

# America's Energy Straight Jacket

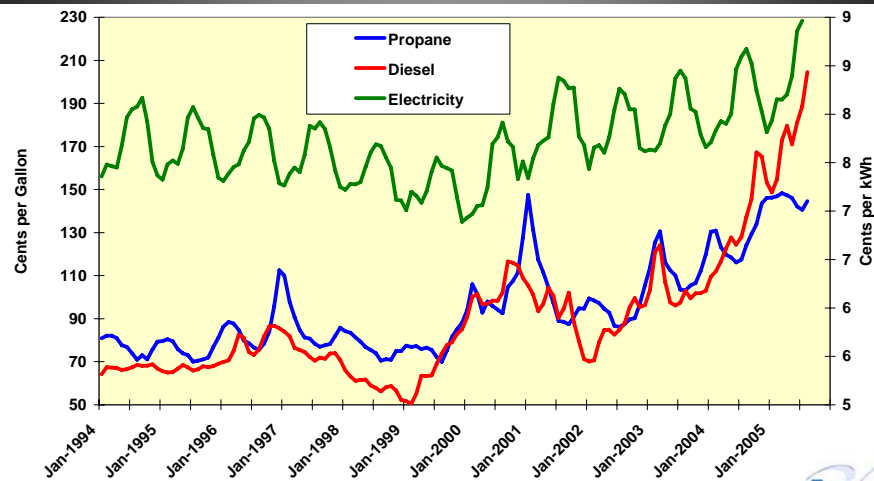
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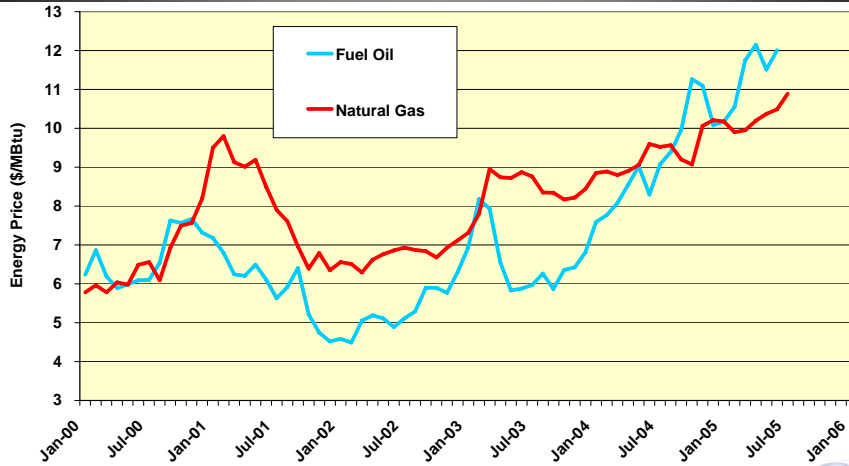
## Average Ag Energy Prices



