



Energy Trends

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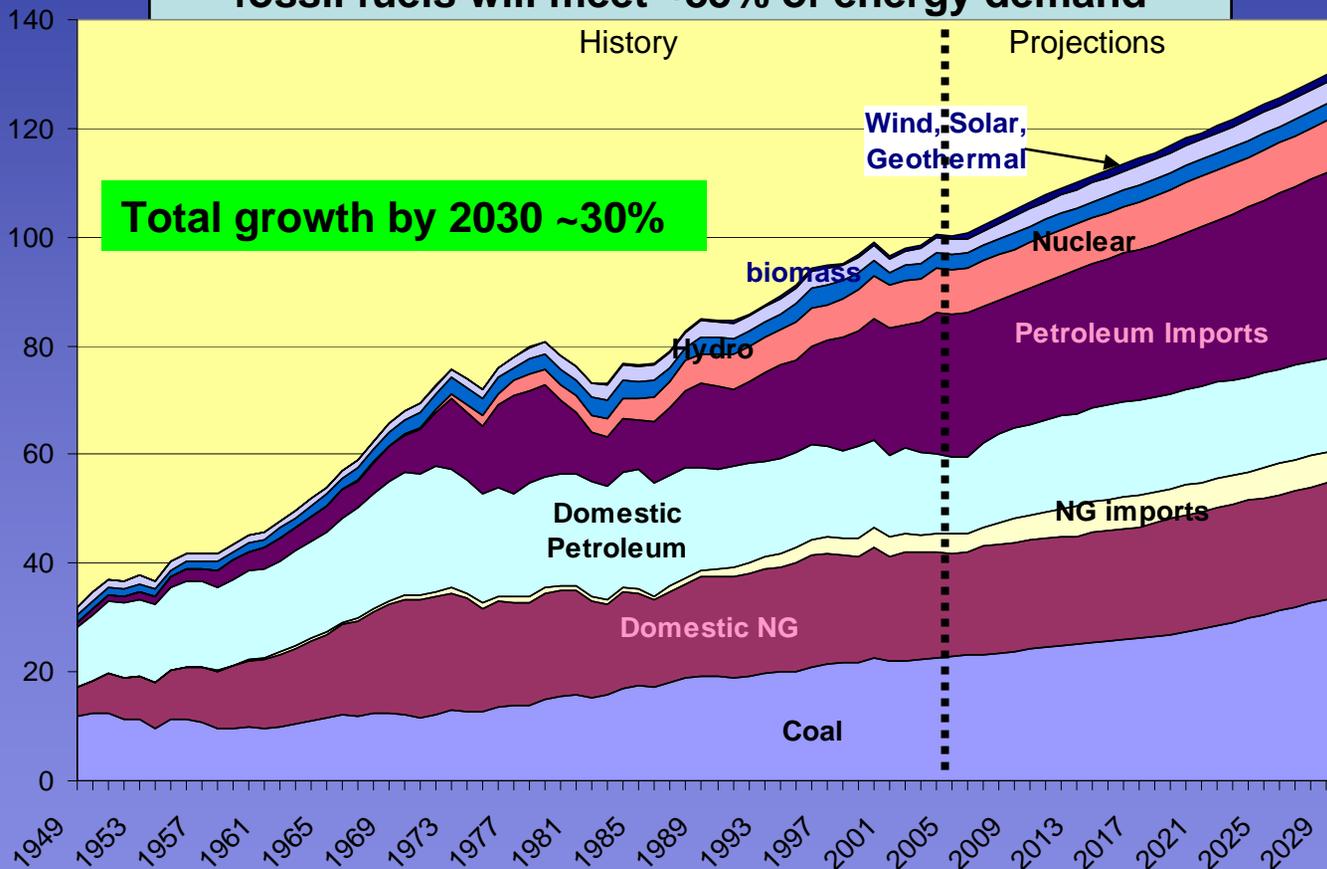
Projected US Demand for Energy

Given current policies and economics, fossil fuels will meet ~85% of energy demand

Increase from 2006

Wind, Solar, Geo: 53%

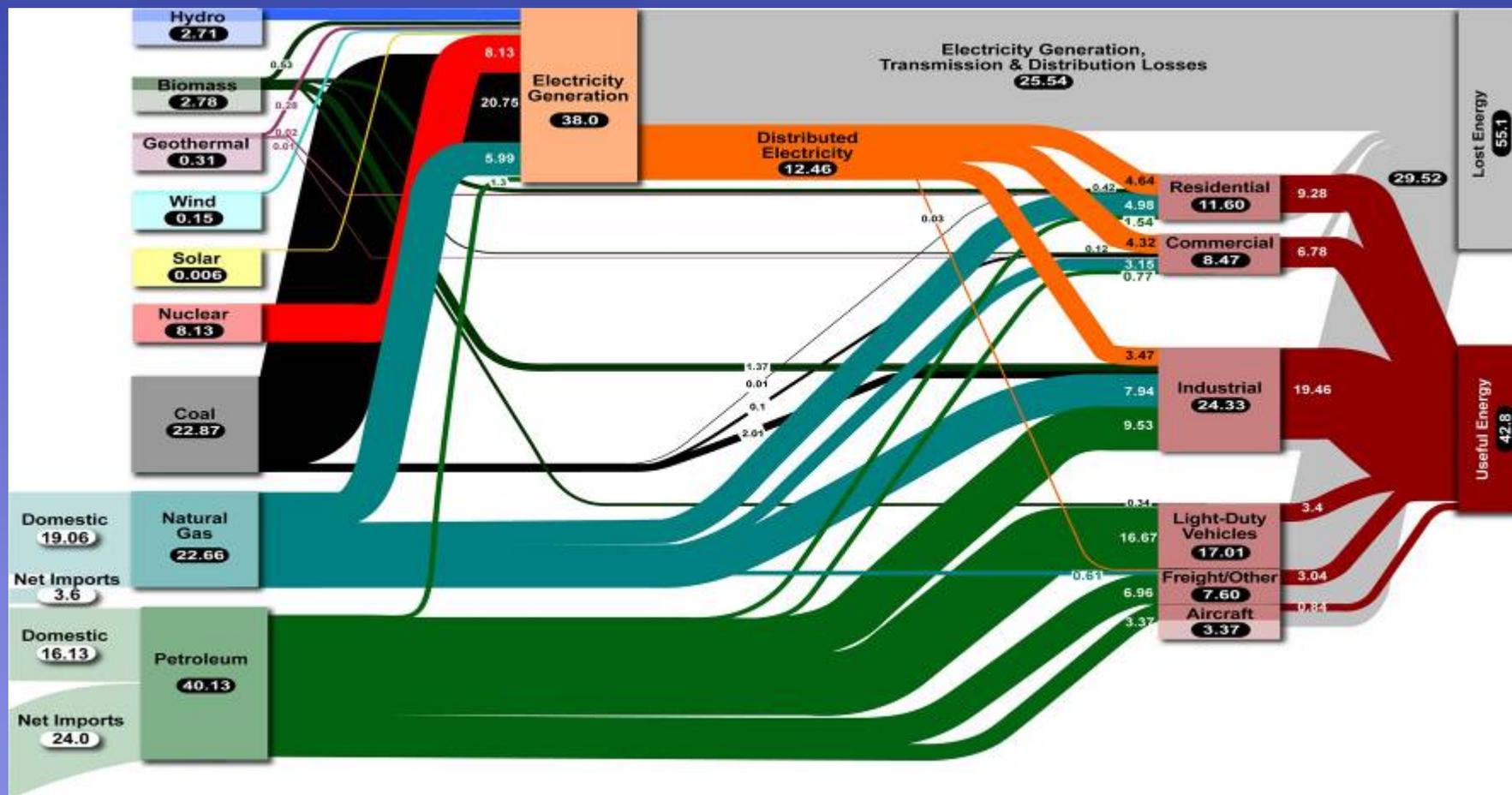
Quadrillion Btus



Source: EIA, Annual Energy Outlook 2007, Annual Table 1

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Sources and Uses of Energy - 2002

