

Resource Procurement Best Practices

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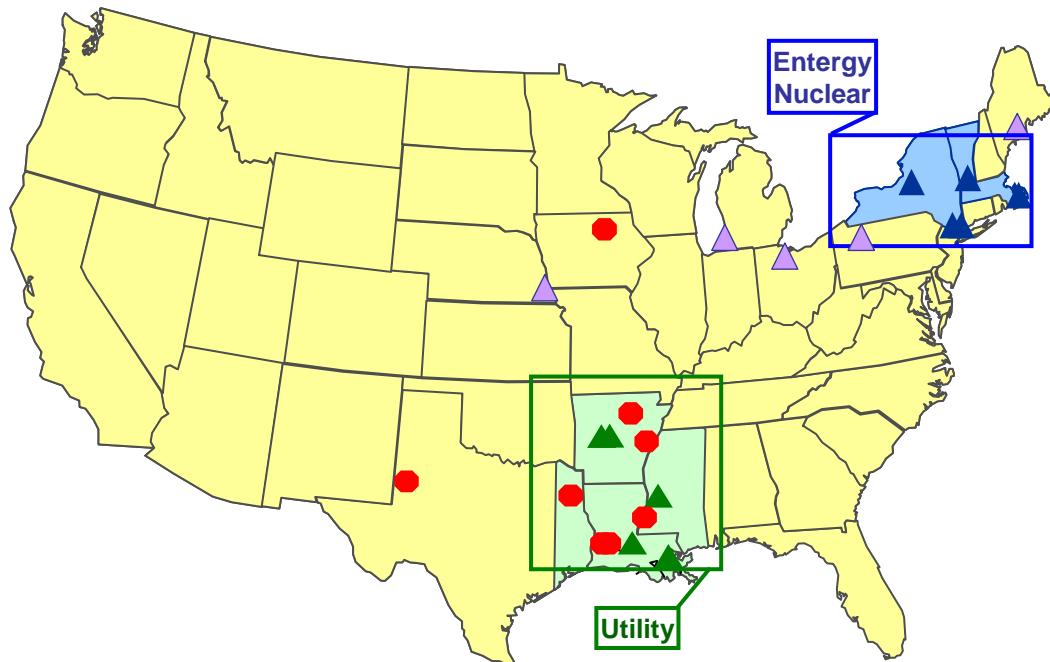
NARUC Conference

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Entergy's Businesses Are Focused in Mid-South and Northeastern U.S.

Entergy's Corporate Profile

- 30,000 MW electric generating capacity
- 2nd largest U.S. nuclear generator
- 2.7 million utility customers
- \$10 billion revenues
- 14,000 employees



- ▲ Owned utility nuclear plants
- ▲ Owned non-utility nuclear plants
- ▲ Nuclear plants under contract
- Non-nuclear wholesale assets

Entergy's Businesses

❖ Utility

- Five electric utilities with 2.7 million customers
- Four states – Arkansas, Louisiana, Mississippi, Texas
- 22,000 MW generating capacity including 5 nuclear plants in mid-south
- Two gas utilities with 236,000 customers

❖ Entergy Nuclear

- Five plants in northeast U.S. ~ 5,000 MW owned and managed generation
- One plant in midwest U.S. ~ 1,000 MW managed generation
- Five plants in northeast and midwest U.S. with service contracts for license extension or decommissioning

❖ Energy Commodity Services

- ~1,500 MW non-nuclear wholesale assets owned, primarily in U.S.