Source: EIA 2005



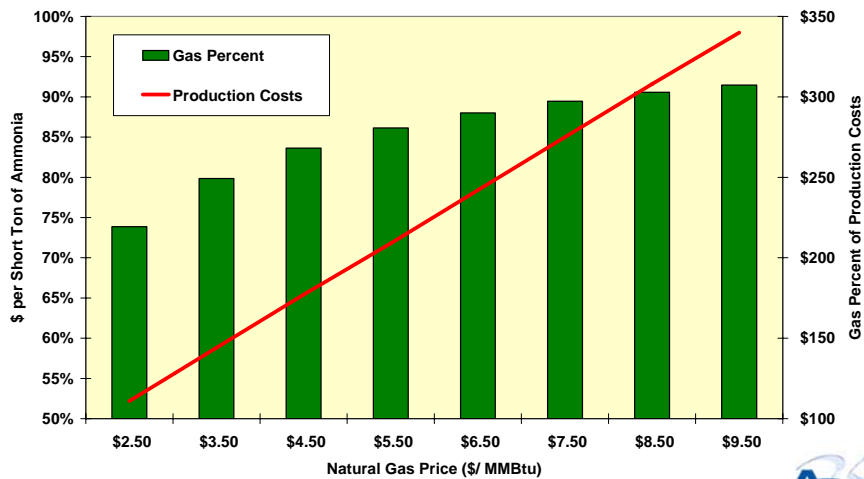
# Average Ag Energy Prices



Source: EIA 2005



# Impact of NatGas Prices on Fertilizer Prices



Source: CERA 2005



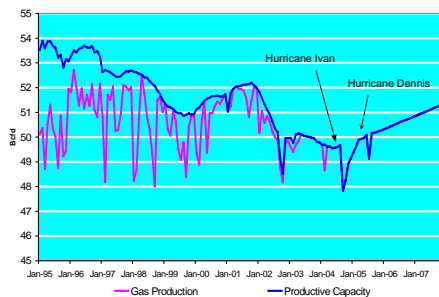
# The Energy Straight Jacket

- 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

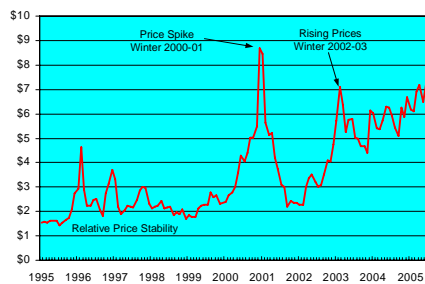


# Natural Gas Markets

Lower-48 Dry Gas Production vs. Dry Gas Capacity (BCFD)



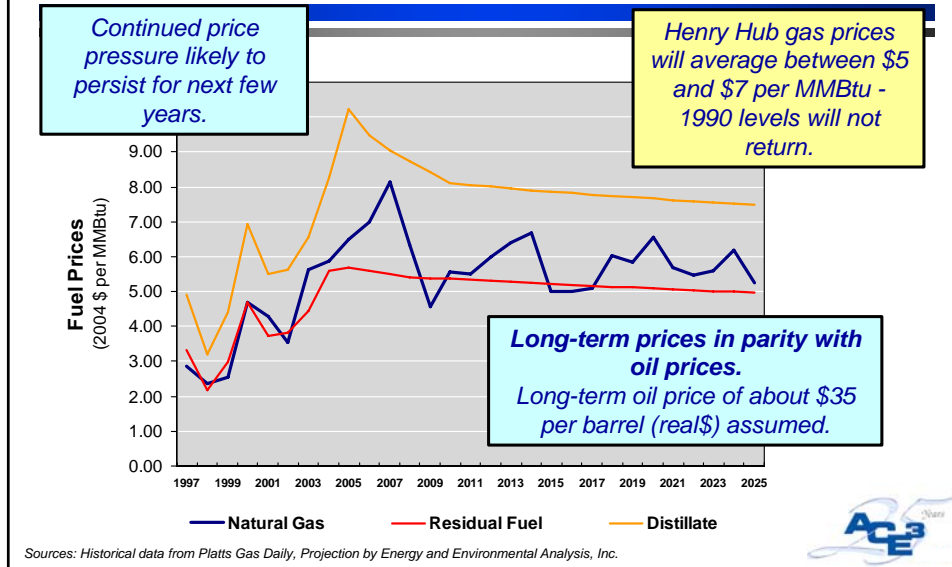
Historical Gas Price at Henry Hub (\$ per MMBtu)



