

Role of Energy Efficiency in Rebalancing Natural Gas Markets

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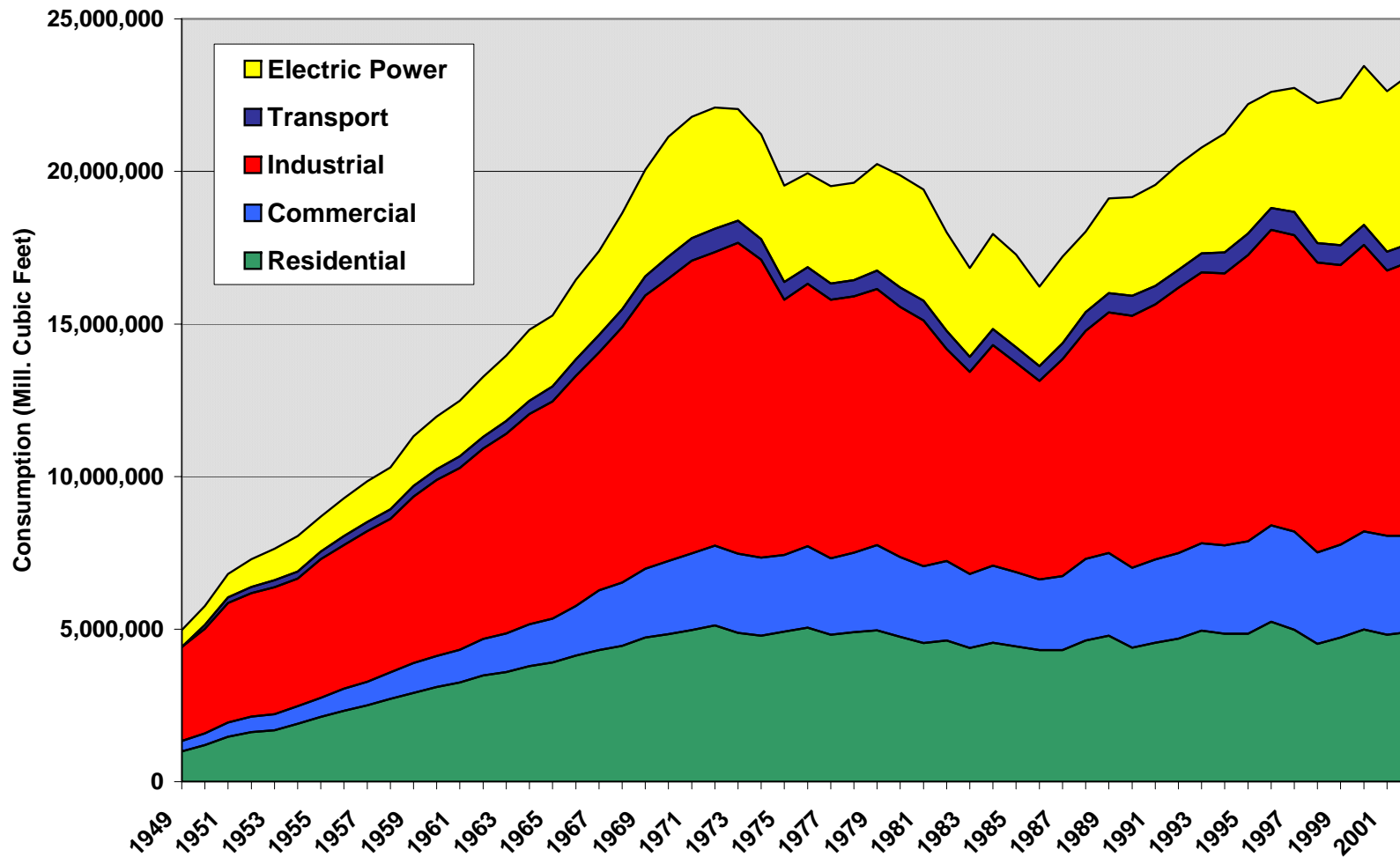


The American Council for an Energy Efficient Economy (ACEEE)