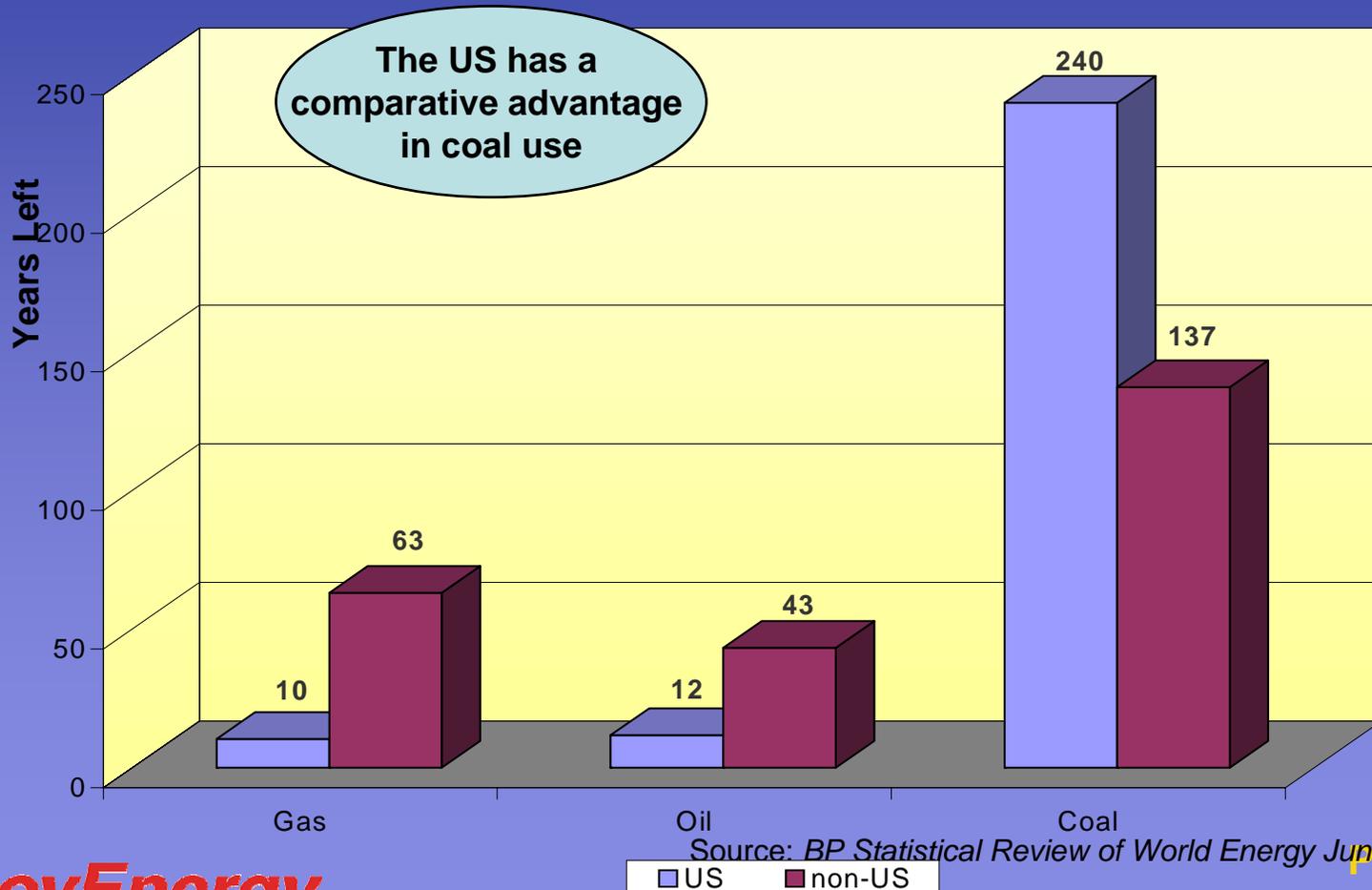


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Strategic Position of Fossil Fuels, US vs. World, Year-End 2005



