

Energy Efficiency's Role in Getting America Out of Its Energy Straightjacket

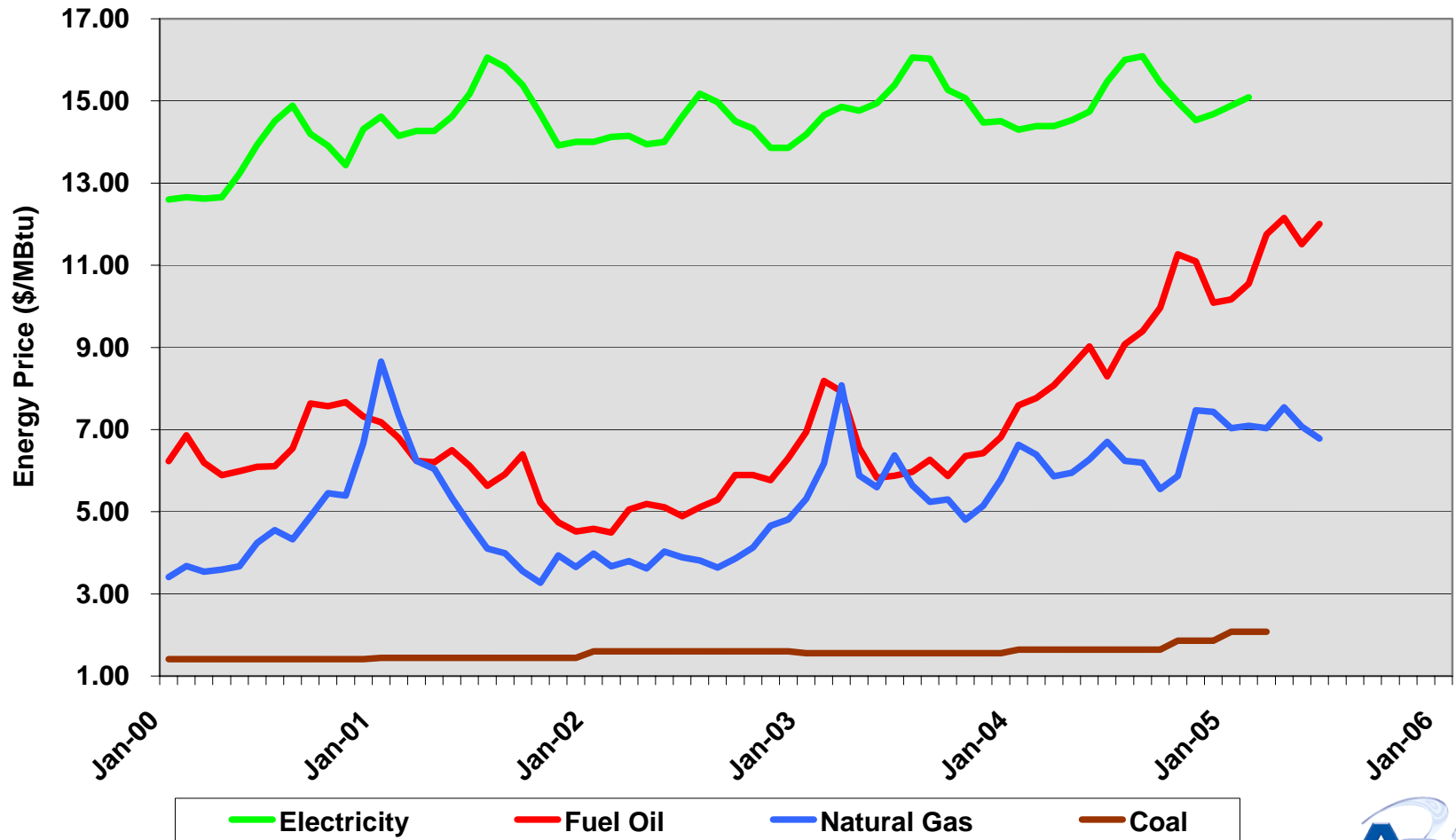
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Industrial Energy Prices



Source: EIA 2005



Interaction Between Energy Markets

- Fuel switching mean oil and gas linked
- NatGas likely to become more of a global market
- Coal Supplies tighten
- NatGas increasingly the marginal fuel for electricity, putting pressure on electric prices
- Electricity prices will be driven up by fuel prices and increased demand