- Non-profit (501c (3)) dedicated to advancing energy efficiency through research and dissemination.
- 25 staffers in Washington DC, Delaware, Michigan and Wisconsin
- Industry, Buildings, Utilities, Transportation, and National Policy
- Conferences and Publications
- Funding:
 - Foundation and Federal grants (50%)
 - Specific Contract work (20%)
 - Conferences and Publications (25%)



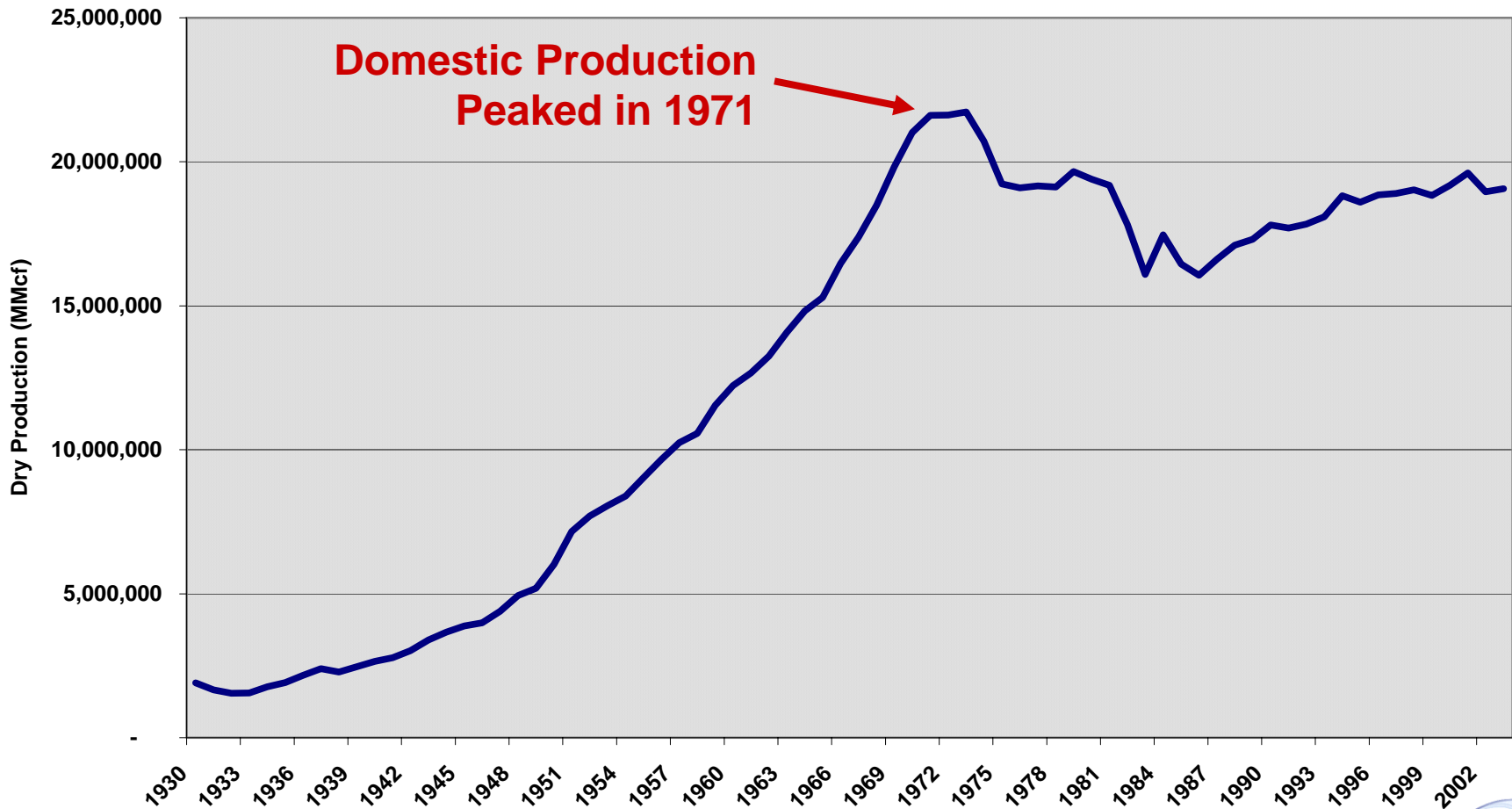