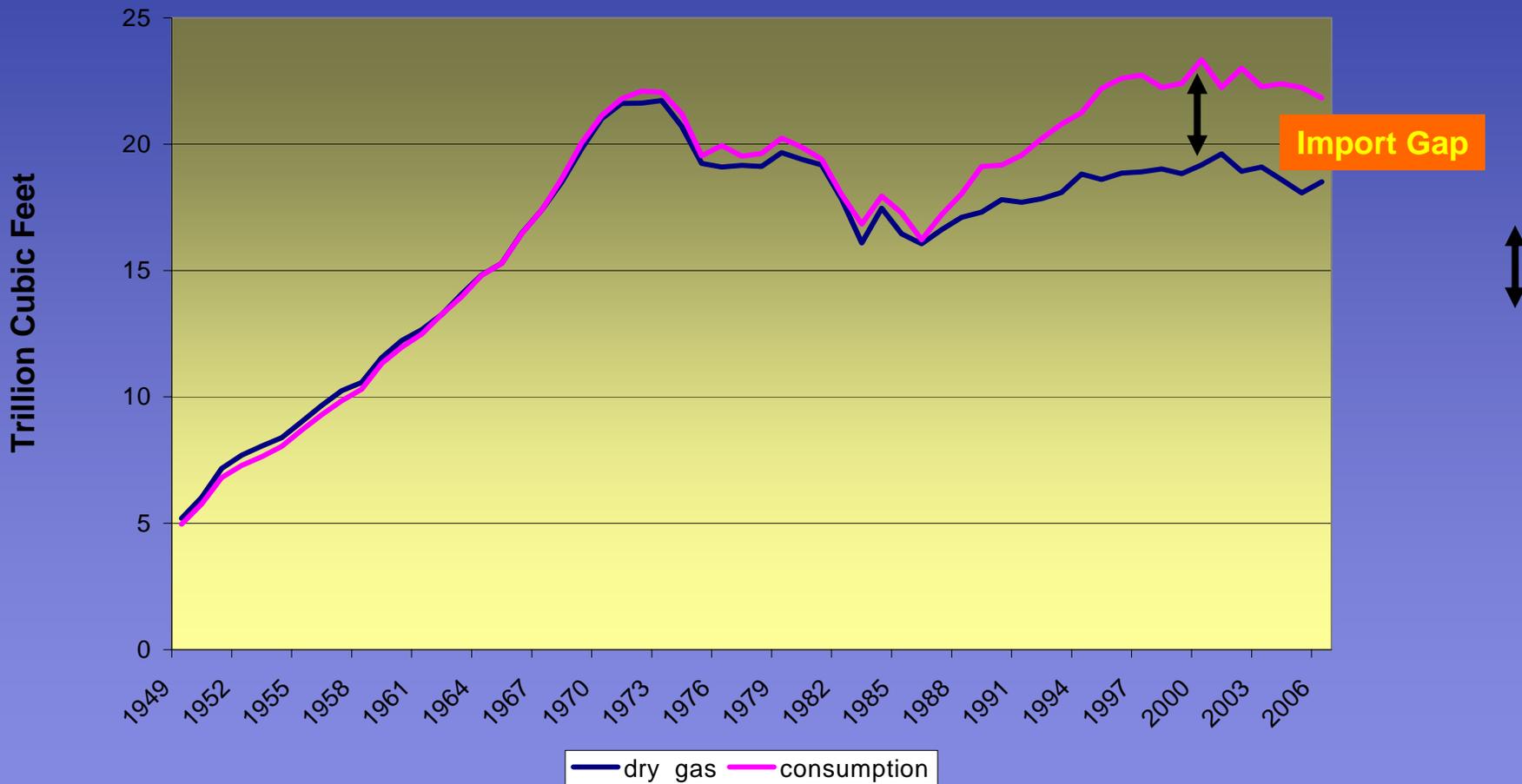
Proved Reserves/Production



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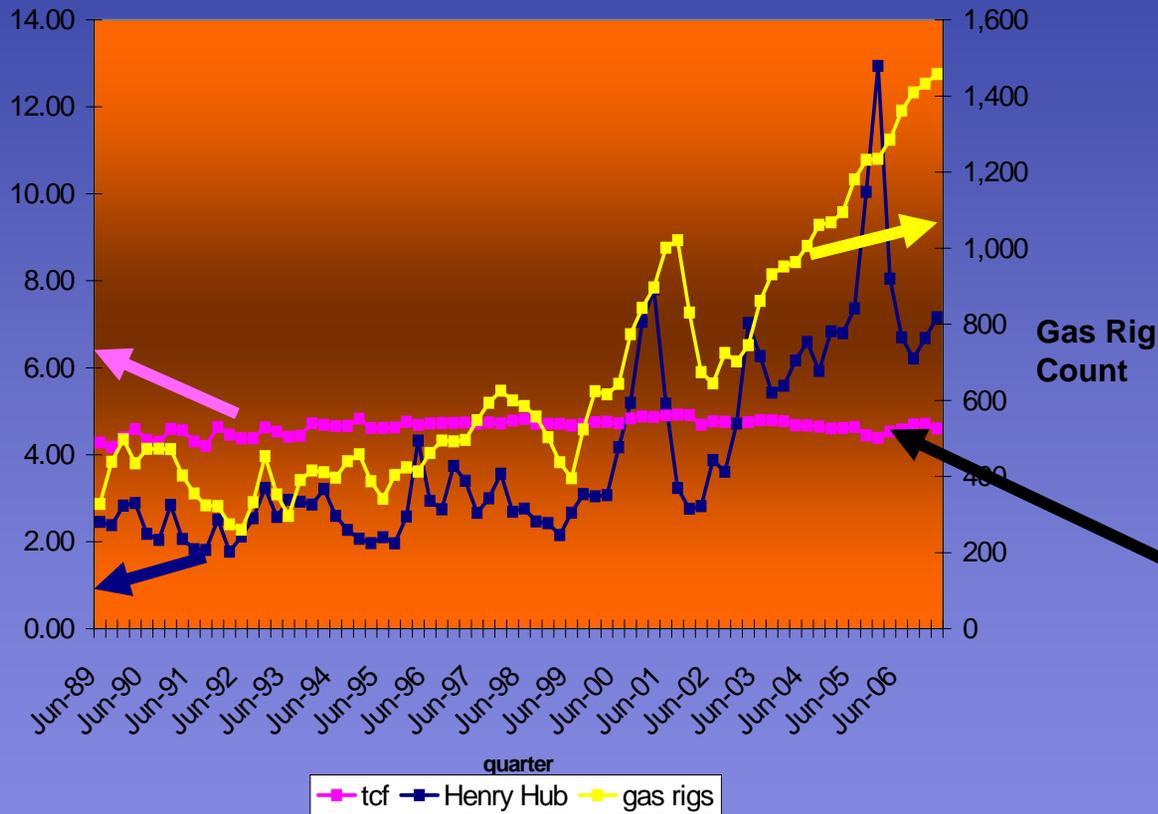
US Natural Gas Production and Consumption 1949-2006



Import Gap



Natural Gas Prices, Rig Count, and Production

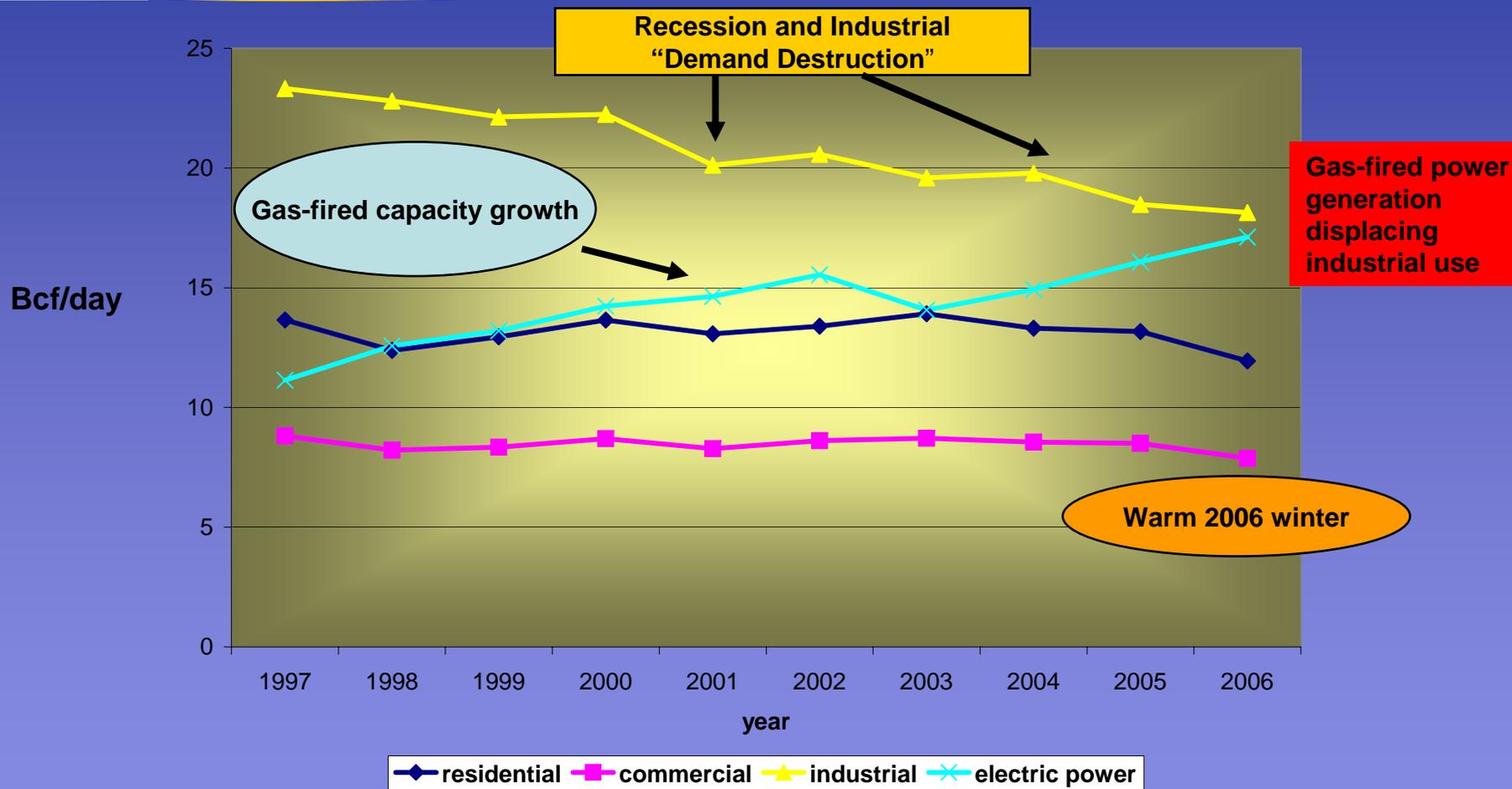


Rig count responds to recent price increases;

Since trough in 2Q2002, Doubling of rig count; gas rigs at record levels; But production **FLAT**

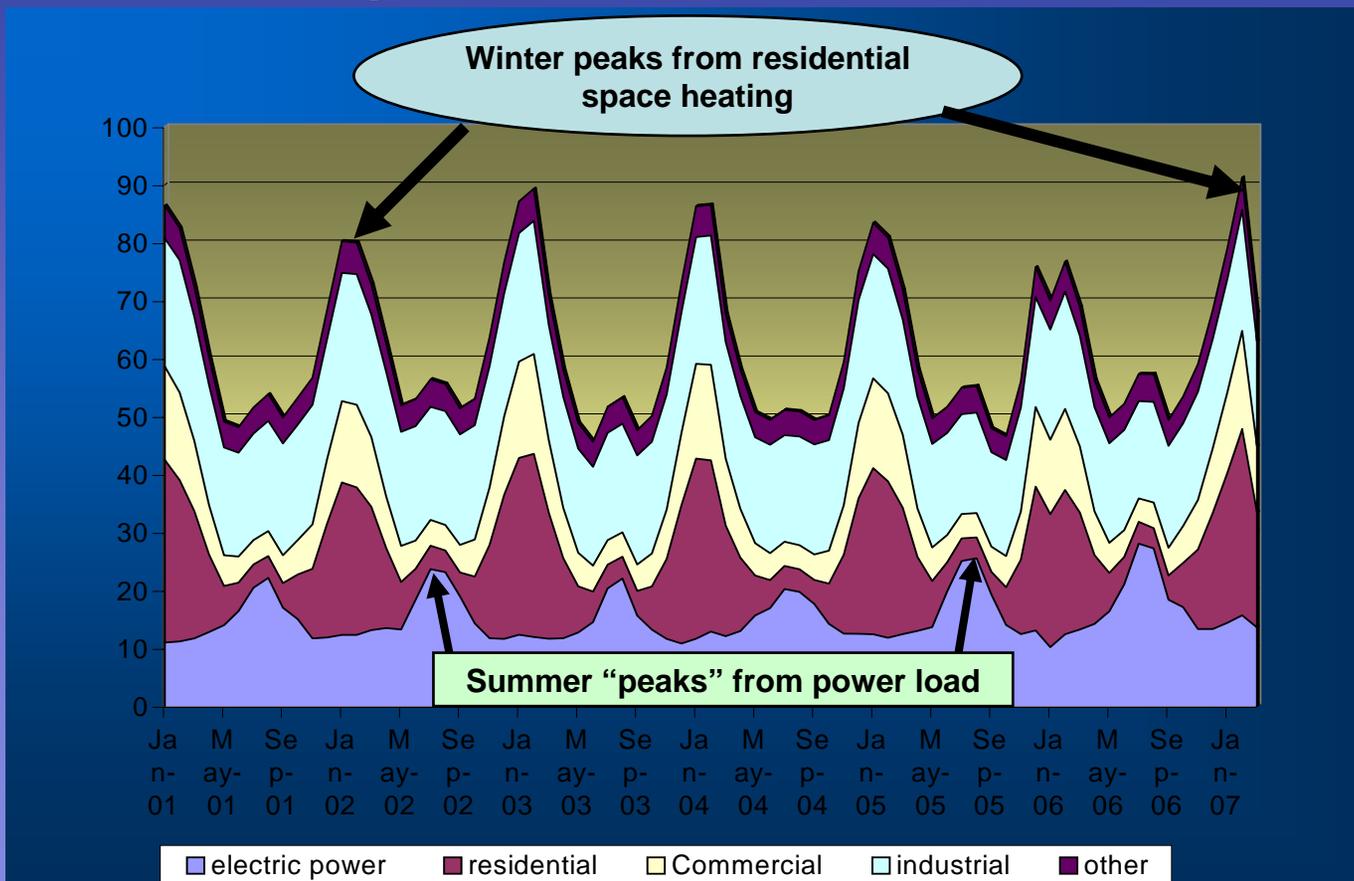
Source: Prices, Production, EIA, *Natural Gas Monthly*; Rigs, *Baker Hughes Rig Count*