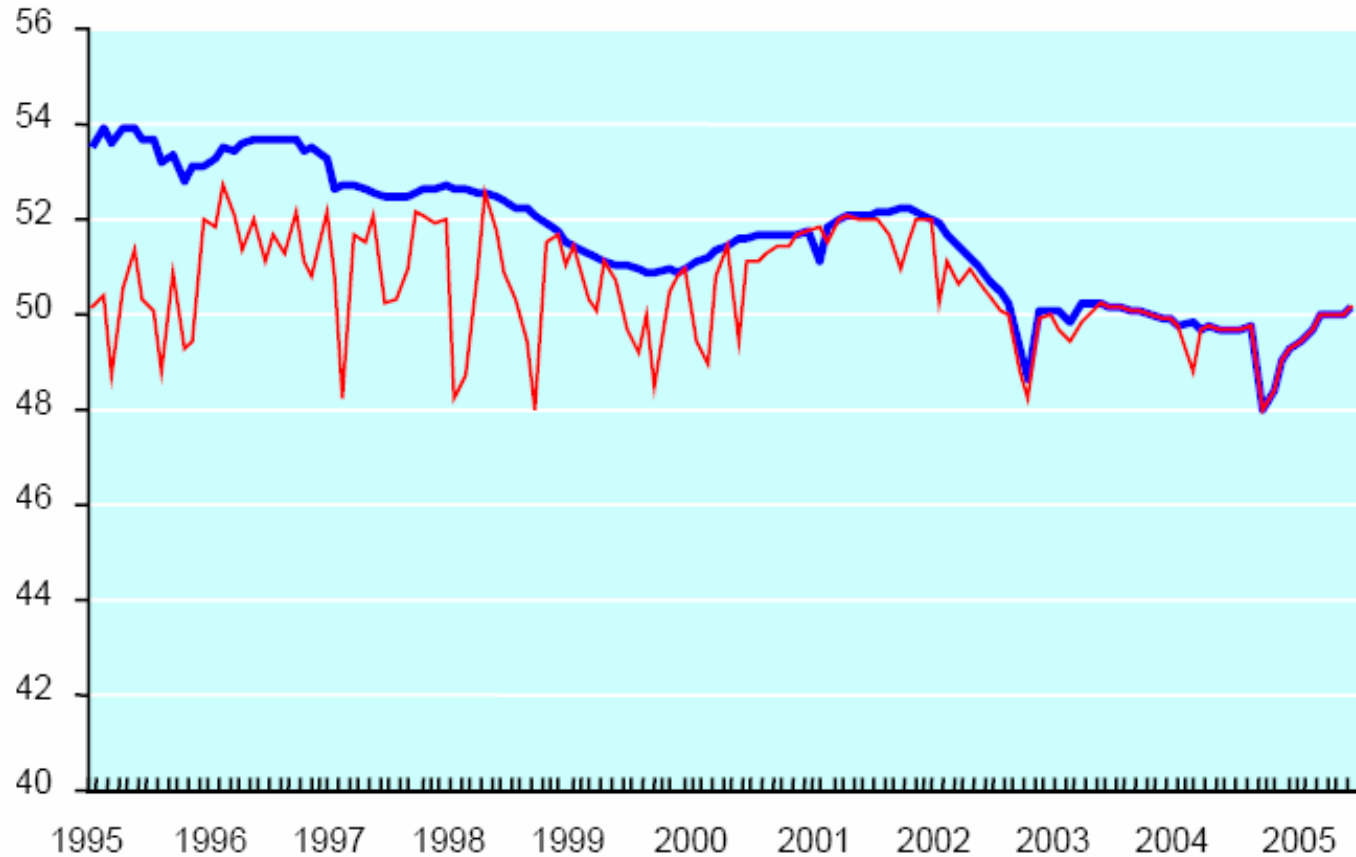
The Energy Straitjacket

- No current “supply” limitations – rather “deliverability” limitations
- Demand surging in all energy markets
- Oil markets constrained by refining
- Coal markets constrained by mining and rail capacity
- Electricity constrained by available fuel
- Limited fuel switching options



Natural Gas Markets

Lower 48 Gas Production vs. Deliverability (Bcf per day)