Natural Gas Consumption by Sector



Source: EIA 2003



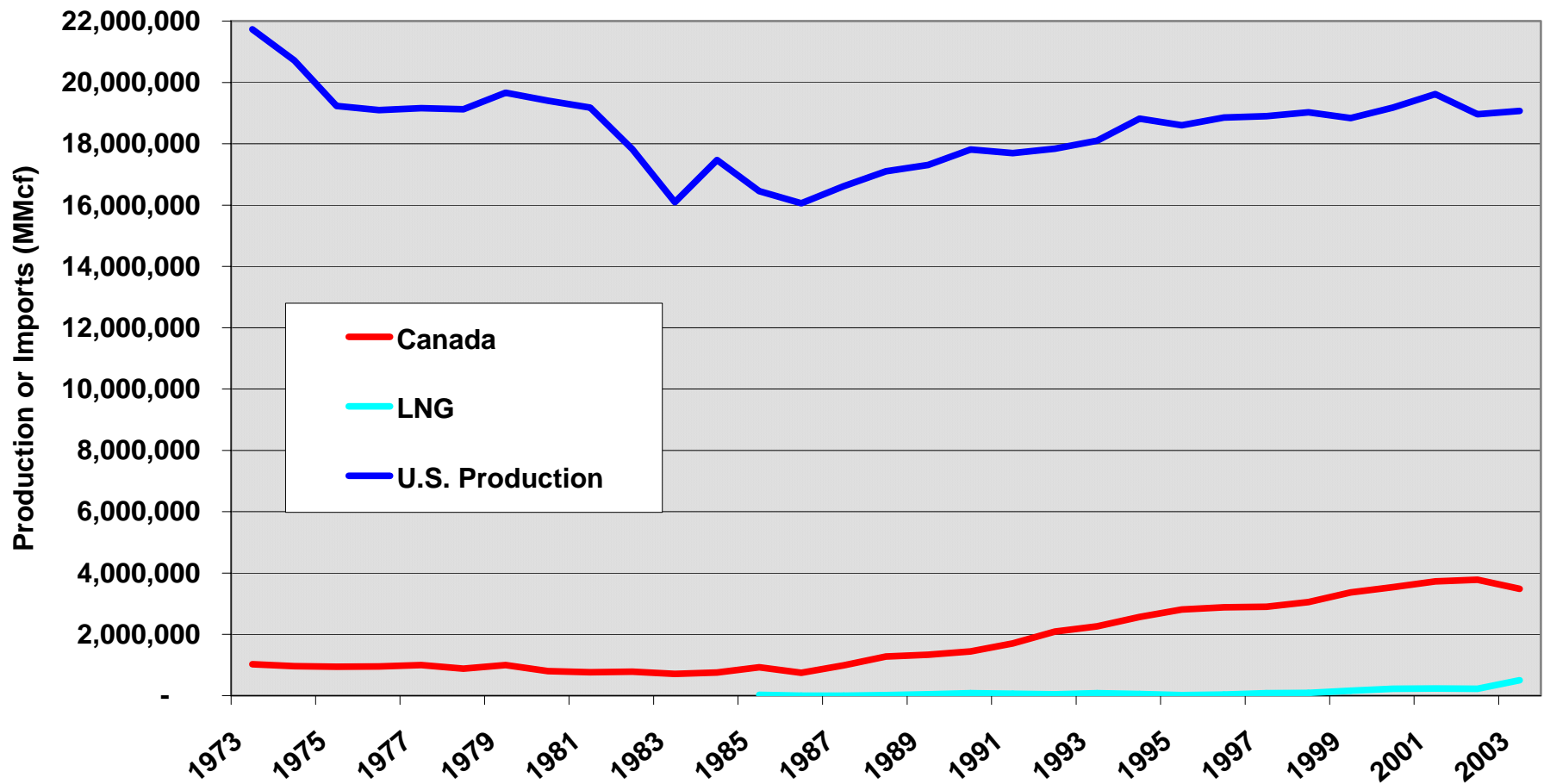
U.S. Dry Natural Gas Production



Source: EIA 2004



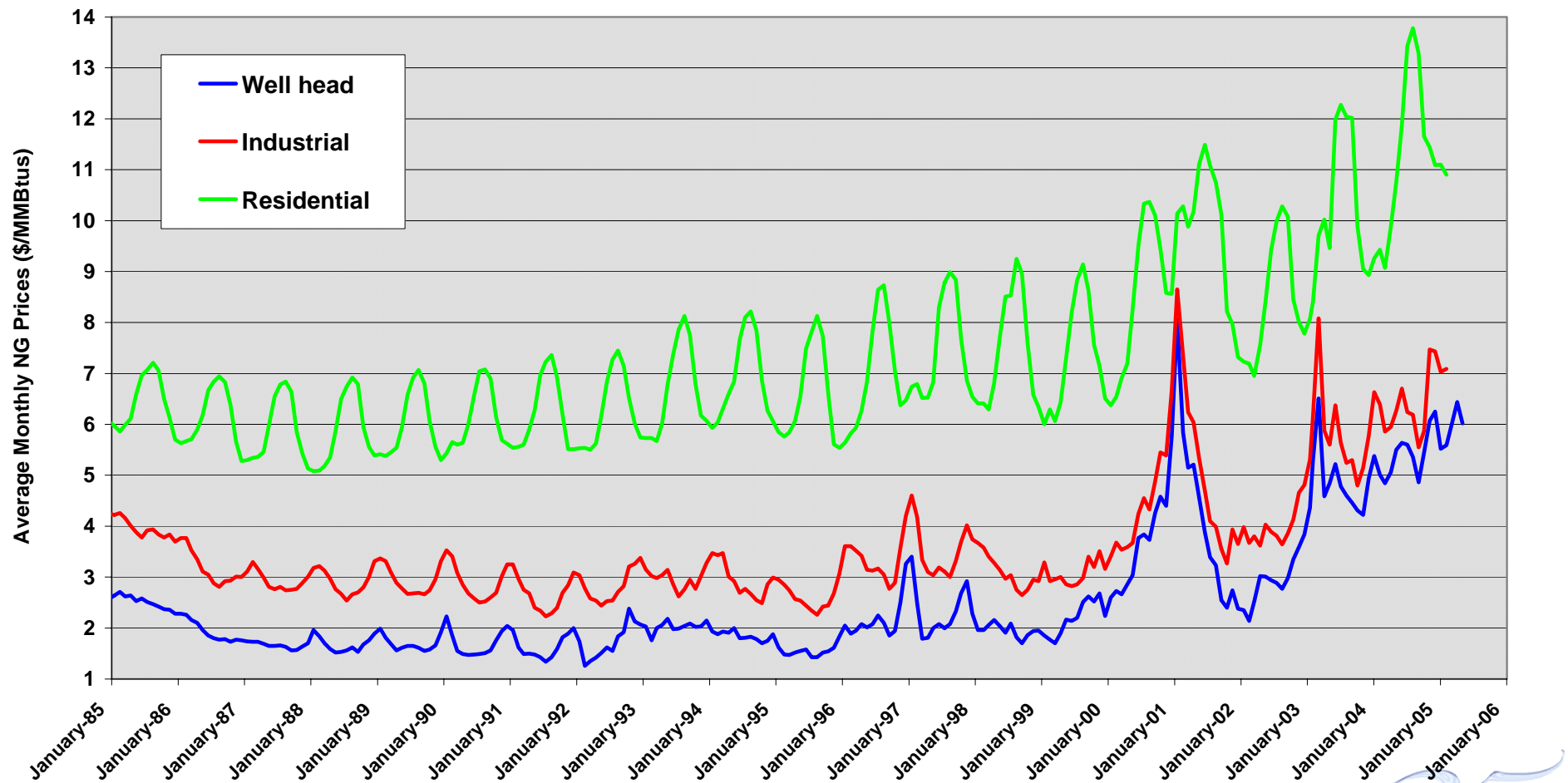
U.S. Sources of NatGas



Source: EIA 2004



Average Monthly NatGas Prices

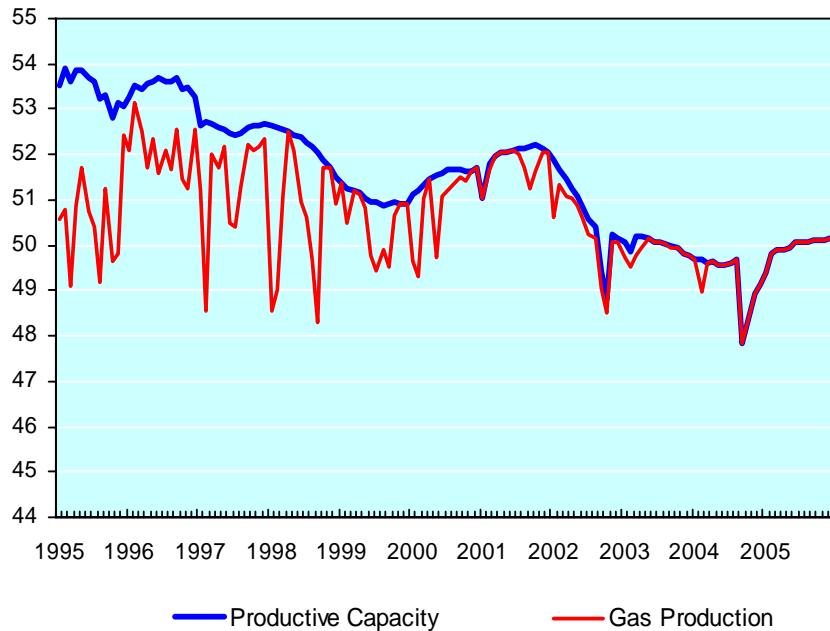


Source: ACEEE 2005 from DOE/EIA Data 2005

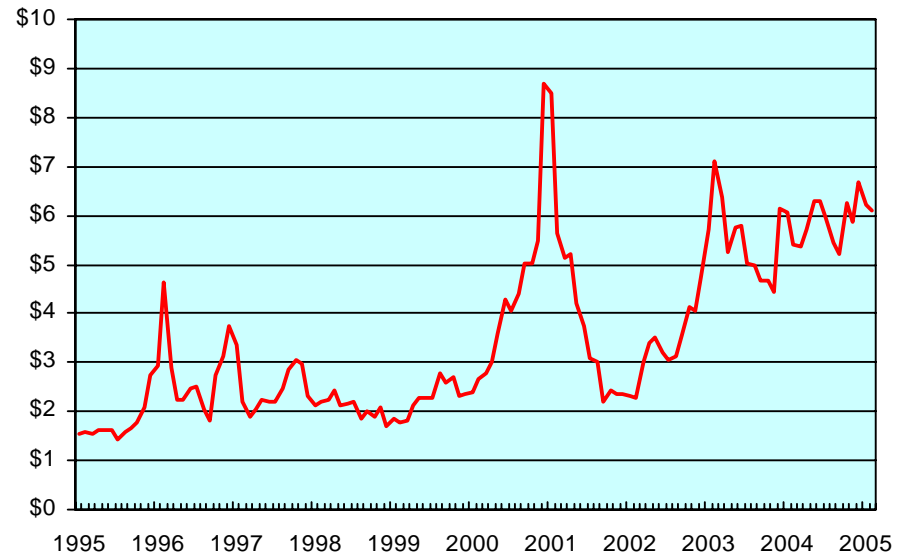


Natural Gas Markets

Lower-48 Dry Gas Production vs. Dry Gas Productive Capacity (Bcf/d)



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



Source: EEA 2005



Tight Markets Causing Economic Pain

- Fundamental supply/demand imbalance.
- High prices pinch gas-intensive industry and low-income residential consumers
- Limited near-term supply options – Alaska Gas 8-12 and LNG 3-7 years away
- Demand reductions through efficiency and conservation most effective near-term strategy, and critical to the long-term plan



Role for Energy Efficiency

- Supply solutions take years to come to market
- If modest increases in gas 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:

1. End-User Natural Gas
2. End-User Electricity

Calculated “reasonably achievable” savings based on sector end-uses (i.e. space heating, motors, lighting...)

