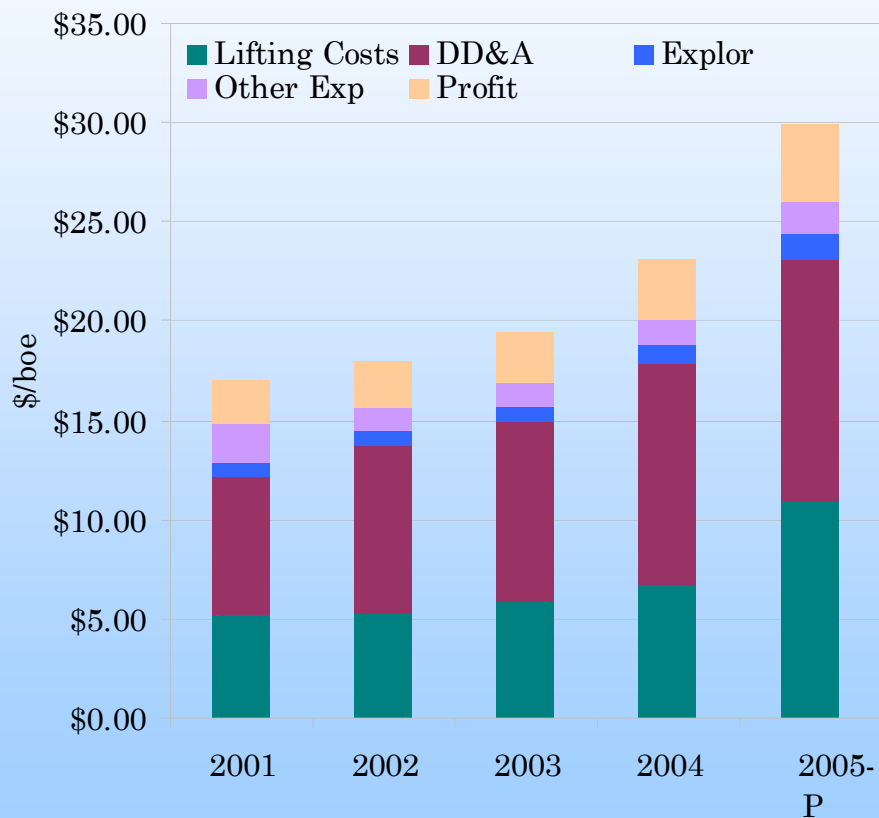


- Natural Gas Well productivity has fallen 30% since 1990

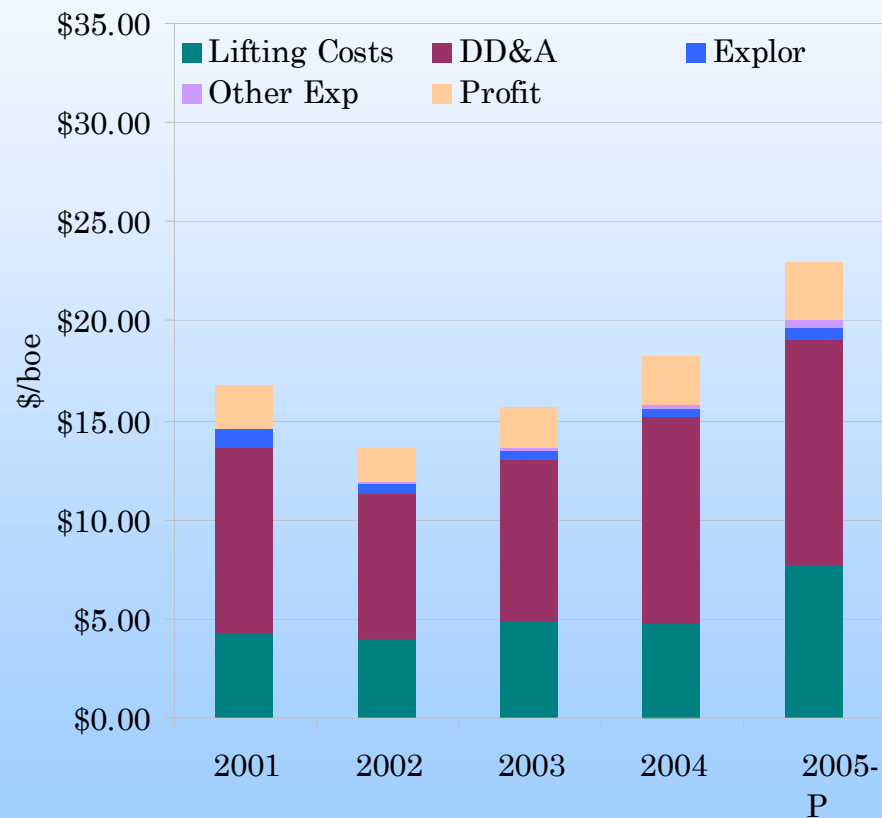