Source: EEA 2005

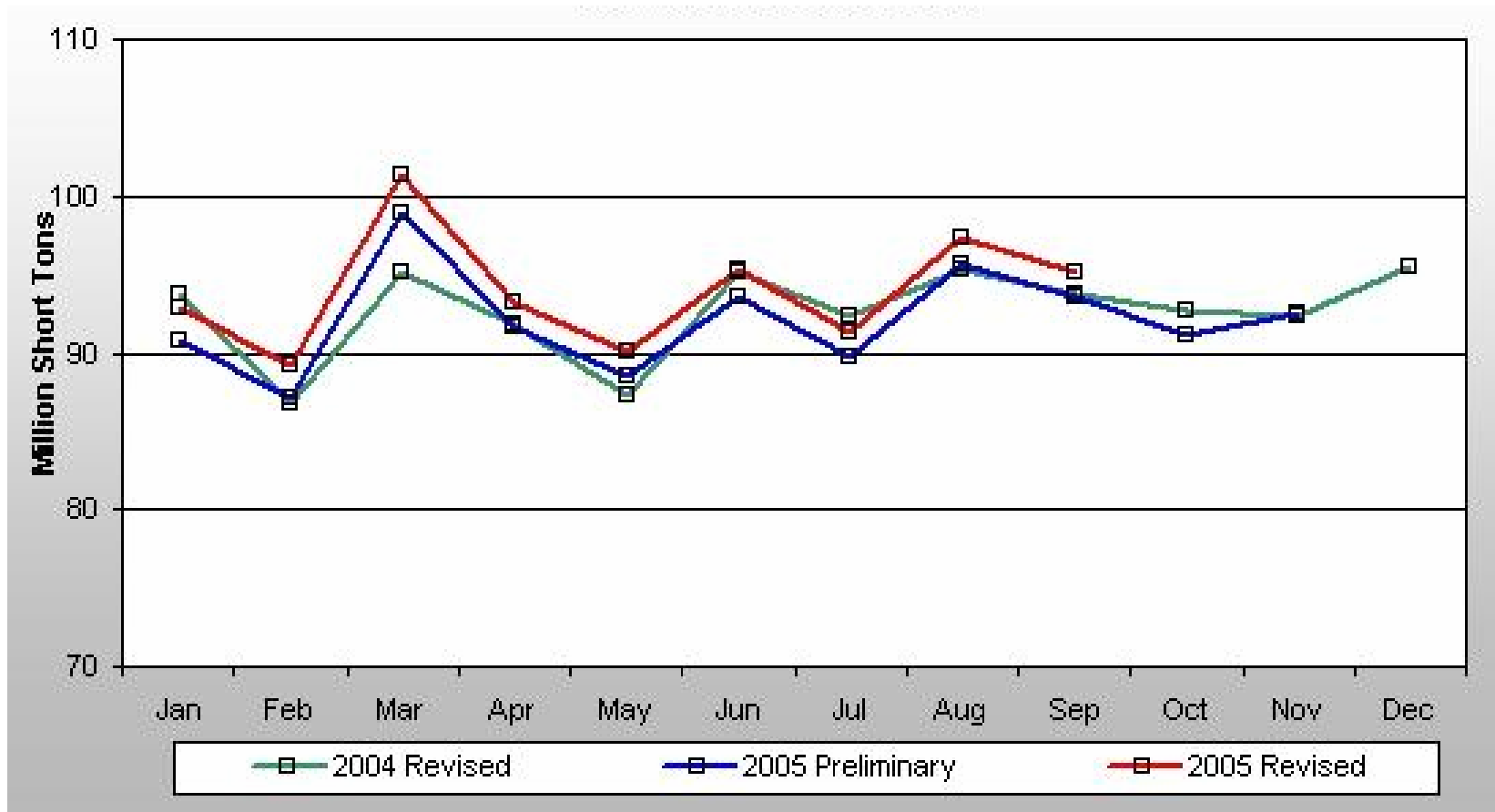


Coal Markets Tightening

- Coal demand up on high gas prices
- Industrial consolidation reduced spare capacity – need major new investments
- Rail capacity limited – shortage of rail cars
- Later winter 2005 storms damaged western rail lines