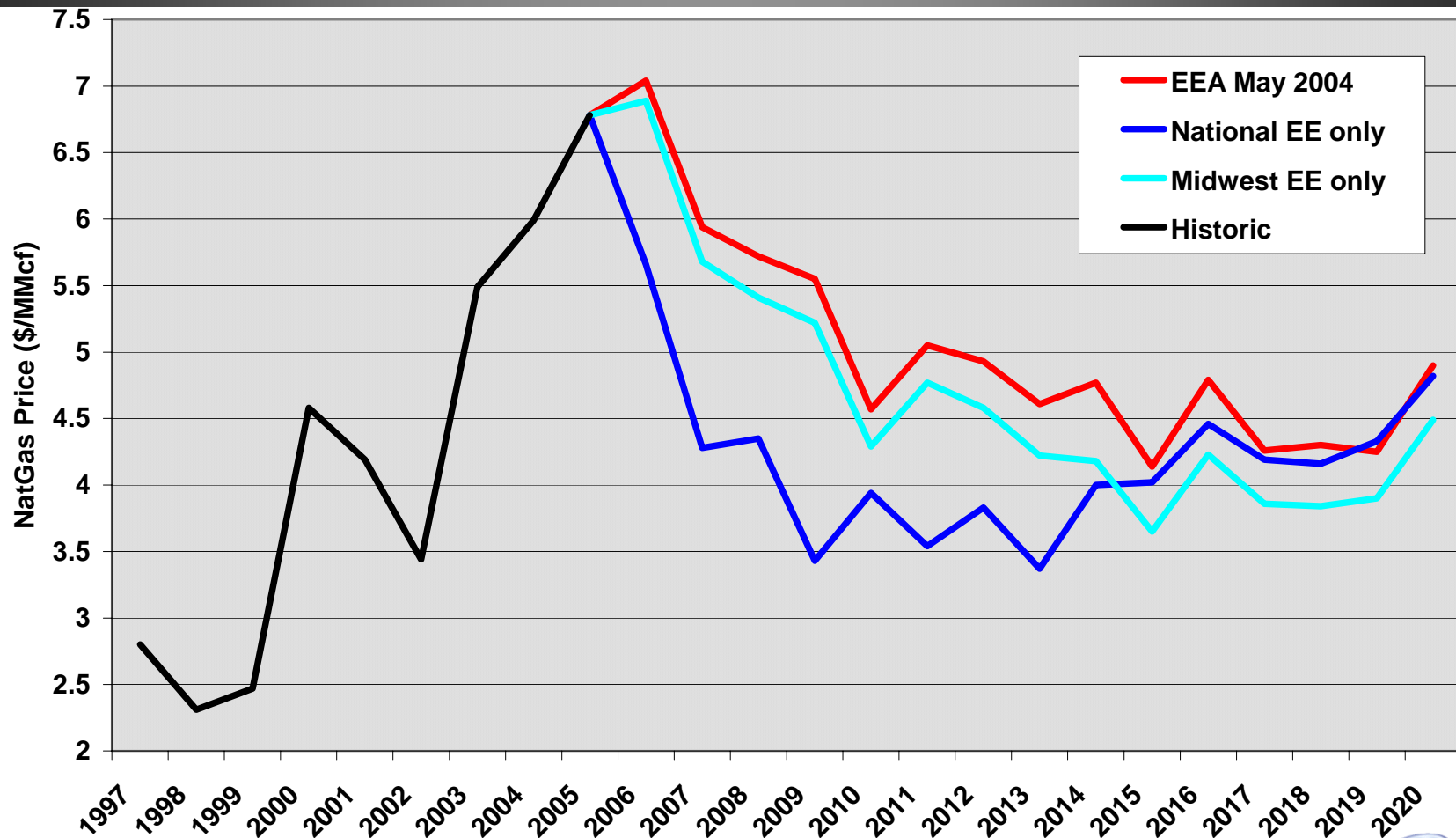


Using EEA Natural Gas Model

- EEA respected, independent natural gas analysts – used for current and past NPC NatGas studies
- Fully integrated natural gas market model incorporating supply, transmission, storage and consumption at 106 nodes
- Using July 2003 projection as base case
- ACEEE modified consumption only – model handles other issues (e.g., fuel switching, demand destruction, addition resource choices)