Annual Natural Gas Consumption by Sector, 1997-2005



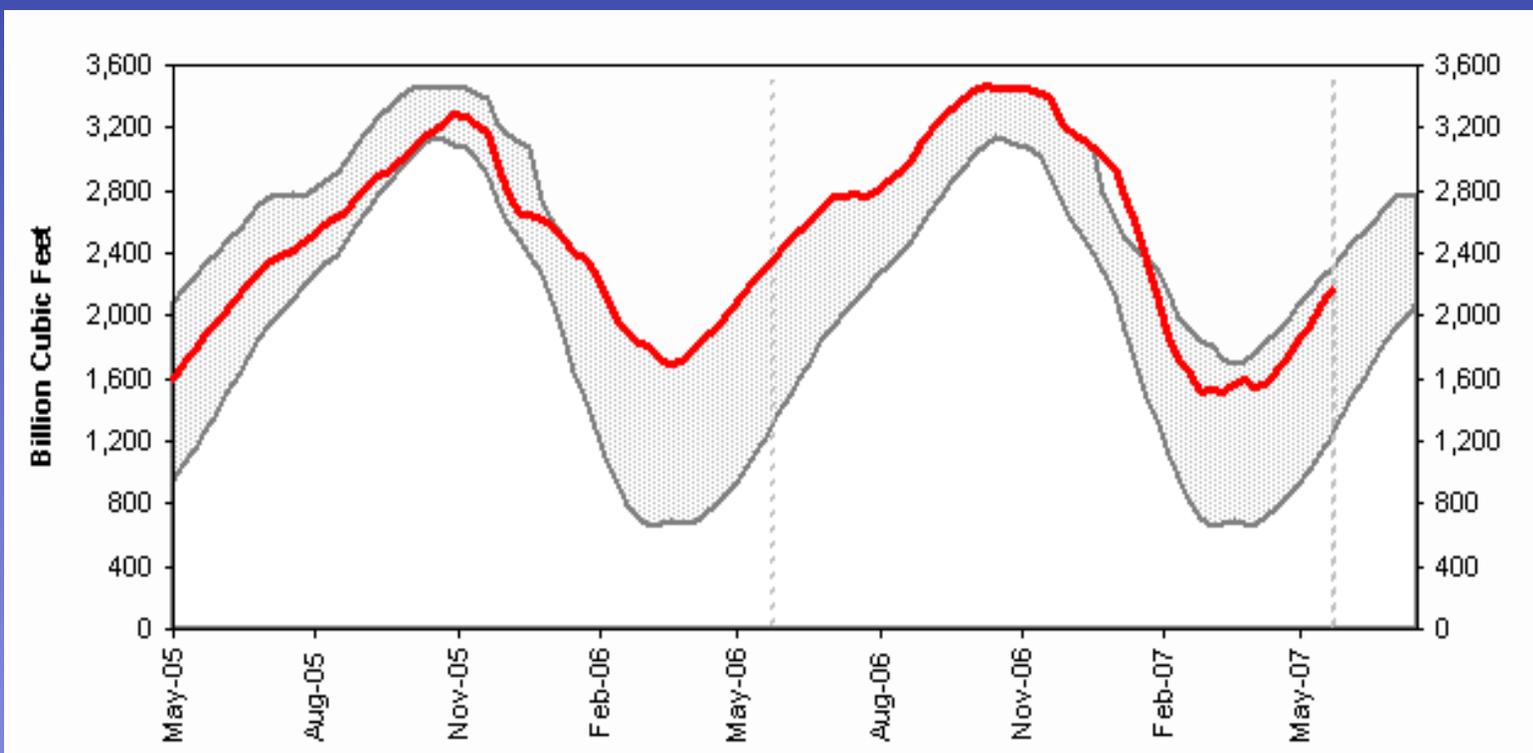


Seasonal Natural Gas Consumption





Weekly Gas Storage



Note: The shaded area indicates the range between the historical minimum and maximum values for the weekly series from 2002 through 2006.

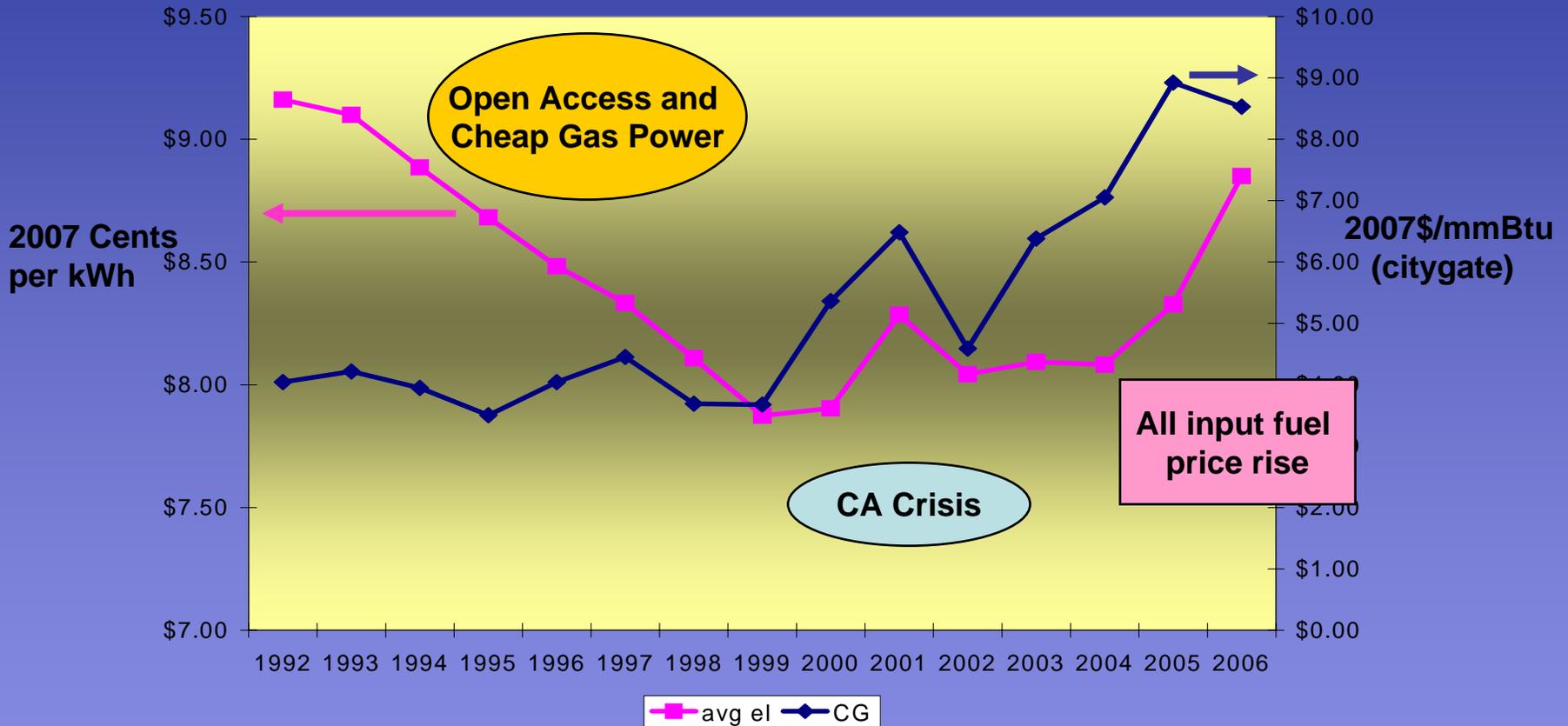
Source: Form EIA-912, "Weekly Underground Natural Gas Storage Report." The dashed vertical lines indicate current and year-ago weekly periods.