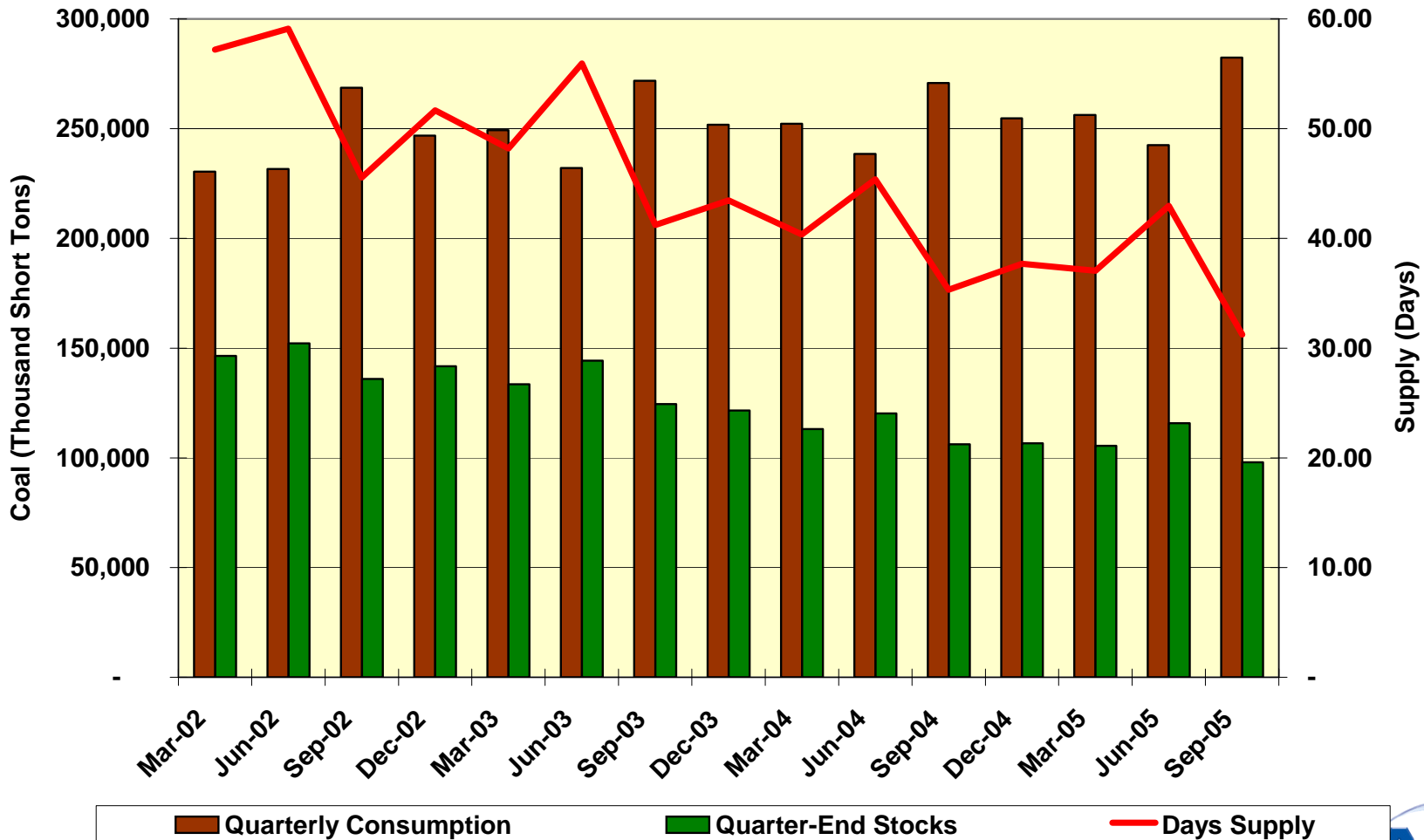
Coal Production Flat



Source: EIA 2005



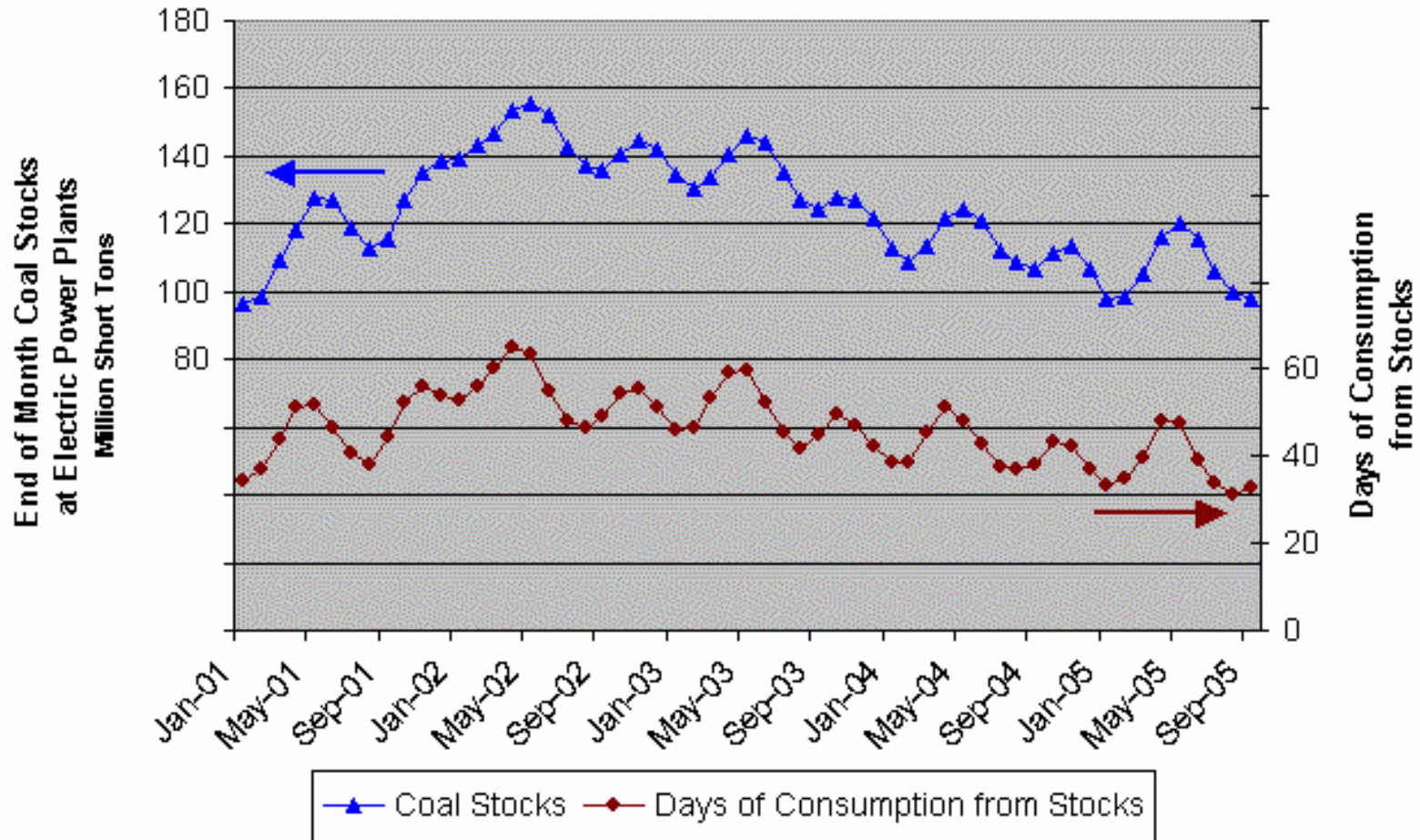
Coal Markets Tightening



Source: ACEEE from EIA Data 2006



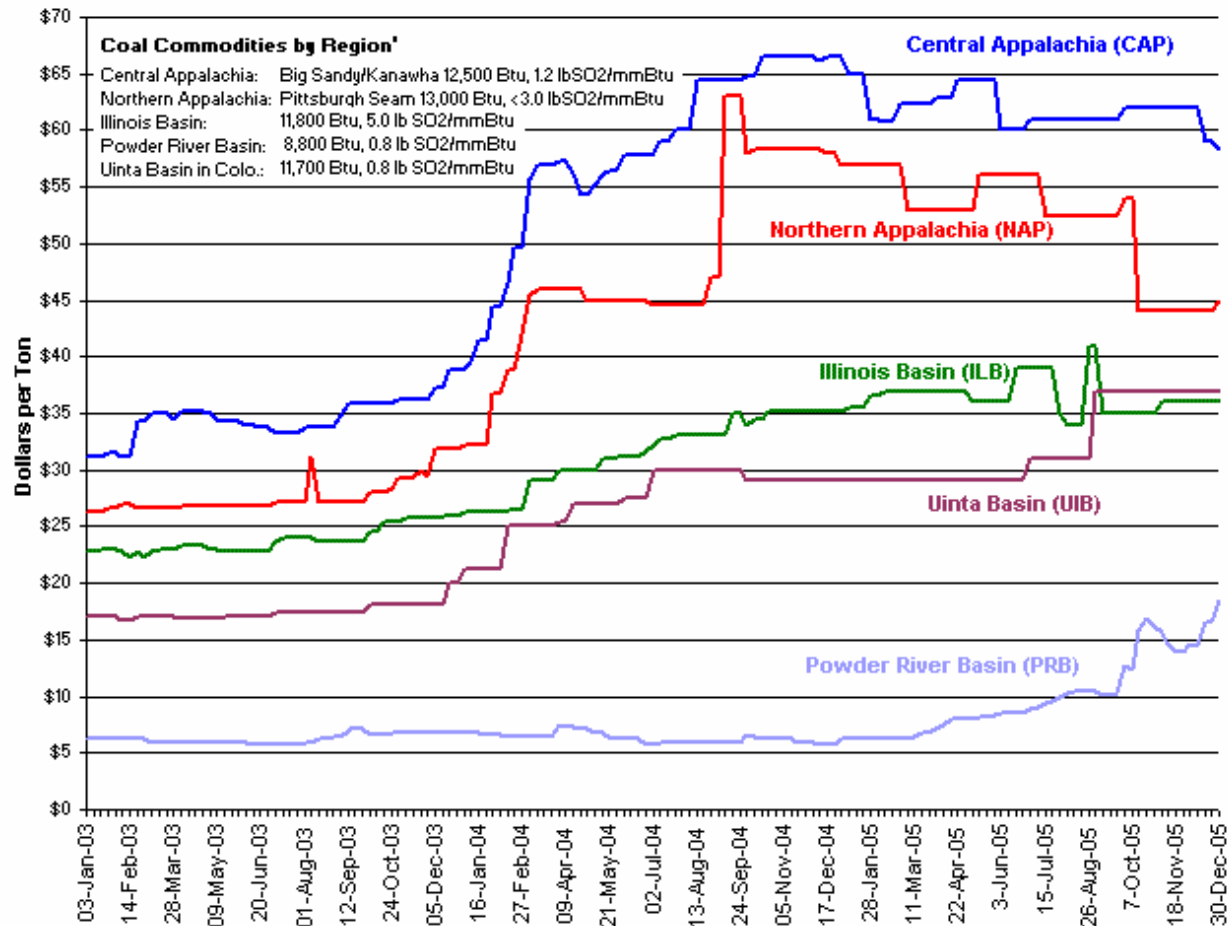
Coal Stocks at Electric Power Plants



Source: EIA 2006



Average Weekly Coal Spot Prices



Source: Platts Coal Outlook 2005