# Fully Allocated Unit Costs

**U.S. OIL Producers  
Cost of Production**

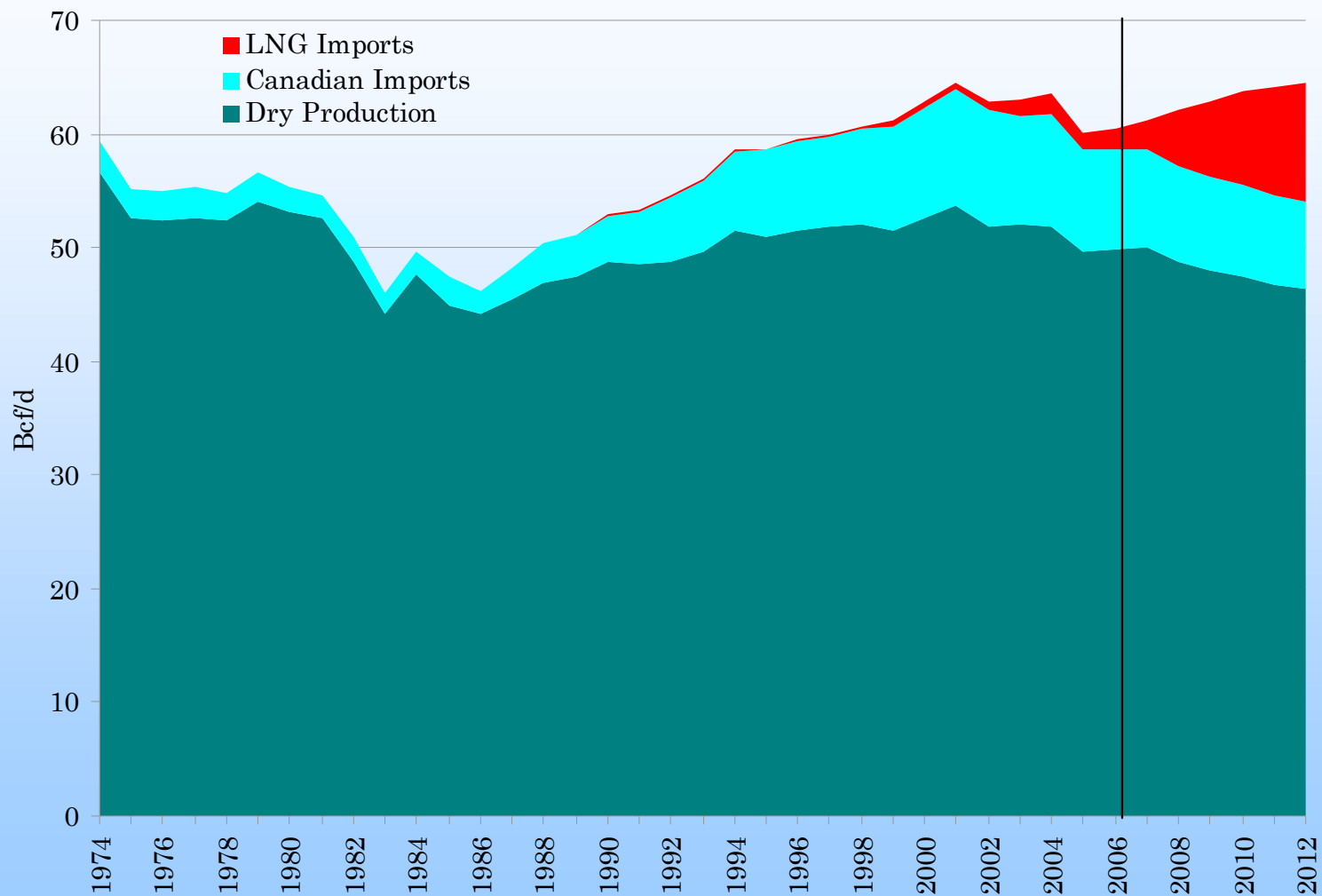


**U.S. GAS Producers  
Cost of Production**





