



# Electric Restructuring in the United States

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Maryland Senate Special Commission on  
Electric Utility Deregulation Implementation

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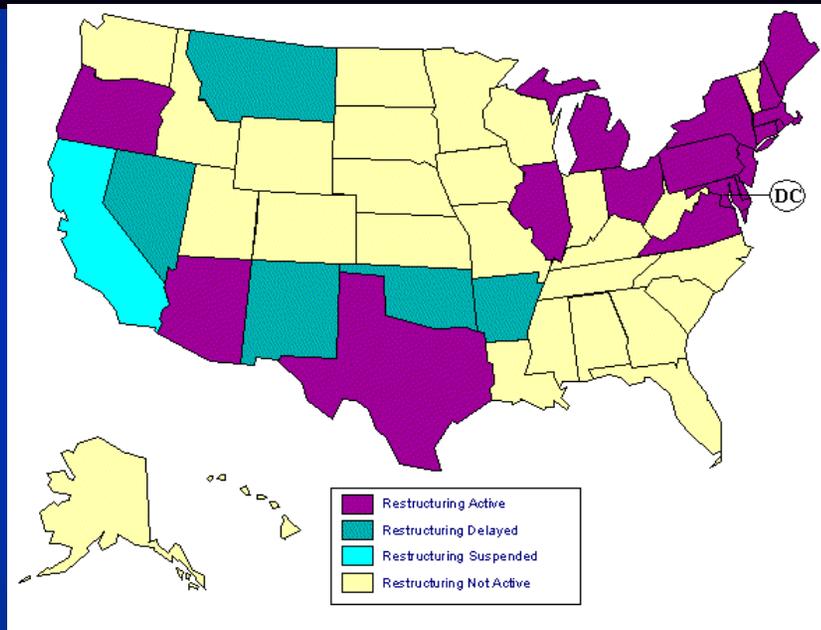


# Presentation Overview

- State Experiences
  - Switch Rates and Customer Trends: Residential and Non Residential
  - Price Caps and Commodity Costs
- Emerging Issues
  - Responding to Natural Gas Cost Increases
  - Resource Adequacy
  - Portfolio Management
  - Disaggregated Benefits
  - The Throughput Incentive
  - Energy Policy Act of 2005: Implications for States



# Restructured States





# Retail Competition

- Retail competition, as structured in most states, has been neutral for the majority of customers and has benefited the largest customers -- sometimes.
- Retail competition only works if wholesale markets work.



# Most Marketers Aren't Marketing to Residential Customers

- Some marketers are selling to residential customers, but in general the costs to marketers are too high and the return too low.
- Savings for most residential customers are too low: **From 2% to 10% (84 cents to \$4.20)**
- So most retailers focus on commercial/ industrial (C&I) customers.