Background

Uncertainty Leads to Inaction

Short Supply /High Prices

Merchant Boom and Over-Development

Rising Gas Prices and Increasing Volatility

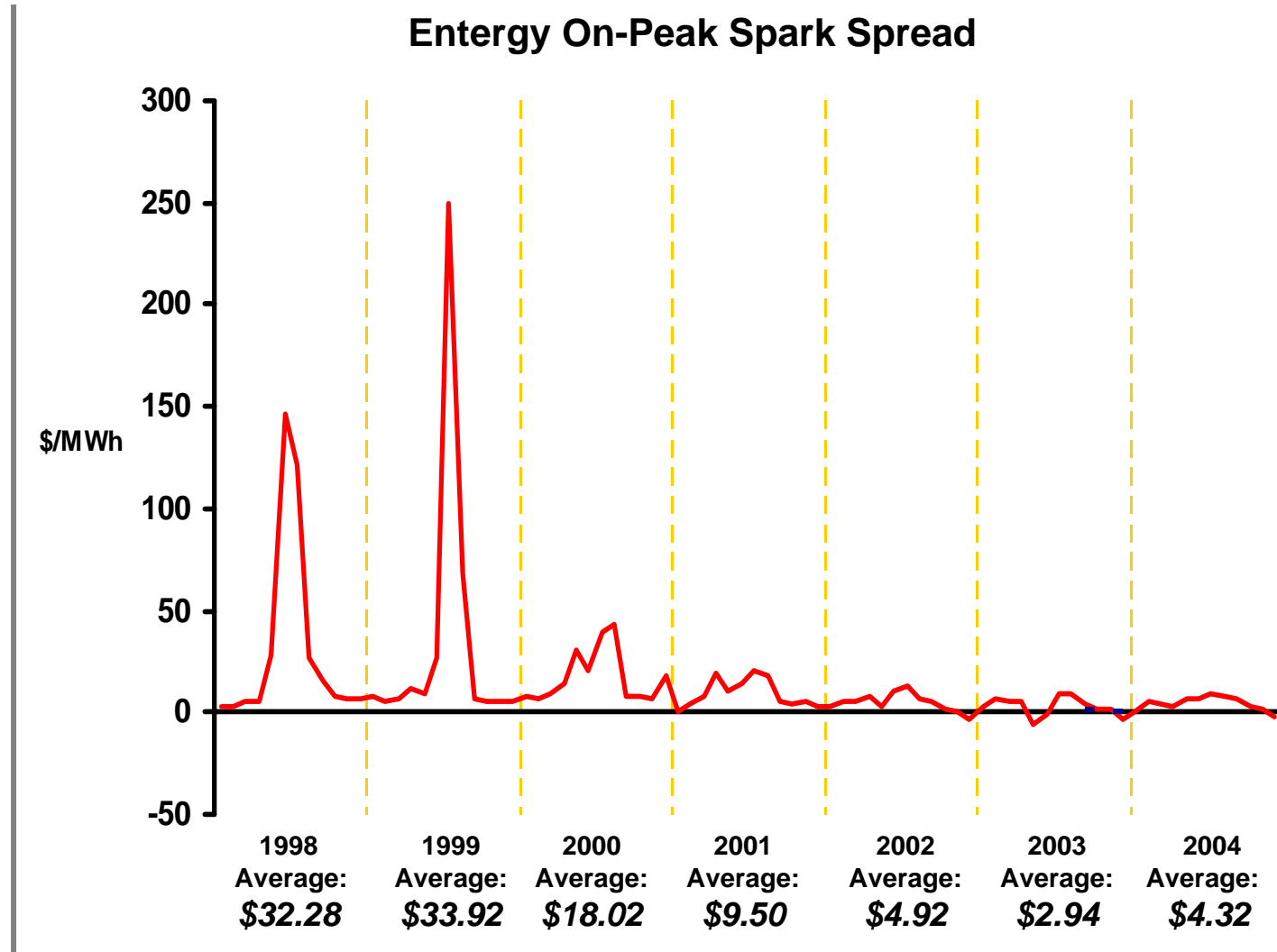
- During the 1990s the prospect and uncertainty of deregulation discouraged the construction of new, regulated generation by the utilities.
- However demand continues to grow pushing electricity prices higher.
- A merchant boom ensues that ultimately leads to excessive over-development
- Meanwhile, natural gas has had a fundamental change in pricing, leading to a doubling of costs and increasing volatility.

Once High Spark Spreads Collapse

High Spark Spreads Dominated Energy Markets until 2000.

Unwise to Commit to Long-Term Supply in High Cost and Uncertain Market.