# US Natural Gas Supply

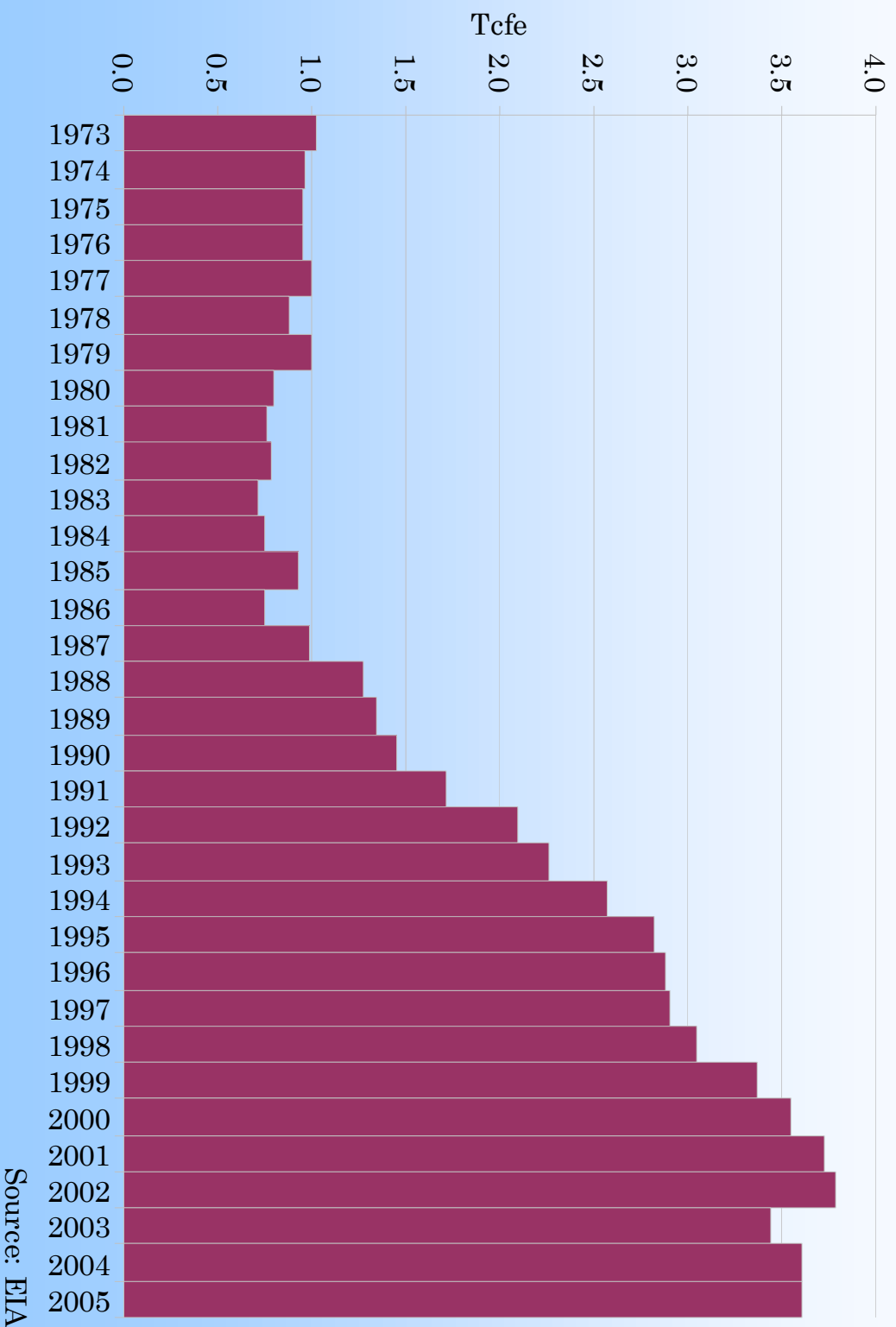


Source: EIA, John S Herold

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# US Gas Pipeline Imports From Canada