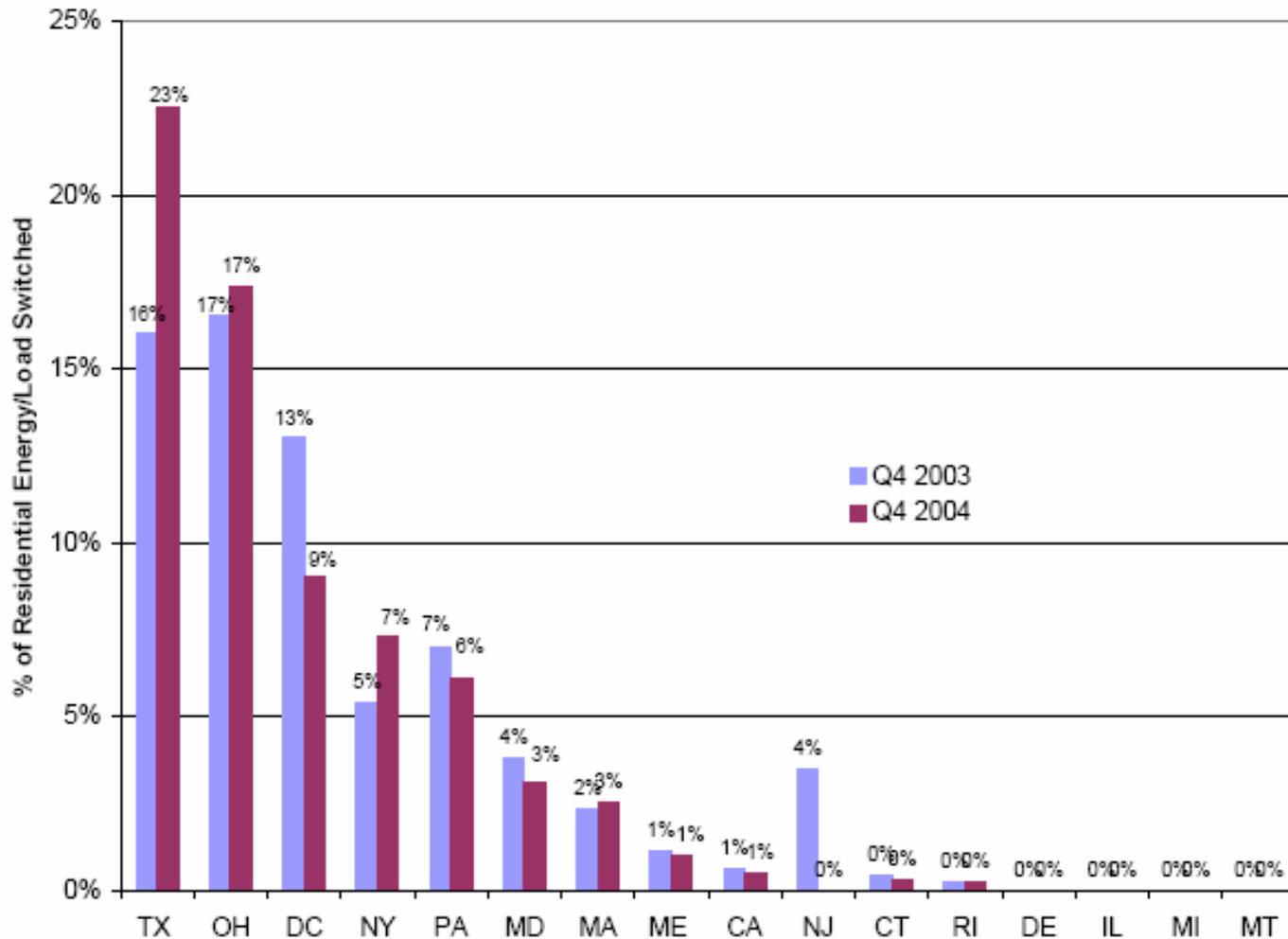


# Categories of State Activity

1. Places with rules supporting competition
  - Texas, Maryland
2. Places with rules in conflict
  - Low “price to beat”
  - Municipal aggregation and rate stabilization: Ohio
3. Places with no action at all
4. Abandoned or delayed: Arkansas, California, Montana, Nevada, New Mexico and Oklahoma.