Source: EEA 2005



# Natural Gas Forecast

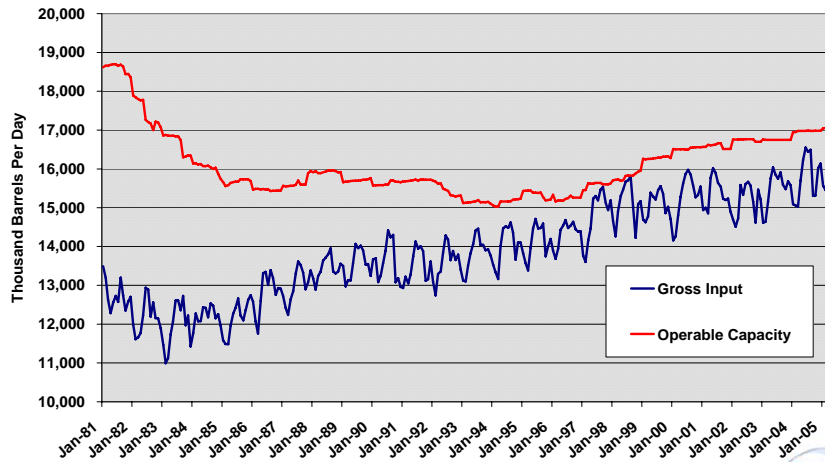


# Oil Markets Tight

- 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



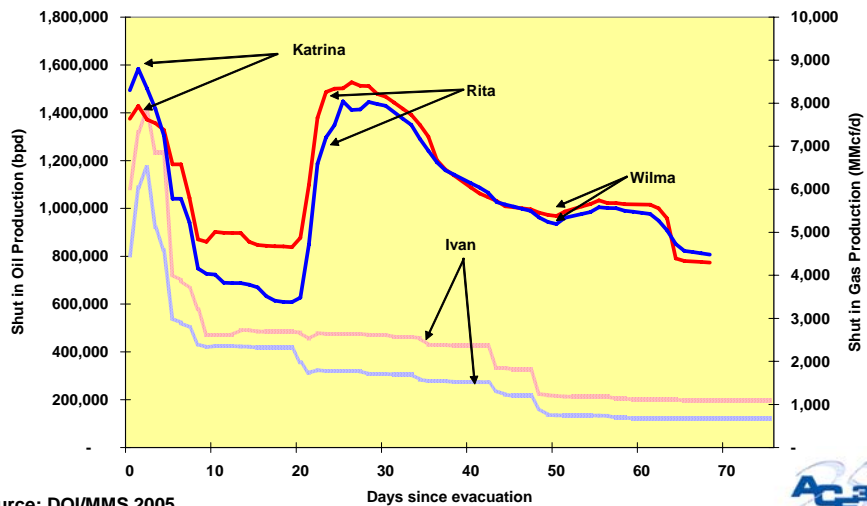
# Refining Capacity vs. Production



Source: EIA 2005



# Impacts of Hurricanes on Oil & Gas Production



Source: DOI/MMS 2005

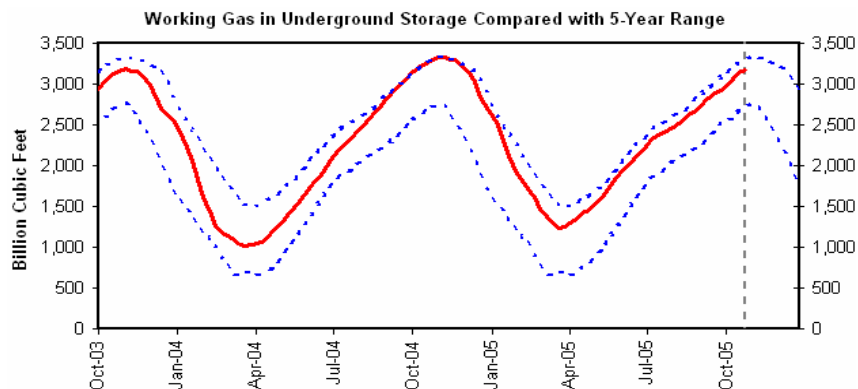


# Market Response

- Initial reduction in gasoline and diesel in response to retail price spikes
- Increased imports of refined productions
- Signs of recovering consumption as price begins to fall
- Refined goods markets still perilously tight