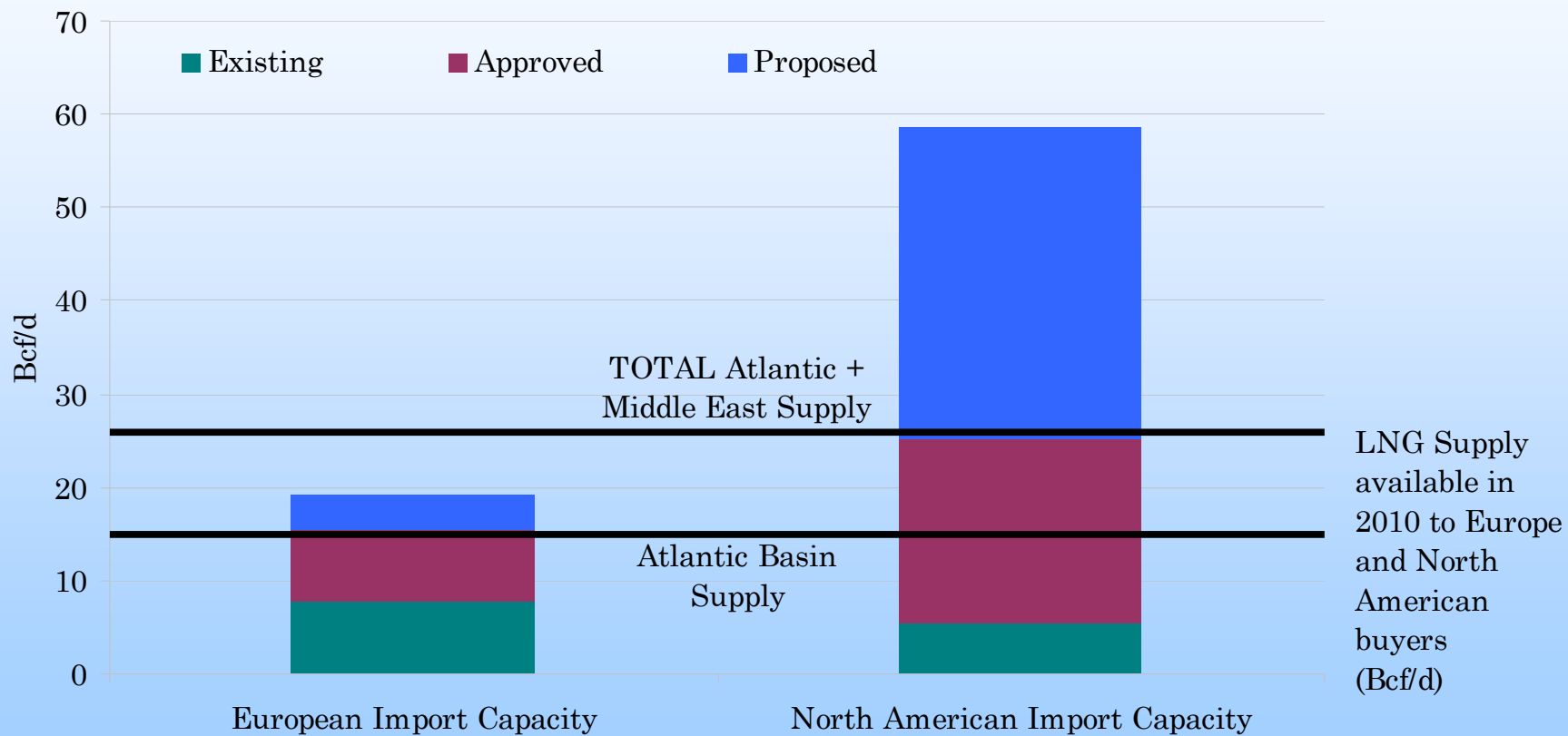


Source: EIA





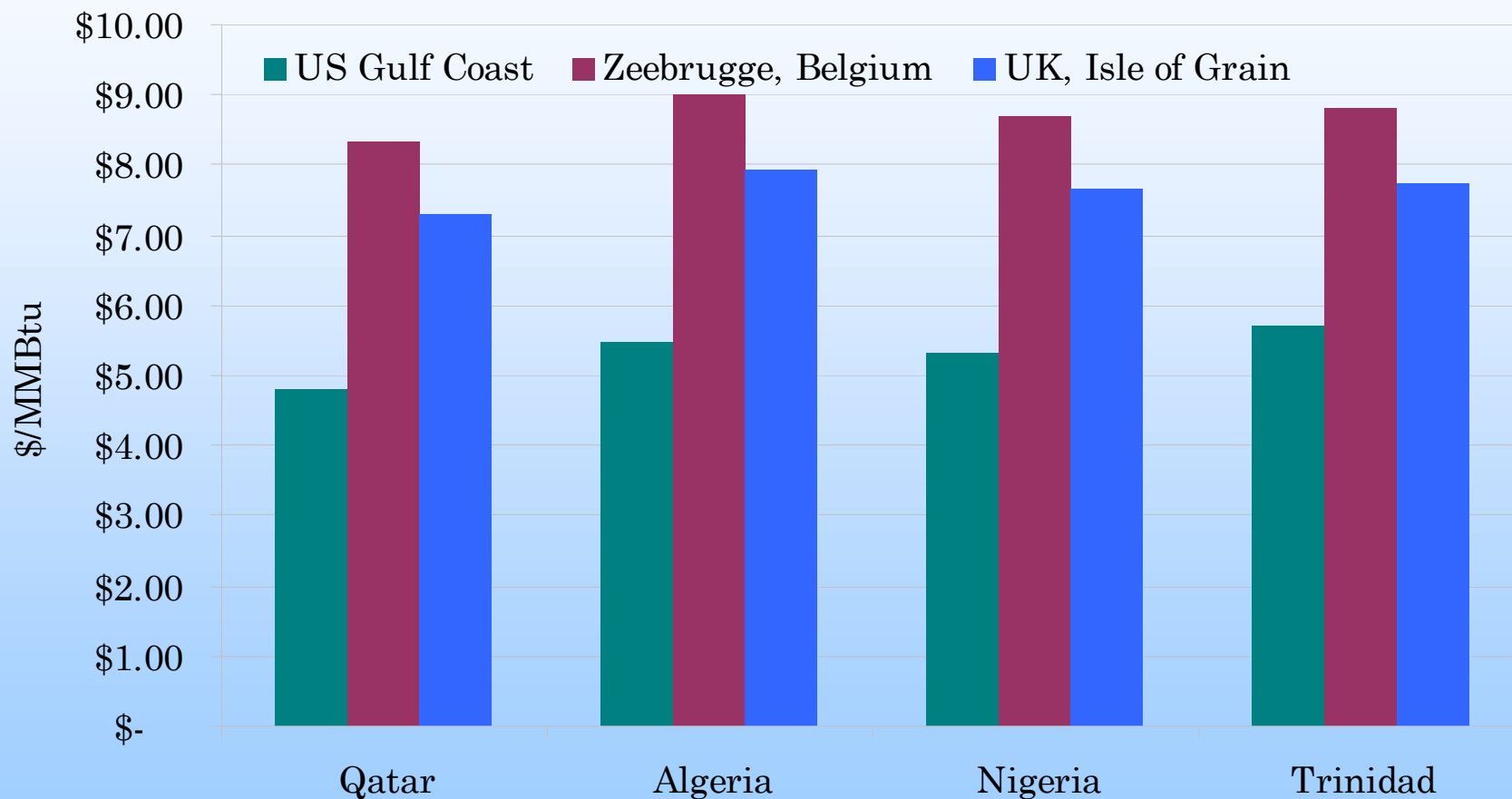
# Atlantic Basin LNG Regas Capacity 2010



Source: John S Herold



# Indicative Spot Netbacks to Select LNG Suppliers 3.22.06



Source: Dow Jones, Energy Intelligence



# Marathon Oil

## Equatorial Guinea LNG Project

**Project Type:** Utility

**Ownership:** Marathon 60%, GEP Petroleum 25%, Mitsui 8.5%, Marubeni 6.5%

### **Operating Parameters:**

Capital Cost: 1.4 billion

Start-up: Late 2007

Capacity: 3.4 MT/yr.