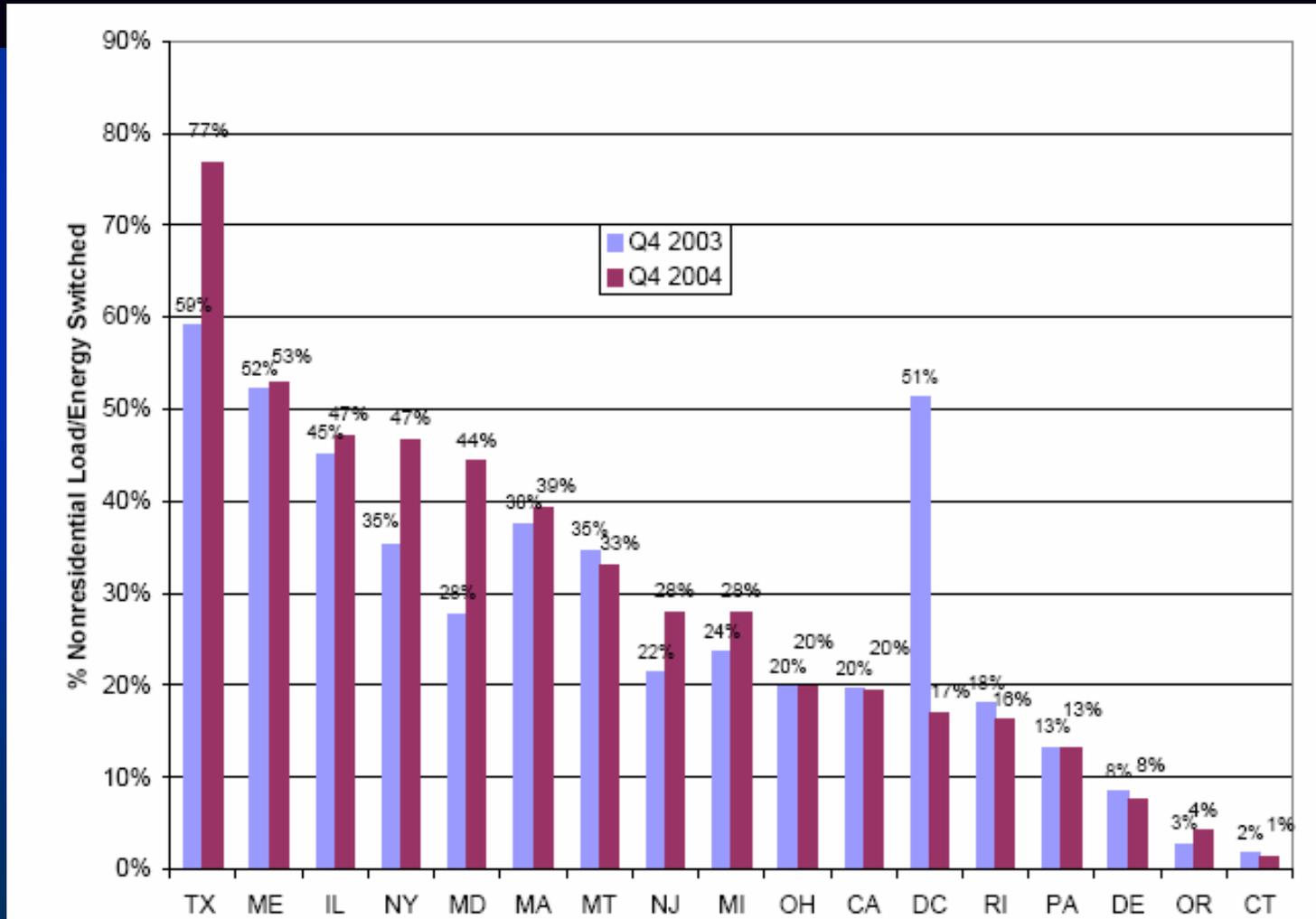


# State Residential Switching Rates



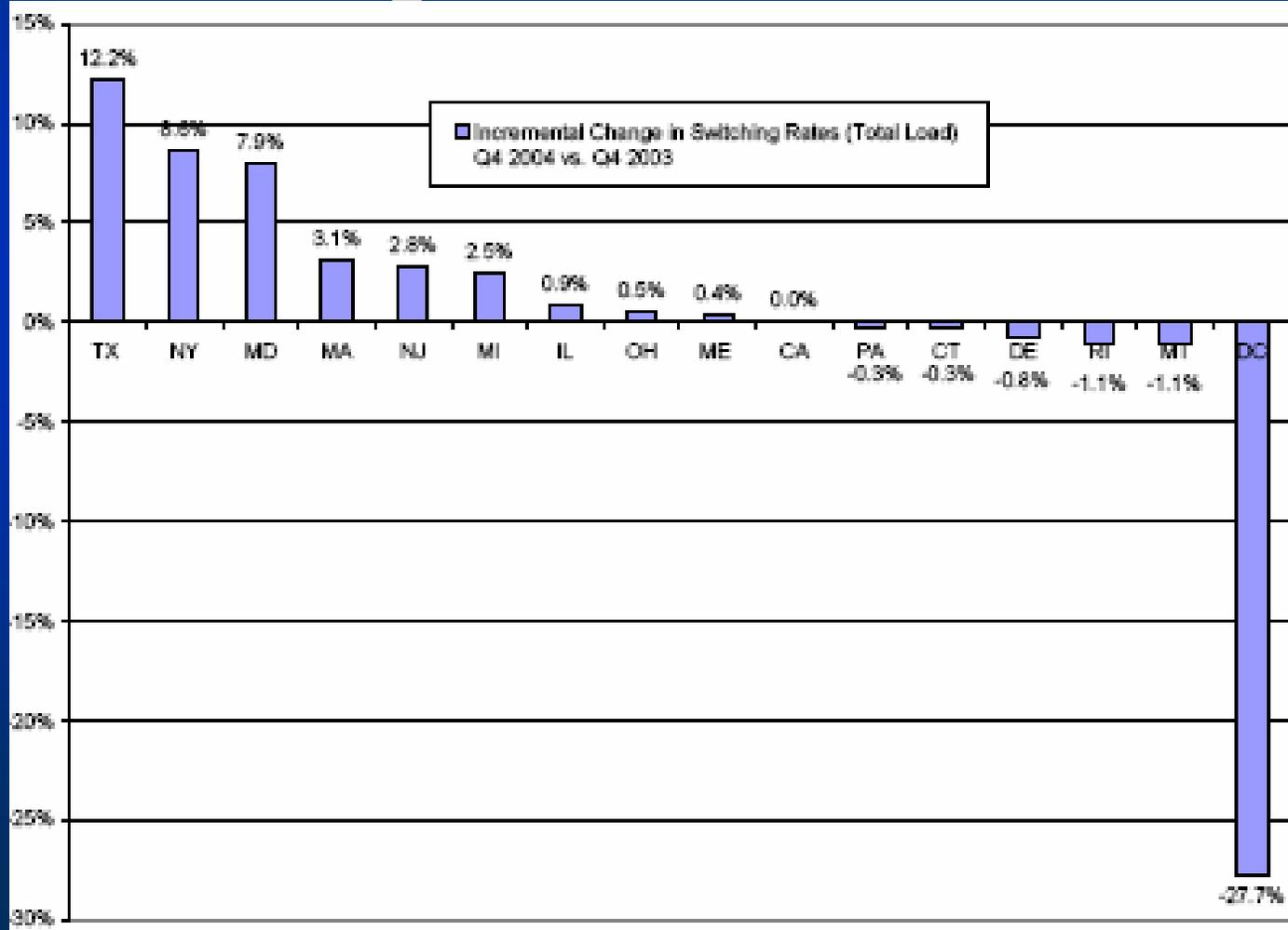


# State Nonresidential Switching Rates





# States Ranked by Relative Change in Switching Rates (total load)





# Key Issues in Competition States: Price Caps

- Price caps ending, post-transition periods beginning 2005-2007: DC, DE, IL, MA, MD, NY (ConEd), Ohio (CG&E), PA (Duquesne), TX, and VA.
  - New Jersey, 2003: consumers experienced a 19 percent rate increase when the price cap in that state expired.
  - San Diego, 2000: rate freeze expired at same time wholesale prices spiked.
  - Ontario, 2002: price cap reinstated after 25% rise in prices.



# More Key Issues

- Ohio has rate stabilization plan to compensate utilities for being providers of last resort.
- Higher prices due to NG markets.



# Maryland

- Customers that stay with the incumbent utility have to pay administrative charges of 2.25-6.5 mills/kWh that shopping customers do not pay.
- Investor-owned utilities are continuing to provide standard-offer service.
- Rate caps for commercial and industrial customers lifted. New standard-offer rates 20% higher.