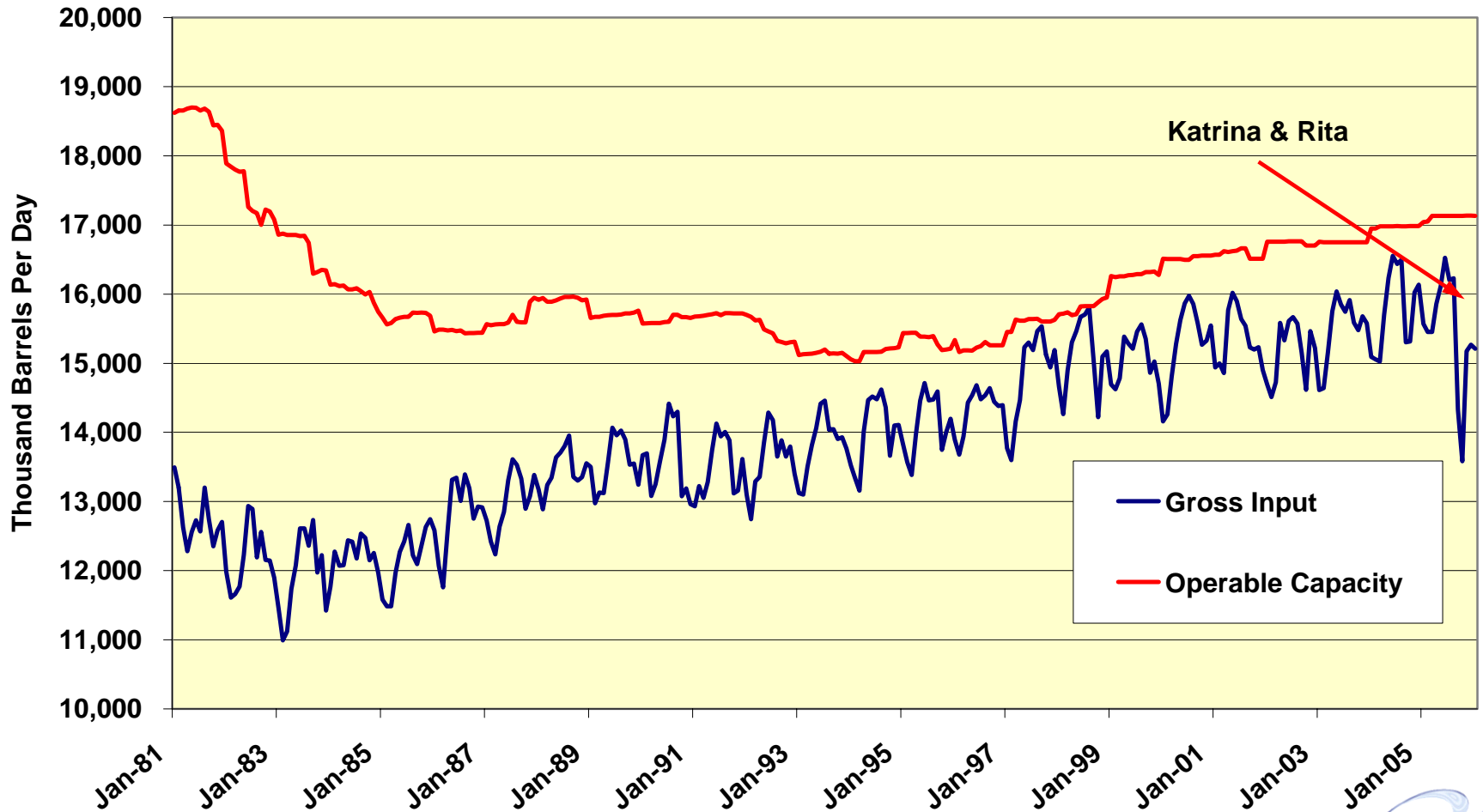
Oil Markets Tight

- Crude Production Near Capacity
- Refined Products Very Tight
- Limited Refining means Competition between Refined Products – Gasoline and Distillate
- Markets Vulnerable to Disruptions – Storms, instability, terrorism
- Global Price Driven by Increasing Demand in U.S., China and India