Pricing: Henry Hub Index

Contract: 17 years (Bg)

Op. Cost: \$1.00/Mcf

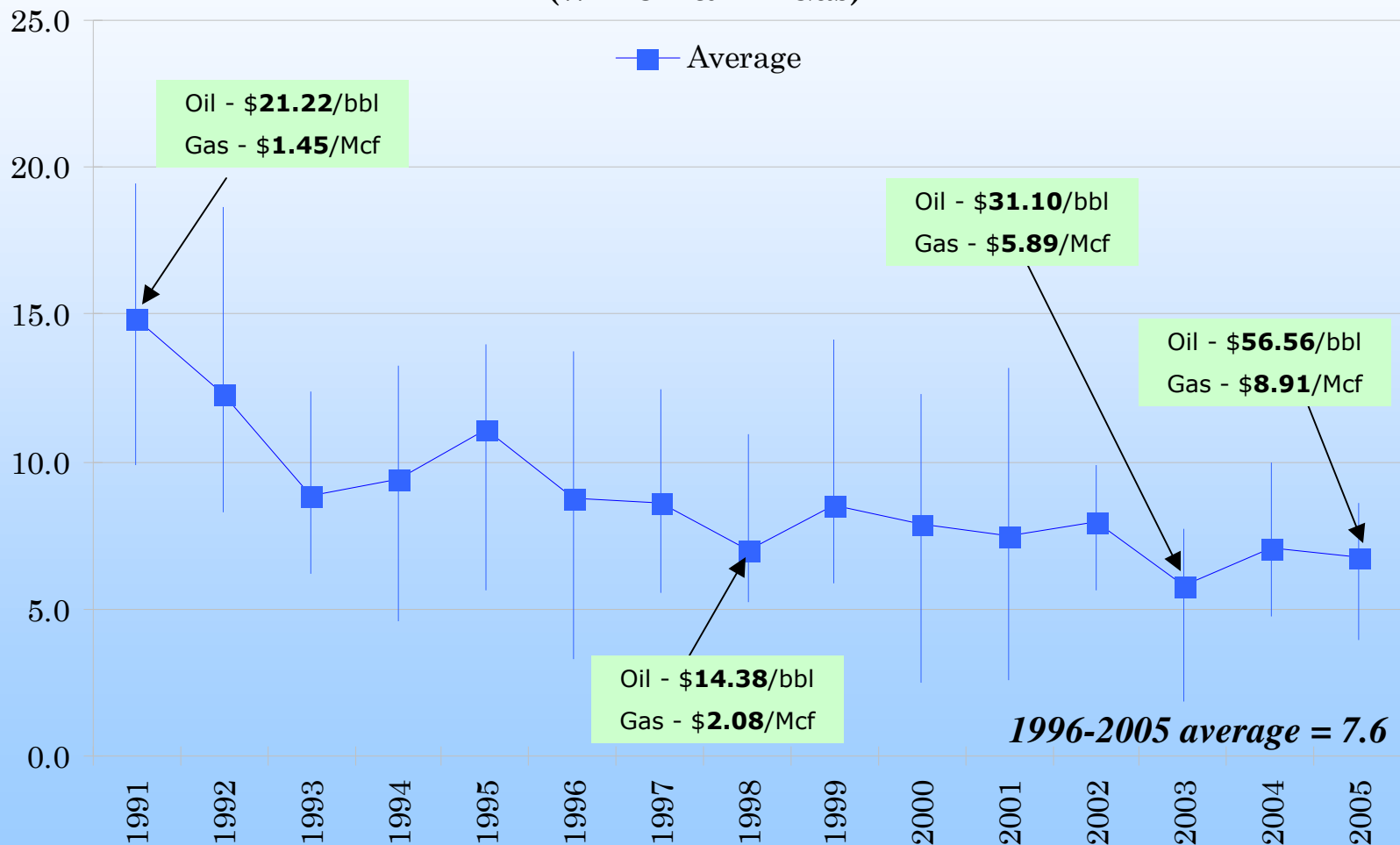
### **Economic Returns:**

<u>Gas Price Scenario</u>	<u>Internal Rate of Return:</u>
Base Case	15%
\$3.50	12%
\$4.25	16%
\$5.00	17%
\$6.00	19%