Factors Affecting Growth in Natural Gas Demand

- **Economic Growth**
 - Expansion of industrial use - Offset by industrial relocation?
- **Residential and Commercial Sector**
 - Use for Space (Home) Heating
 - Highly weather dependent
 - Larger homes
- **Competition in Power Generation**
 - Expansion of Coal, Nuclear would limit growth in gas demand

Real Average Electricity and Gas Prices



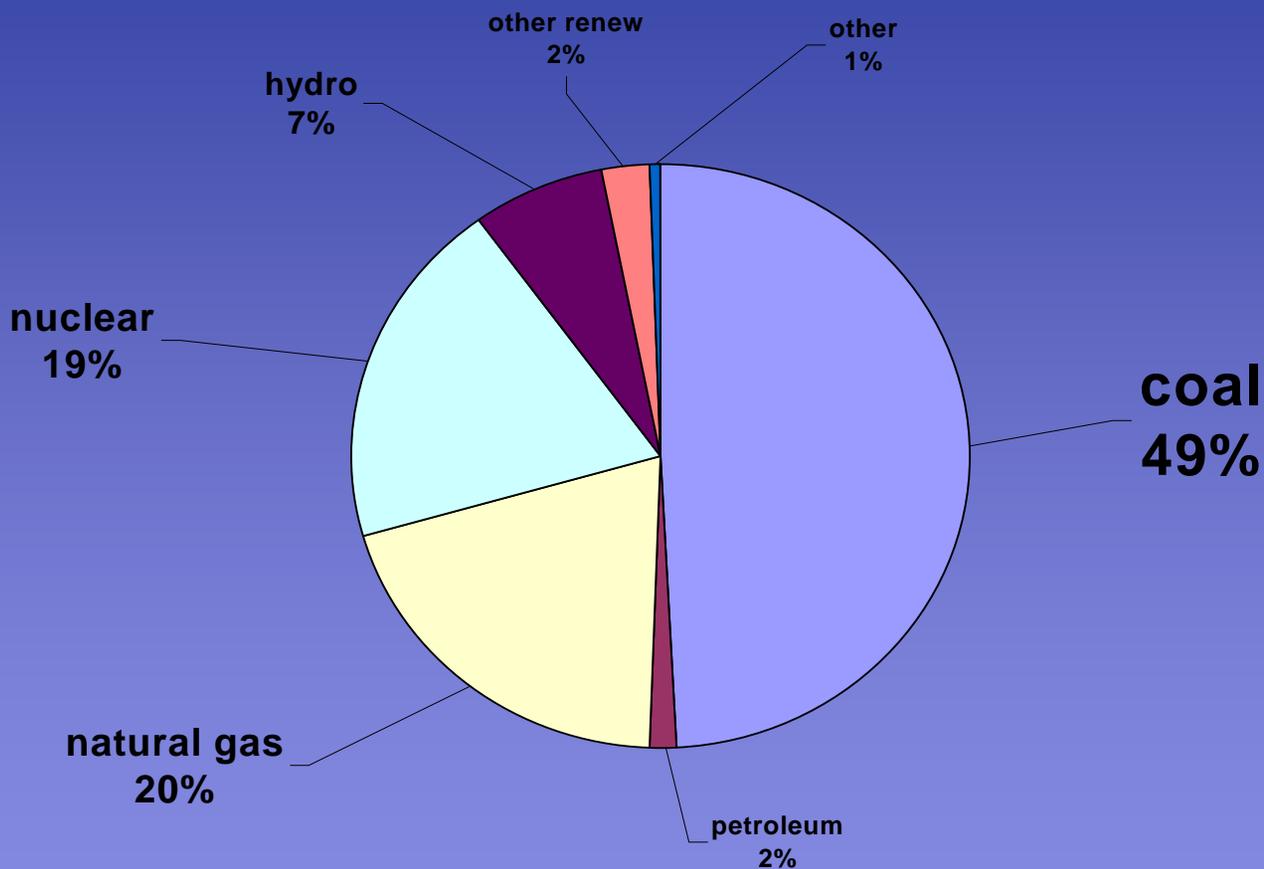
Source: EIA: Average Annual Retail Price, *Electricity Power Monthly*, March 2007;
 Average Annual Citygate Price, *Natural Gas Navigator*;
 BEA, GDP Price Deflator

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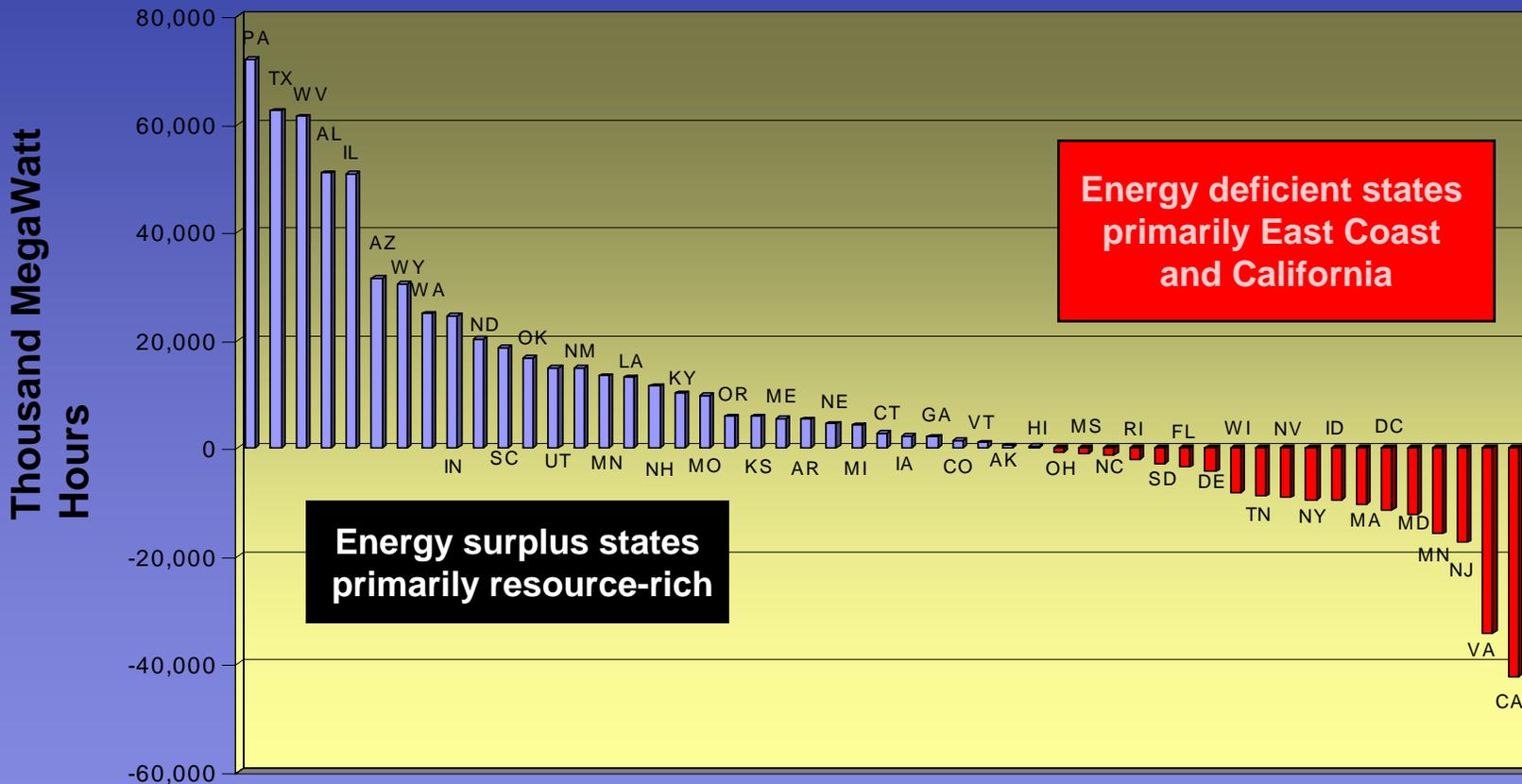
US Power Generation 2006, by fuel source