# Natural Gas Storage

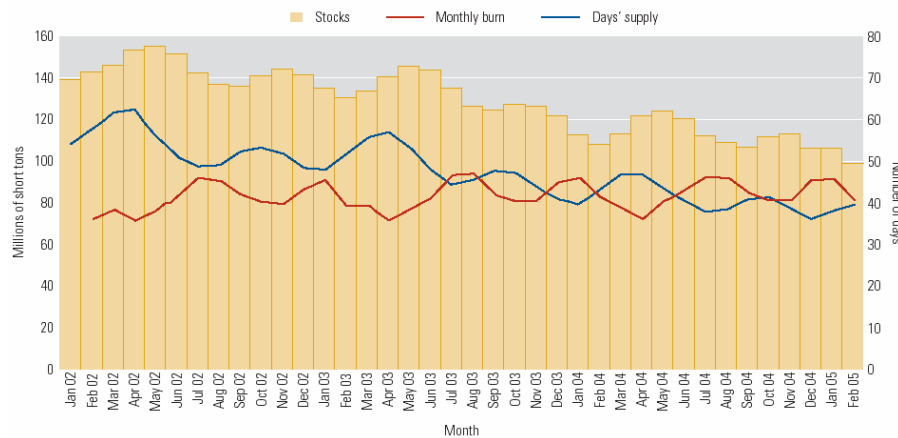


Note: The dashed lines indicate the historical range for the period 2000-2004. The solid red line represents weekly storage volumes. Source: Weekly storage values from March 15, 2002 to the present are from Form EIA-912 "Weekly Underground Natural Gas Storage Report." Values for earlier weeks are from the Historical Weekly Storage Estimates Database.

Source: EIA 2005



# Coal Markets Tightening



Source: Platts Power, June 2005



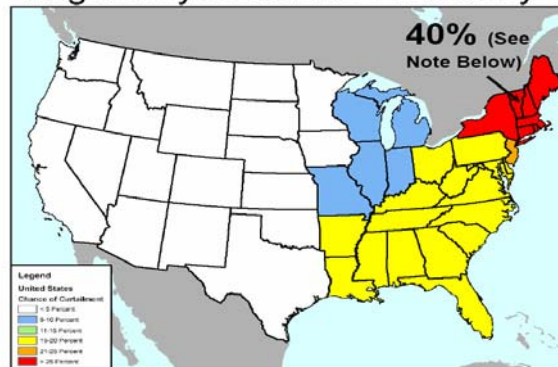
# The Weather Wild Card

- Extreme weather affects production of oil, gas and coal
- Extreme weather increases demand
  - 3 cool summer and 4 warm winters
  - Summer 2005 ~4% above “normal”, but >75% warmer than 2004
  - Concerns about cold winter
- Possible outright shortages greater this winter



# Impacts of Hurricane Outages on NatGas Markets

## INGAA Worst Case Recovery Scenario Regulatory Allocation Probability



Note: 40% probability means that there is a 2 in 5 chance that the weather will be cold enough to require regulatory allocation on a few days.

Source: INGAA 2005



# 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

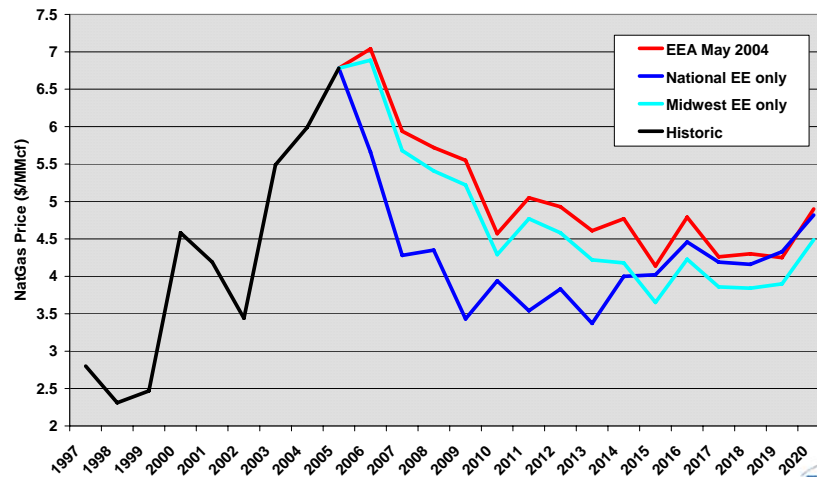


## ACEEE Research Approach

- Sector estimates by State of the near-term implementable potential for energy efficiency and conservation programs for:
  - End-User Natural Gas
  - End-User Electricity
- Calculated “reasonably achievable” savings based on sector end-uses (i.e. space heating, motors, lighting...)



## Impact of Energy Efficiency on Henry Hub Natural Gas Pricing



Source: EEA 2004 and ACEEE 2005



# Conclusions

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- 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



# Contact Information

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

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