Thunder Horse

Refining Capacity vs. Production



Source: EIA 2006

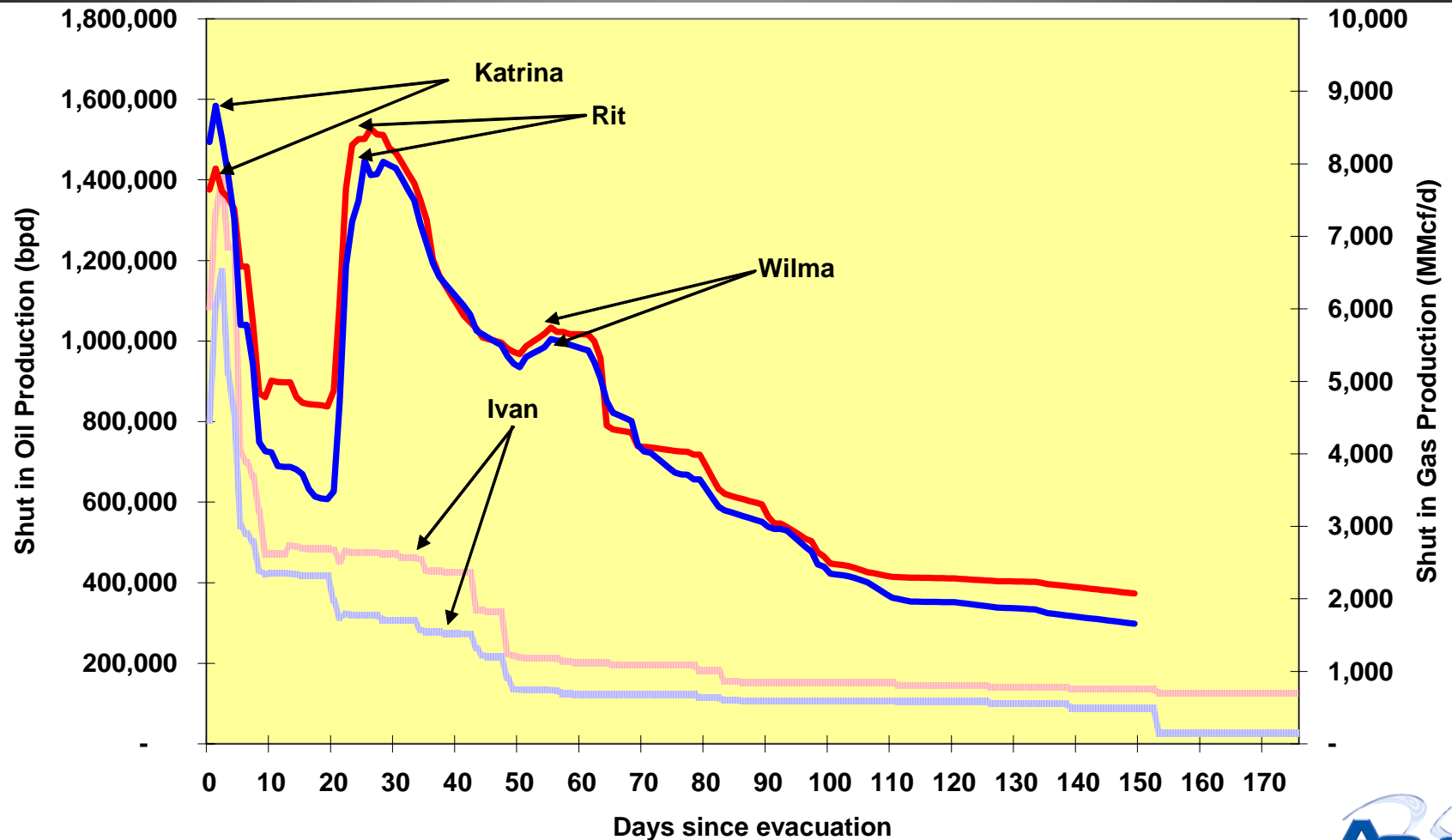


The Weather Wild Card

- Extreme weather affects production of oil, gas and coal
 - Late winter snows disrupted western coal
 - Hurricanes disrupted both production and processing
- Extreme weather increases demand
 - 3 cool summer and 4 warm winters
 - Summer 2005 ~4% above “normal”, but >75% warmer than 2004
 - We have had a warm fall, cold December, and warm January