Source: EIA: *Electric Power Monthly* March 2007

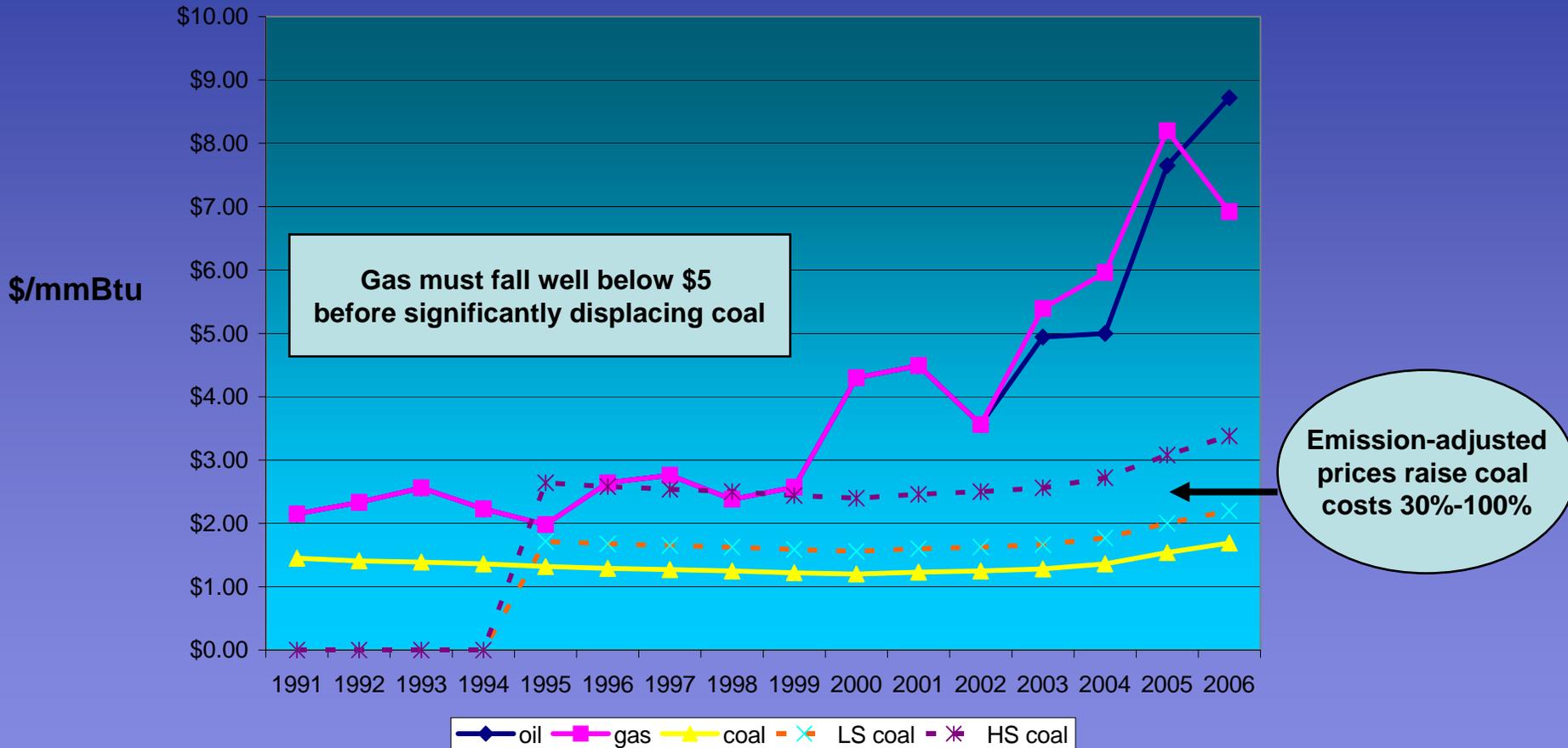


State Power Balances, 2006



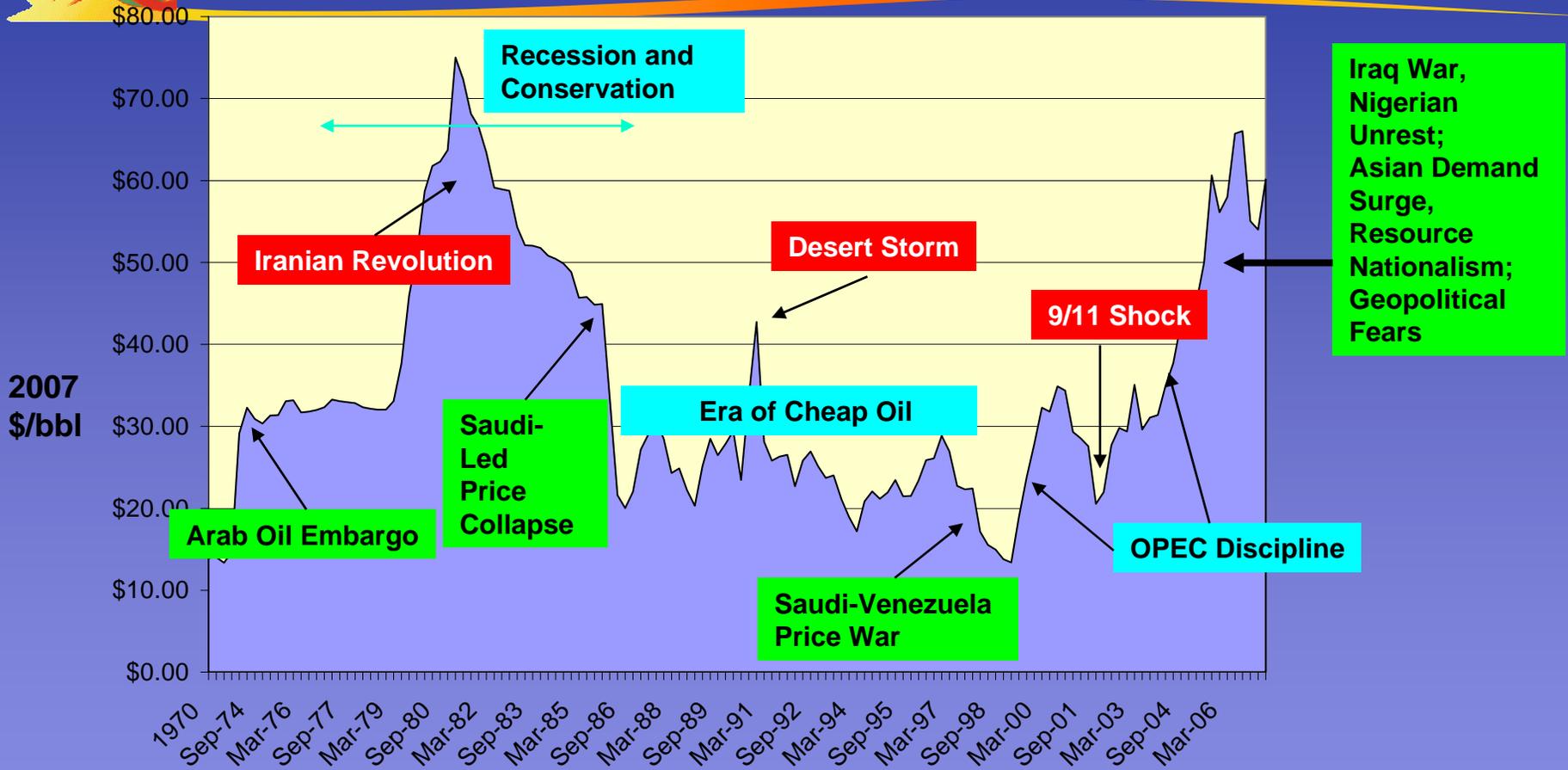
Source: EIA. Electric Power Monthly, March 2007,