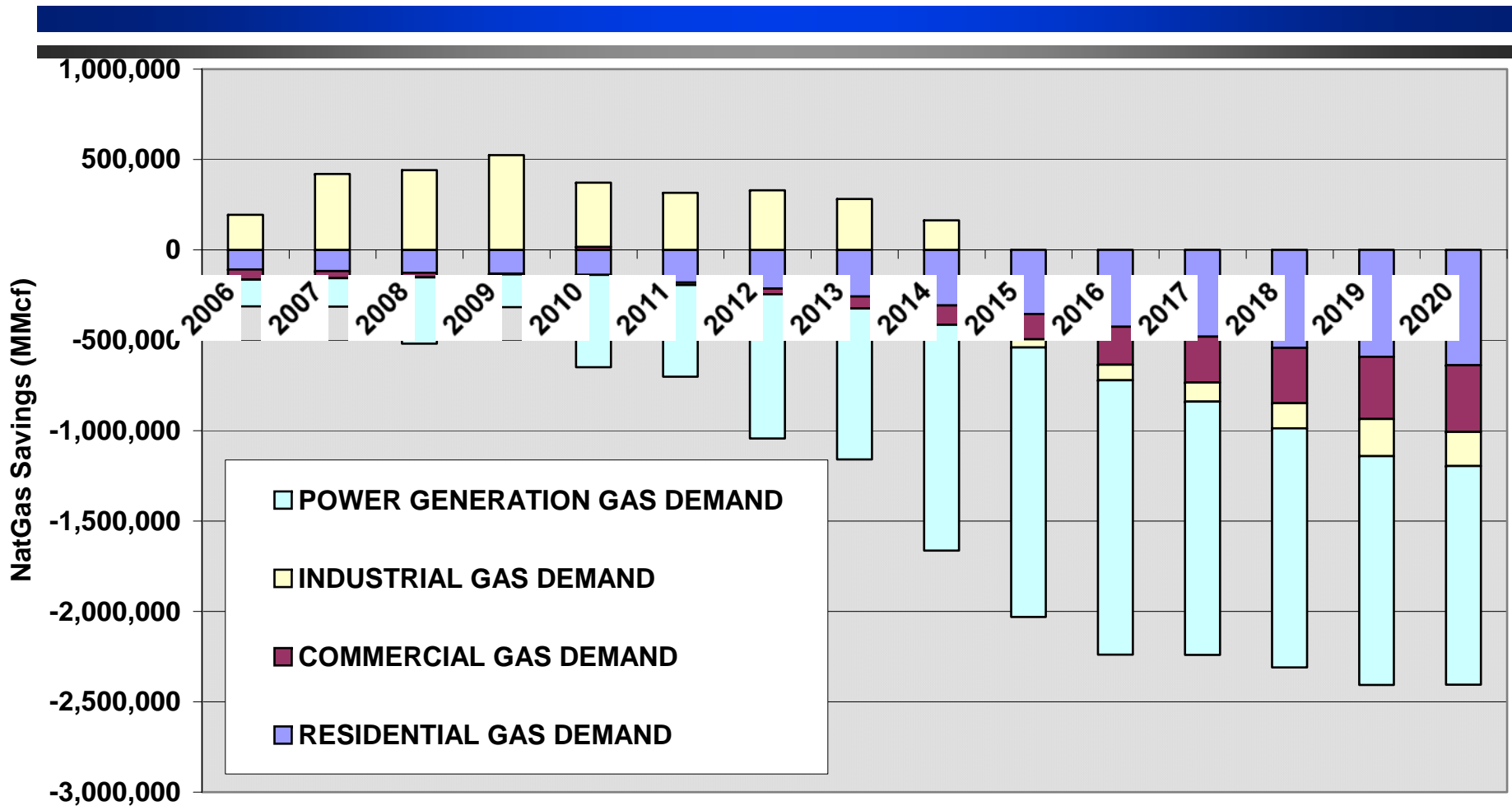
Impact of Energy Efficiency on Henry Hub Natural Gas Pricing