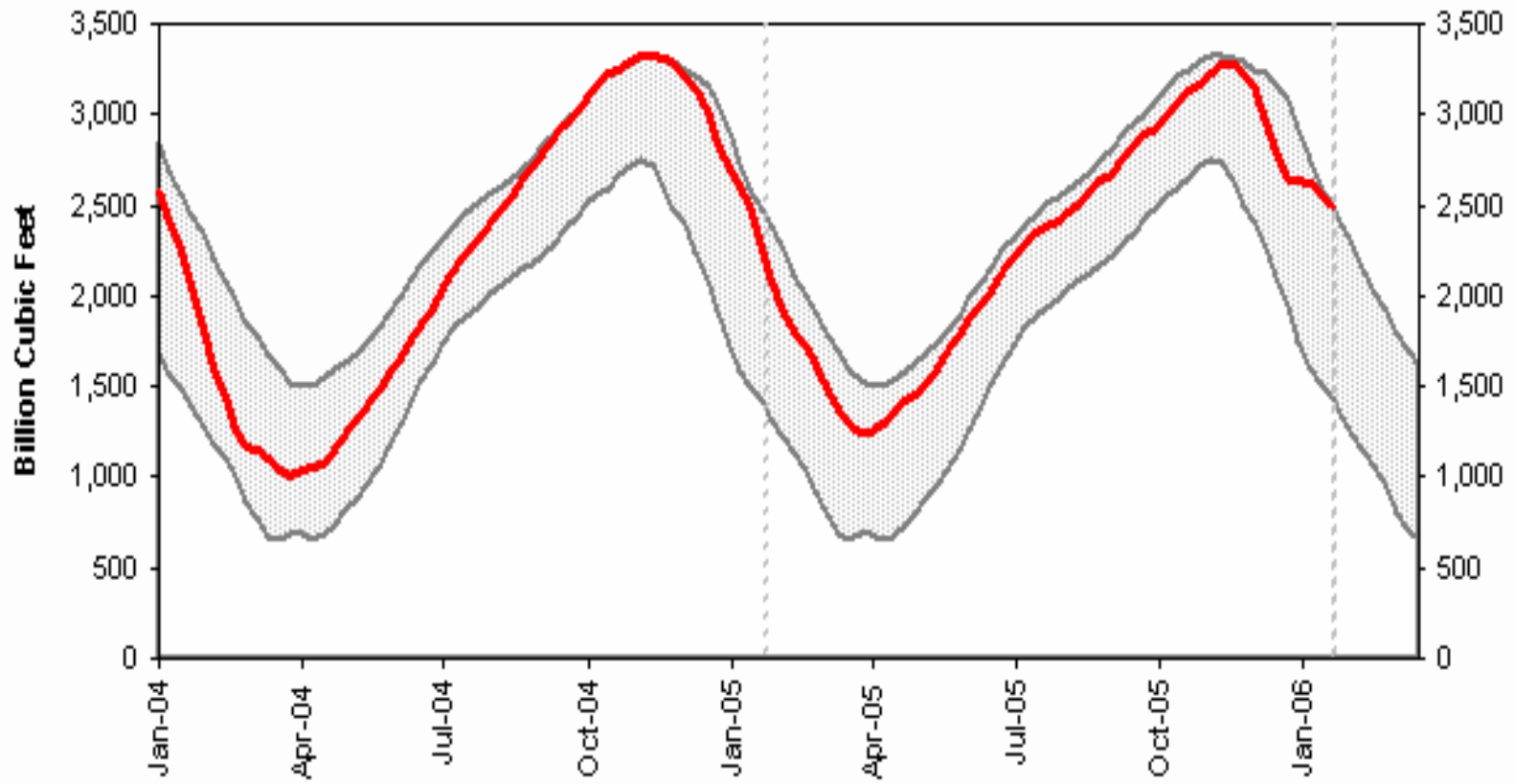
Impacts on Oil & Gas Production



Source: DOI Minerals Management Service 2005-2006



Natural Gas Storage



Source: EIA 2006

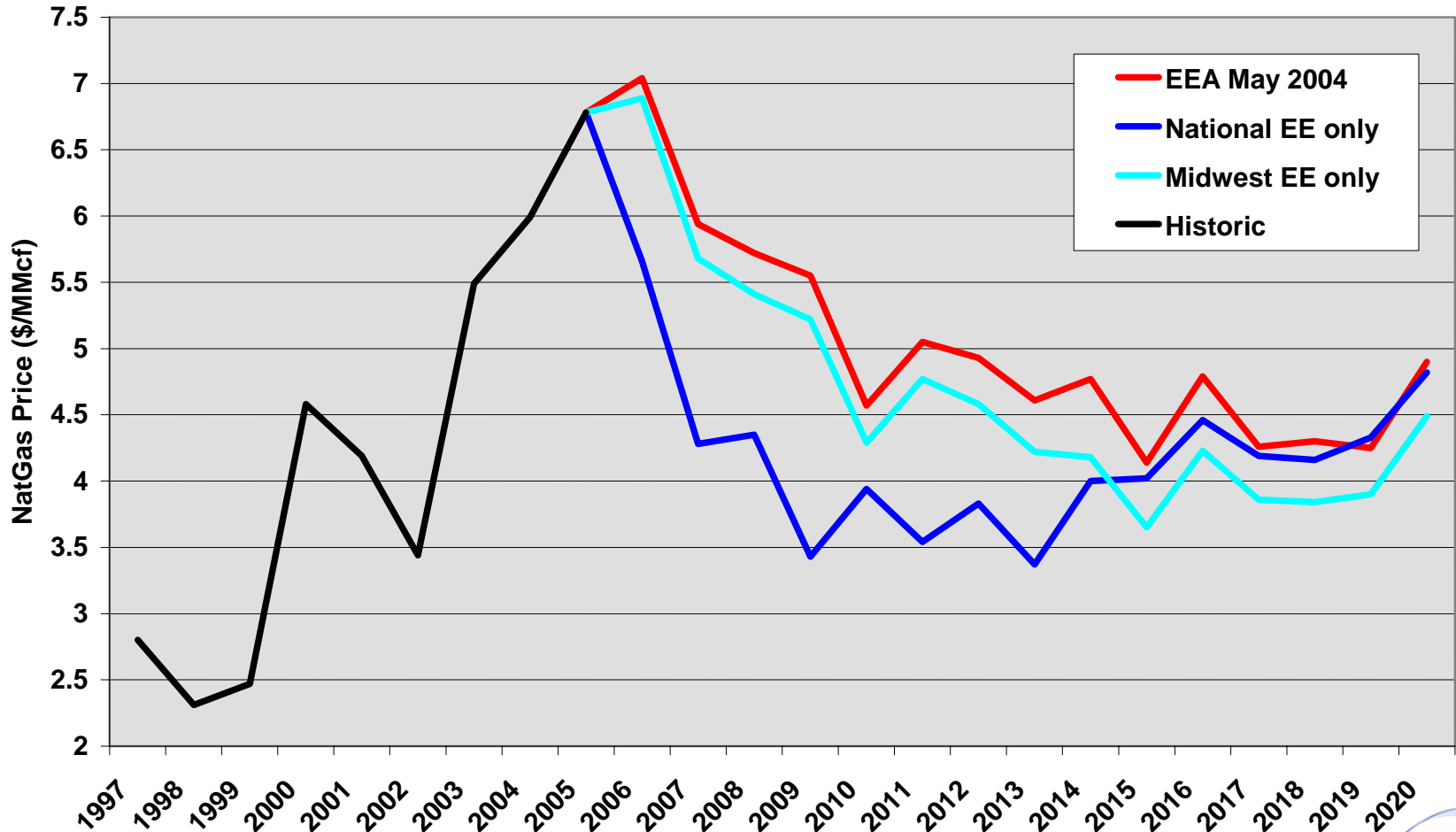


Role for Energy Efficiency

- Supply solutions take years to come to market
- If modest increases in demand produced large price increases, then small decreases should produce large price reductions
- Efficiency energy can produce savings in both the near-term and longer-term



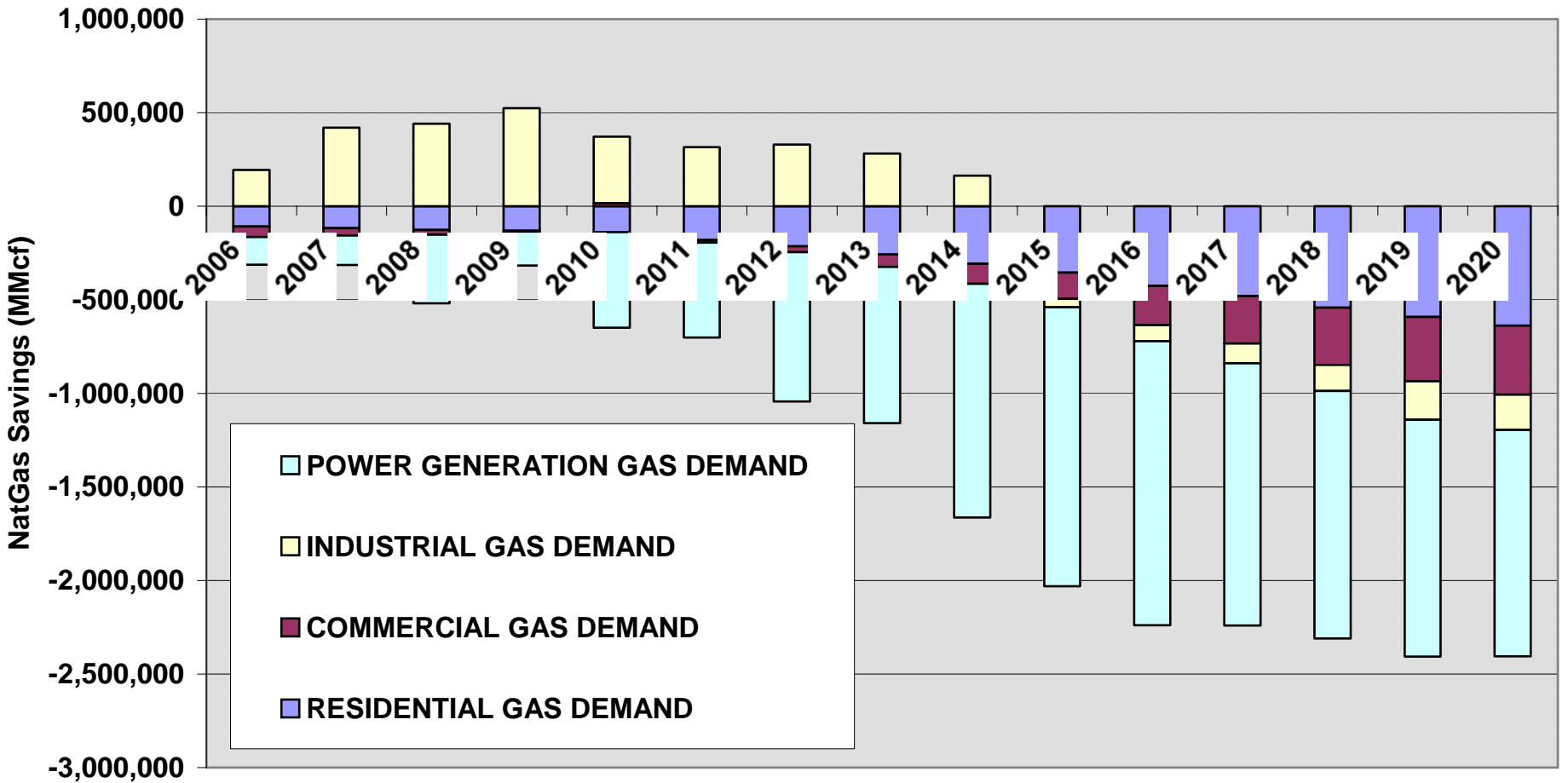
Impact of Energy Efficiency on Henry Hub Natural Gas Pricing



Source: EEA 2004 and ACEEE 2005



Gas Consumption Reductions from Energy Efficiency



Source: ACEEE 2005



Conclusions

- We can do something about high energy prices – encourage energy efficiency
- Only viable near-term options – supply options will take 2-7 years
- Electric efficiency critical because of expanded natural gas generation
- National decision makers need to lead **NOW** – consumers are motivated but need direction
- Sooner we start the sooner states will see benefits



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For more information and updates on Natural
Gas and Energy Efficiency visit:

<http://aceee.org/energy/natlgas.htm>