# Changes in Commodity Prices

	2003 Price	2004 Price	Change
<b>Natural Gas</b>			
Henry Hub	\$5.44	\$5.85	8%
Southern CA	\$5.08	\$5.51	8%
New York	\$6.45	\$6.81	6%
<b>Coal</b>			
Cen. Appalachian	\$32.19	\$54.39	69%
Powder River	\$6.16	\$6.56	6%
<b>Oil</b>			
WTI Crude	\$31.06/barrel	\$41.51	34%
Residual Fuel, NY	\$27.47	\$27.95	2%
Distillate Fuel, NY	\$0.85	\$1.12	32%



# Key Issues in Competition States

- Supplying the standard offer
  - Who provides service to non-switching customers in utility service areas?
  - Distribution company, or competitive bids?
    - Bidding: DC, MD, ME, MA, MT, PA
    - And what guidance to give these quasi-monopolies?
- Resolving wholesale market growing pains



# More Issues

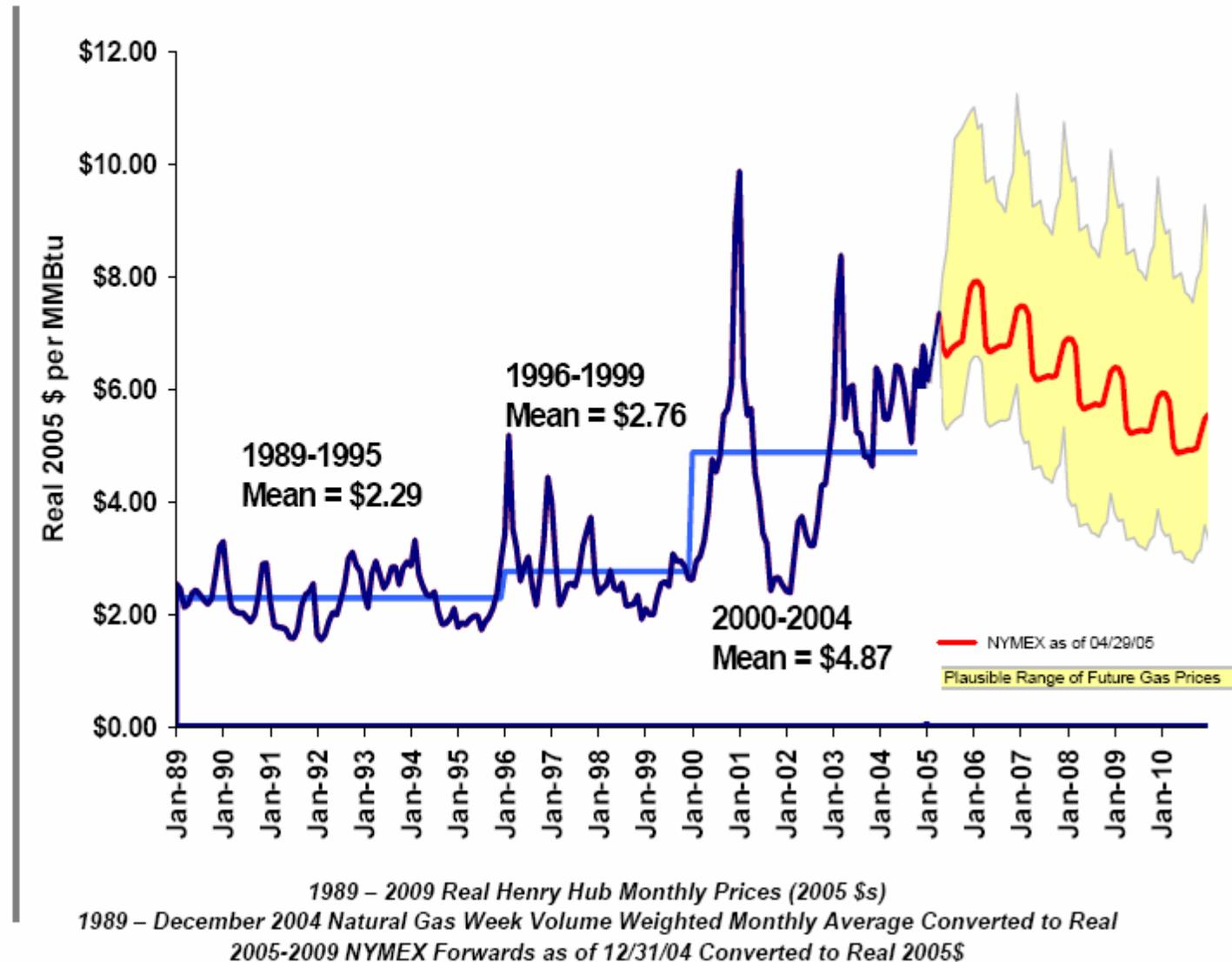
- Disconnection policies
- Back office EDI practices
- Mandatory market-based pricing
- Advanced meter deployment
- Interconnection of small generation
- Efficiency and Renewables policies
- Credit risk from generators