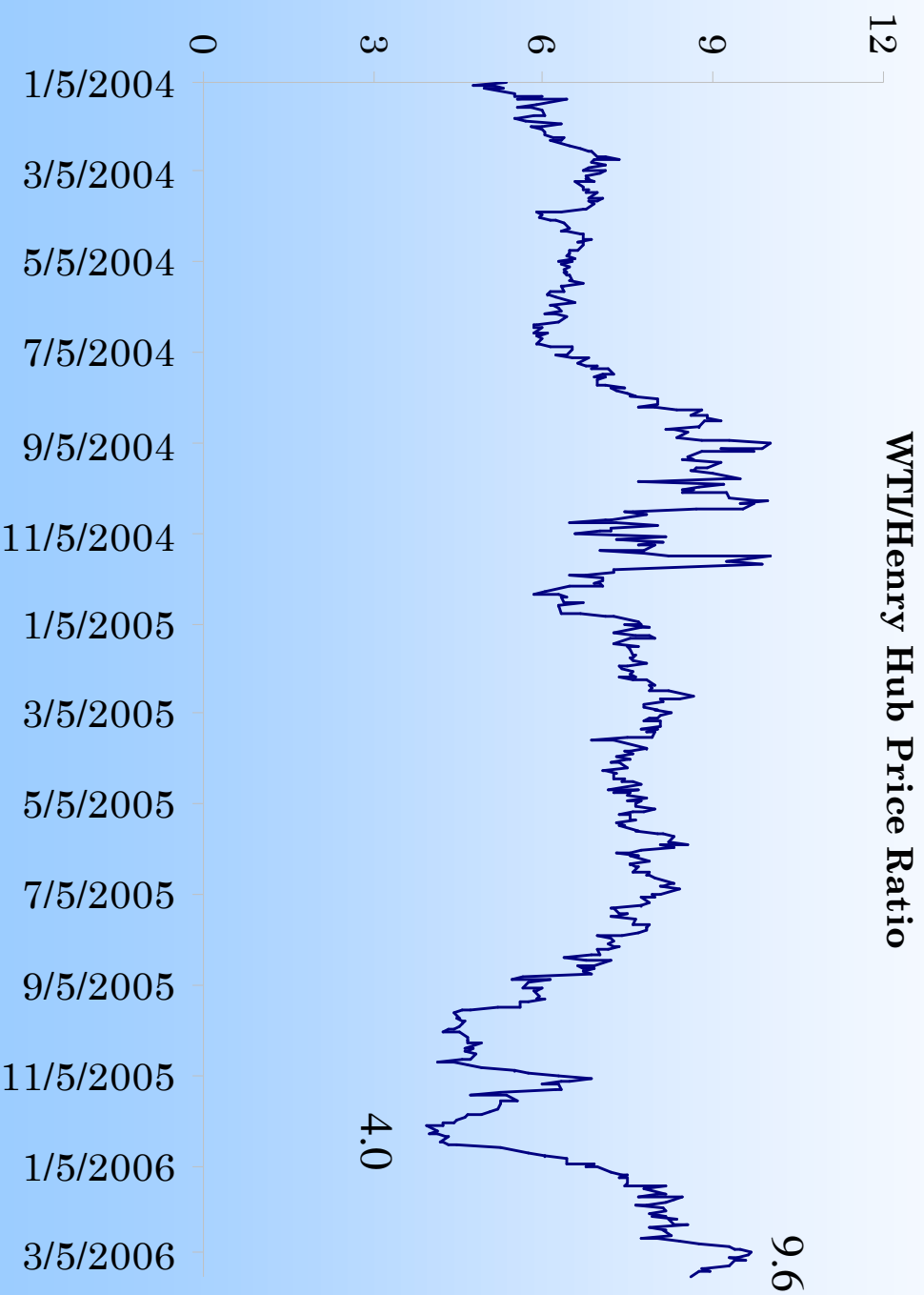
# Ratio trending downwards

Historical Range of Oil/Gas Ratio  
(WTI Oil & HH Gas)





# Ratio highly volatile in short term





# Summary

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