Source: EEA 2004 and ACEEE 2005



Gas Consumption Reductions from Energy Efficiency

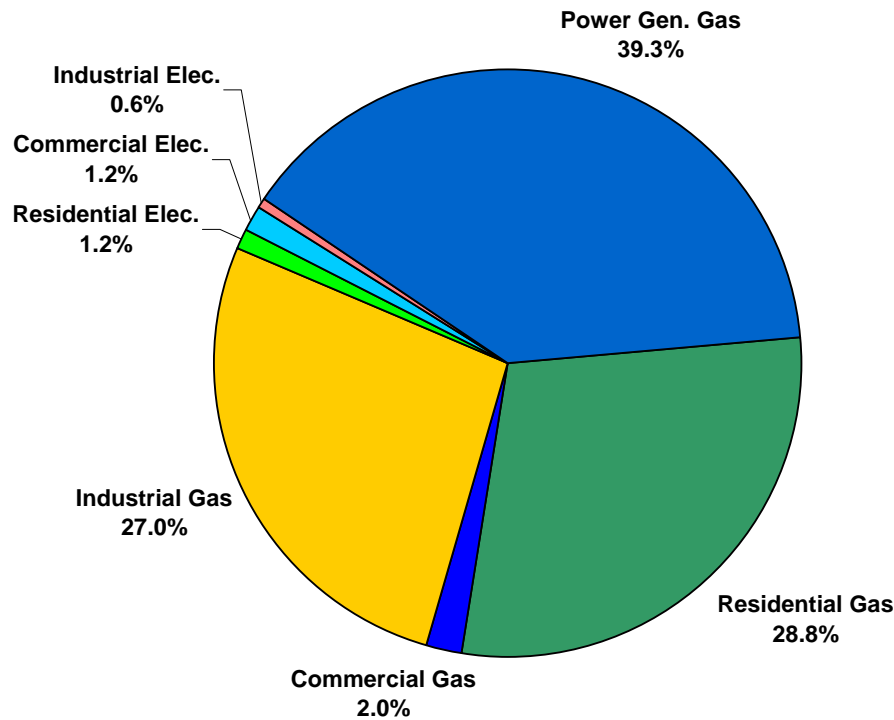


Source: ACEEE 2005

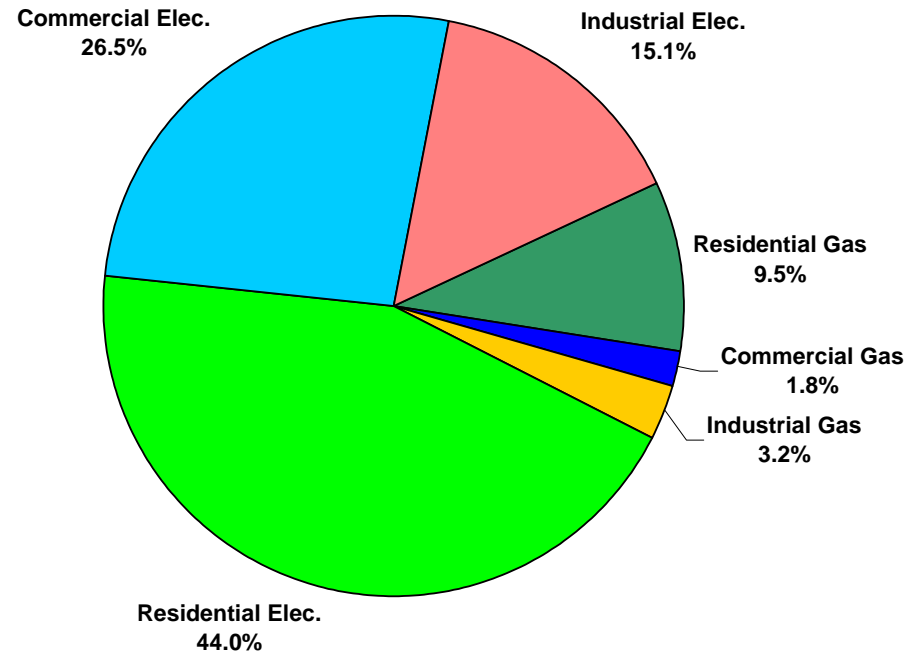


Benefits and Costs from Reductions in Energy Expenditures 2006-2010

Total Benefits = \$142,800 Million
Total Investment and Program Costs = \$22,441 Million



Benefits



Costs



Conclusions

- We can do something about high natural gas 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>