# As Prices Have Risen, So Have Expectations of Future Prices

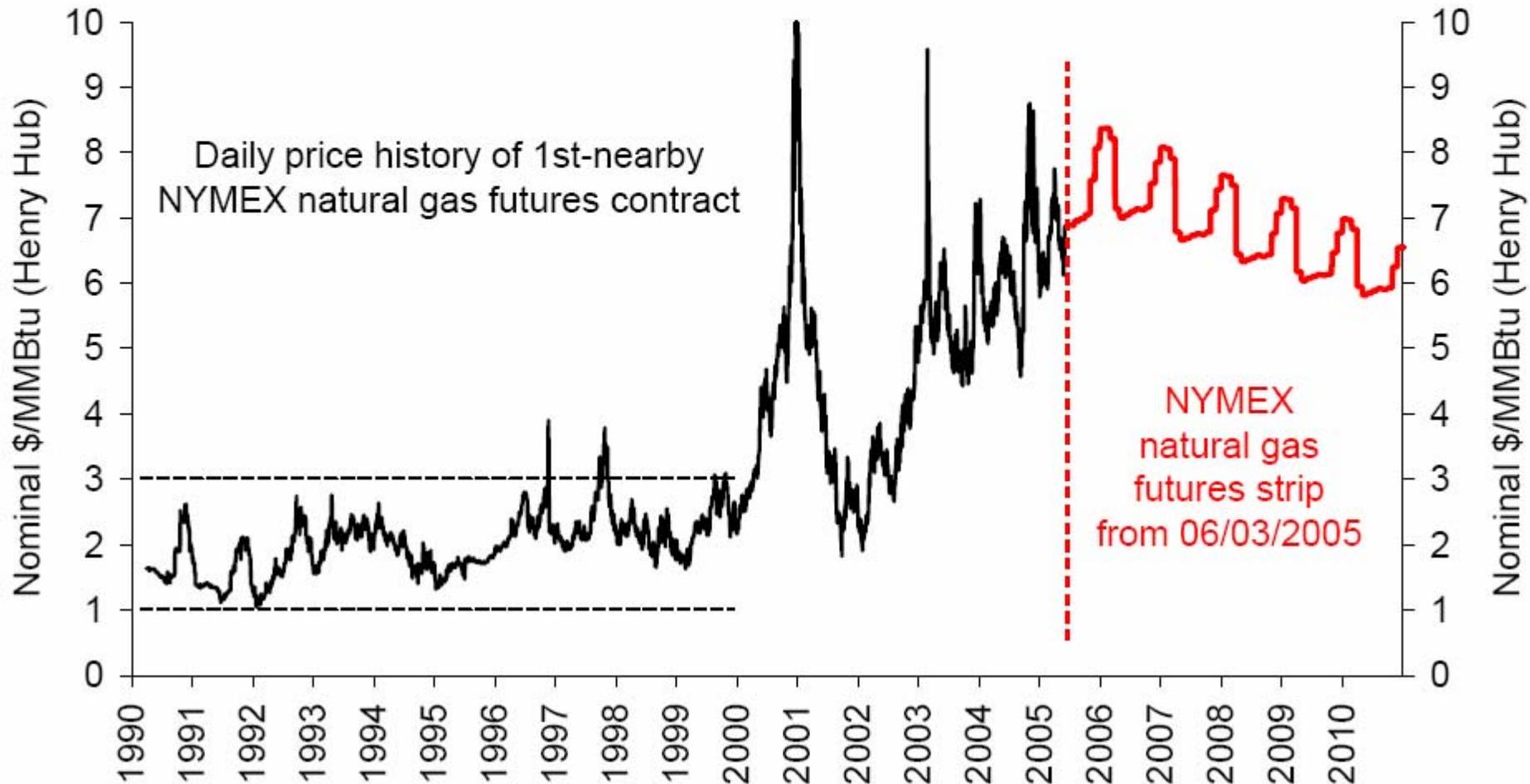
*Short-term price spikes with severe weather...*