Fossil Fuel Cost for Electricity Generation



Source: EIA. Electric Power Monthly, March 2007, Table 4.1, Argus coal weekly

Real Acquisition Cost of Crude Oil, United States 1974-2007

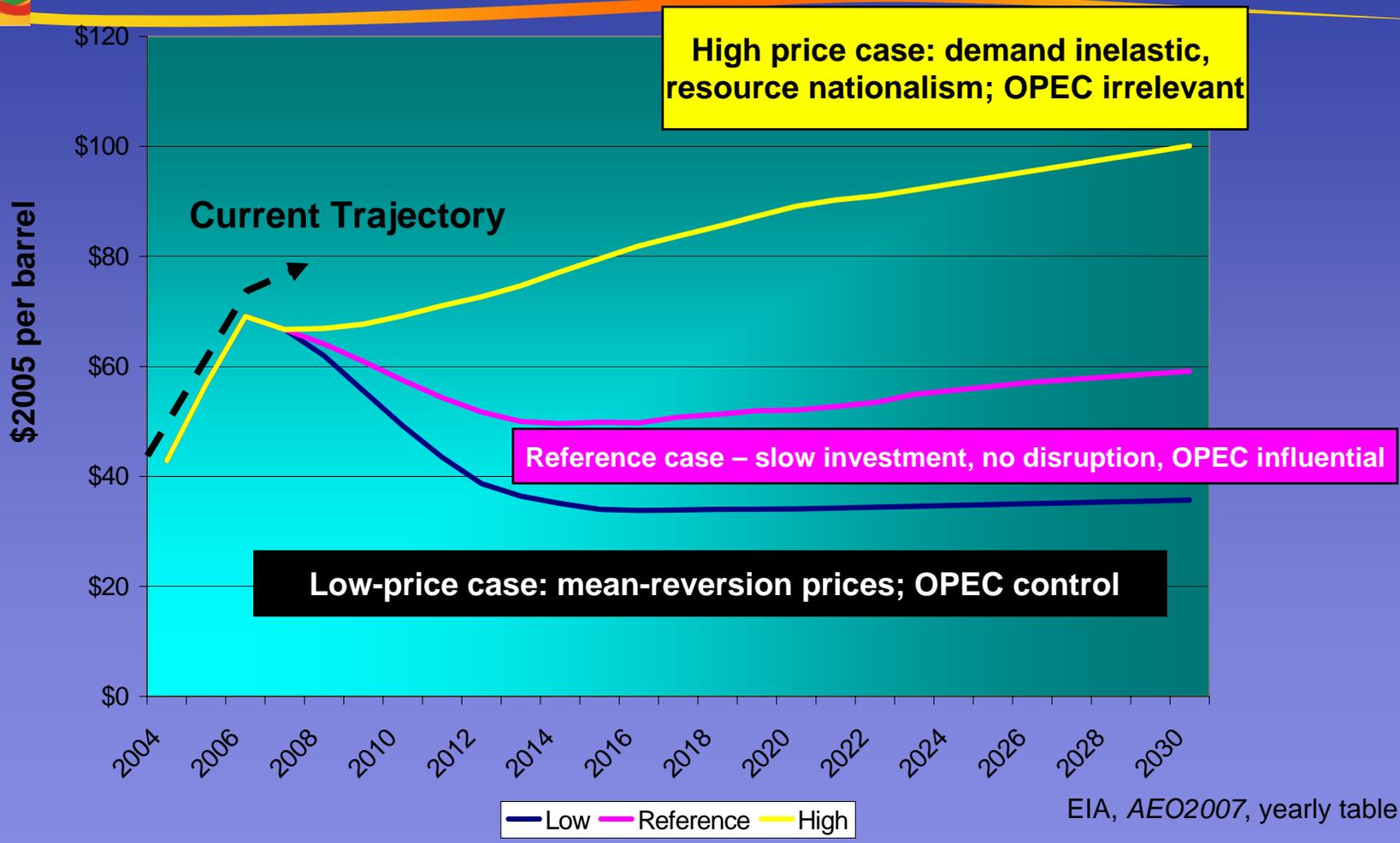


Sources: EIA, *Petroleum Marketing Monthly*; GDP Deflator, Bureau of Economic Analysis

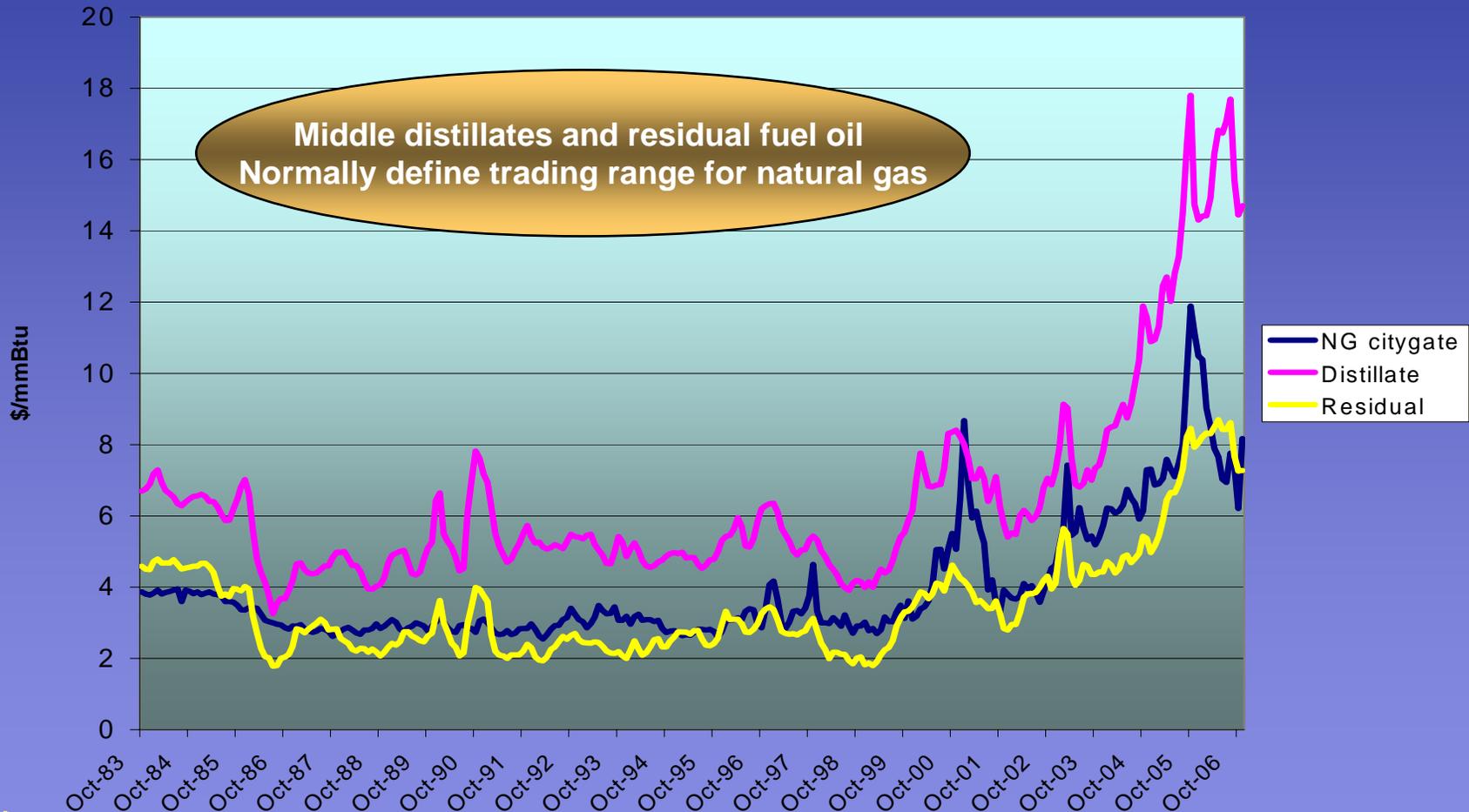
Iraq War, Nigerian Unrest; Asian Demand Surge, Resource Nationalism; Geopolitical Fears