*Increased LNG begins to moderate prices in 2008...*

*Over next five years, gas prices will be driven by short-term weather cycles.*



# ...Helping to drive gas higher & higher





# Responding to Natural Gas Cost Increases

- “Fuel of choice” for a decade plus in U.S.
- Supply/demand tipping point spikes prices
- Unrelenting demand increases add to futures prices
- Other generation alternatives have problems
- Key solution: reduce electric demand  
(National Petroleum Council  
<http://www.npc.org/reports/ng.html> )
- Midwest Natural Gas Initiative



## *Balancing Natural Gas Policy – Fueling the Demands of a Growing Economy*

- The (NPC) recommends a balanced portfolio of actions by industry and government that includes:
  - Encouraging conservation and efficiency
  - Improving demand flexibility and efficiency
  - Increasing supply diversity
  - Sustaining and enhancing infrastructure
  - Promoting efficiency of markets.

*From the transmittal letter to DOE Secretary Abraham, 9/25/03*



# Resource Adequacy: Currently Excess, but...

- Who will assure that there is enough power?
- PJM does not want to order construction
- Can states order construction?
- Market incentives appear unfriendly to new generation and unsettling to the public
  - A boom-bust cycle
  - If this is a problem, will we have enough notice to avoid a crisis?
  - How to avoid creating congestion?
  - PJM's controversial proposed solution – too expensive?



# Portfolio Management

- A way to specify that standard offer service providers factor in market risk to serve customers that will be unable to manage risk on their own
  - Diversify risk factors in power supply
    - Contract length, fuel source, generation owner and credit risk, etc.
  - Because the future is not predictable



# Disaggregated Benefits

- Some system investments might have made sense for the integrated utility because cost savings might flow through the whole operation
- The same investments might not make sense for a distribution-only utility because they no longer operate parts of the business which accrue savings



# Disaggregated Benefits: An Example

- **Advanced Metering** (communication, data recording, controls)
  - Savings occur in: meter reading, outage detection, customer communication, distribution system operations, intermediate and peaking generation management, more...
  - Yet in a state like Maryland, there is not one entity that tends to see a positive business case for installing advanced meters



# Advanced Metering: Progress in California

- CA Advanced Metering Collaborative
  - State PUC and Energy Office, with all major utilities and with funded experts
  - State leadership: not if, but how? And when?
  - In conjunction with retreat from competition
- Other jurisdictions thinking about ordering deployment via distribution company
  - Hard to have “smart rates” with “dumb meters”



# The Throughput Incentive

- Traditional regulation: the more the utility sells, the higher profits are
  - **Why?** The cost to produce or deliver an additional unit is less than the rate
  - **Why is this a problem?** If growth actually raises costs through more expensive G&T and introduces siting and environmental problems, utilities will have no reason to look for cost-effective ways to control growth



# Throughput Incentive: It's all about the Math

- For a sample integrated utility, a 5% reduction in sales leads to a 23% loss in profit
- For a distribution company only, a 5% reduction in throughput leads to a 57% loss in profit!
- Solution: Link utility profits with customer count, add performance measures to assure that cost cutting is to become more efficient, so customers won't be hurt.
- Maryland regulates this way for natural gas today



# Energy Policy Act of 2005

- Can't order states to change policy
- Can direct states to consider policies also relevant to electric competition
  - Interconnection
  - Smart metering
  - Net metering, fuel diversity, fuel efficiency