World Oil Price Projections



Petroleum Products and Natural Gas Price Range



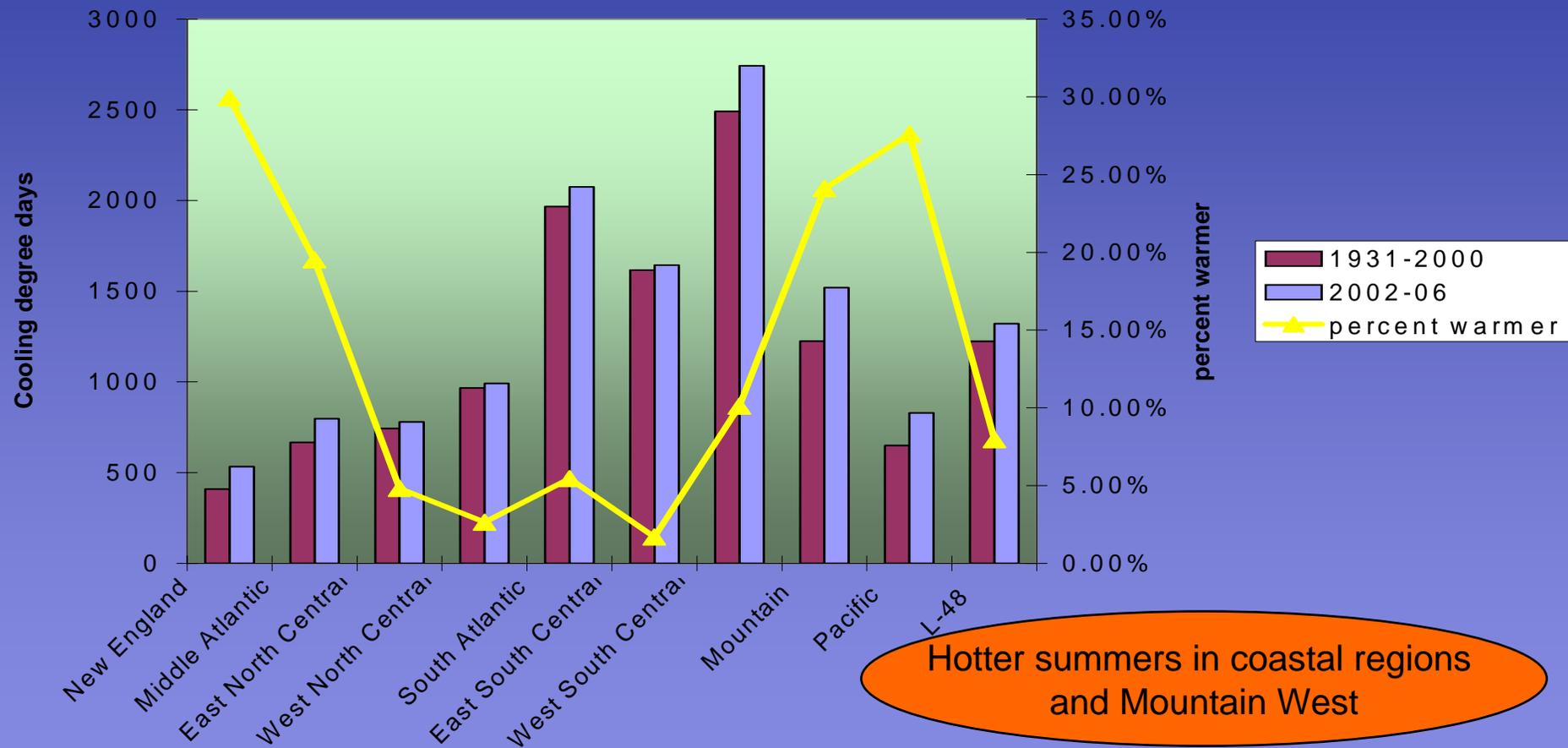
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Source, EIA, *Natural Gas Navigator* and *Petroleum Navigator*
Product Prices adjusted by approximate heat content.

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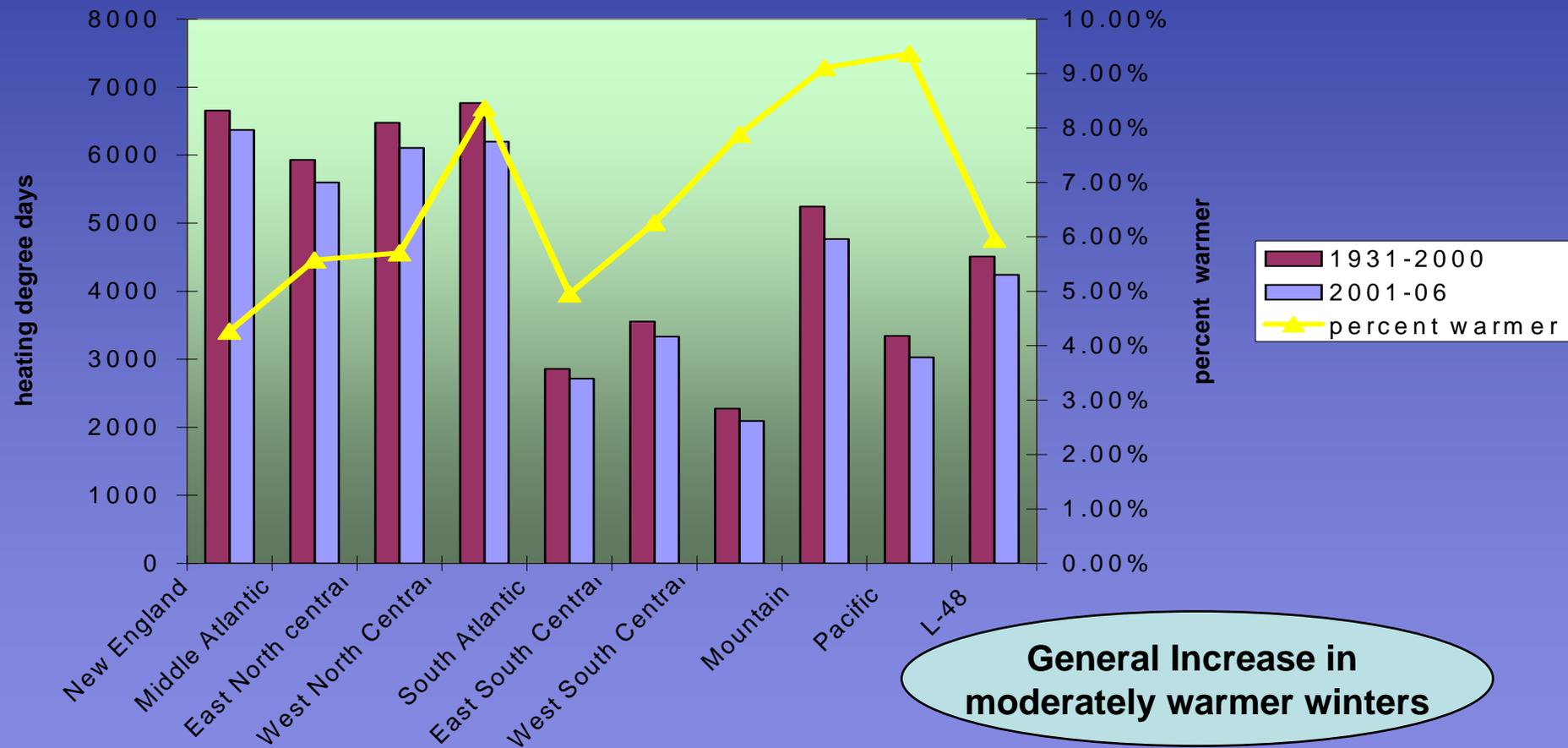
Regional Cooling Degree Days



Hotter summers in coastal regions and Mountain West



Regional Heating Degree Days

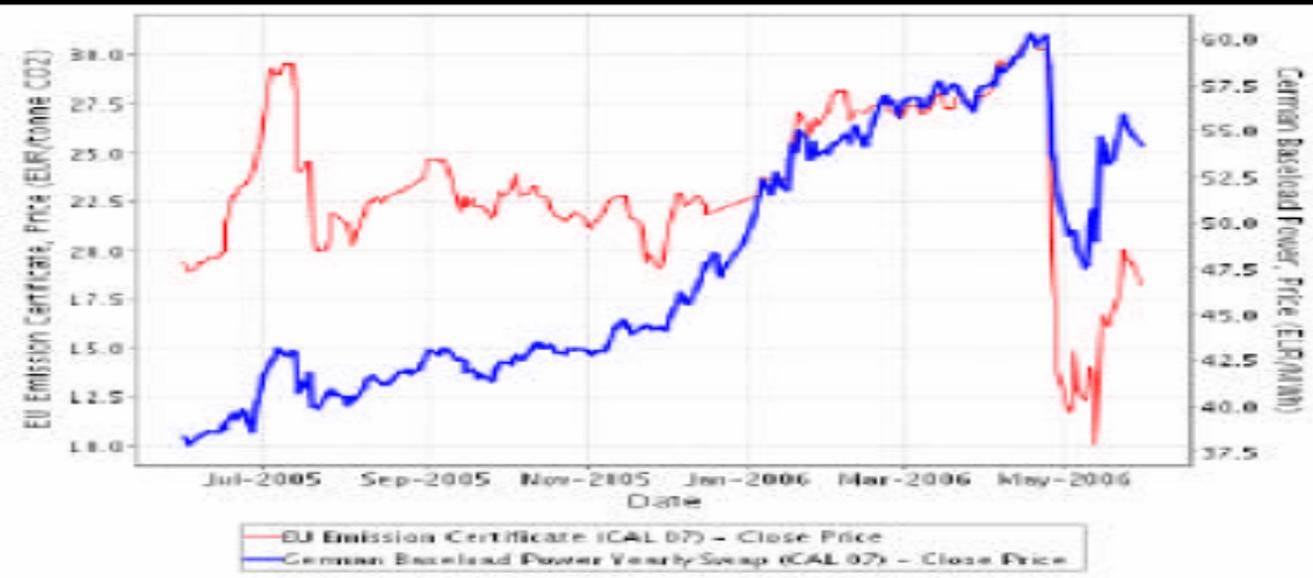


General Increase in moderately warmer winters



Emissions and Power

Figure 2: Emissions & German baseload price



Source: DB Global Markets Research

Source: Deutsche Bank, *Commodities Weekly*, June 2, 2006

European Experience has shown that carbon prices must be high enough to induce switching from coal to gas, raising the overall price of power when constraints bind



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