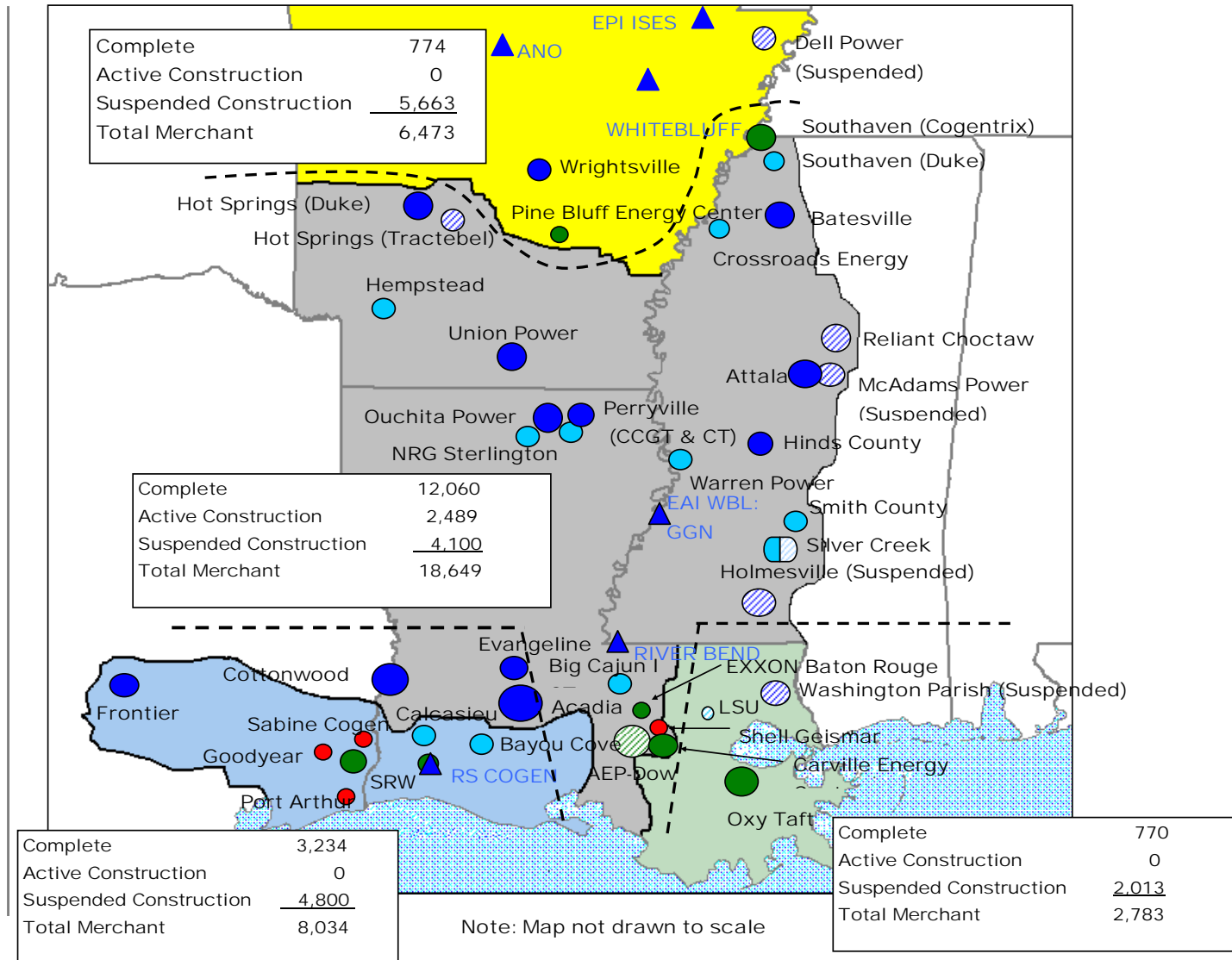
Now, Spark Spreads have Collapsed



Growing Merchant Capacity in Entergy's Control Area

**More than 19,000
Megawatts of New
Generation is
Already Operating
in Entergy's Area**

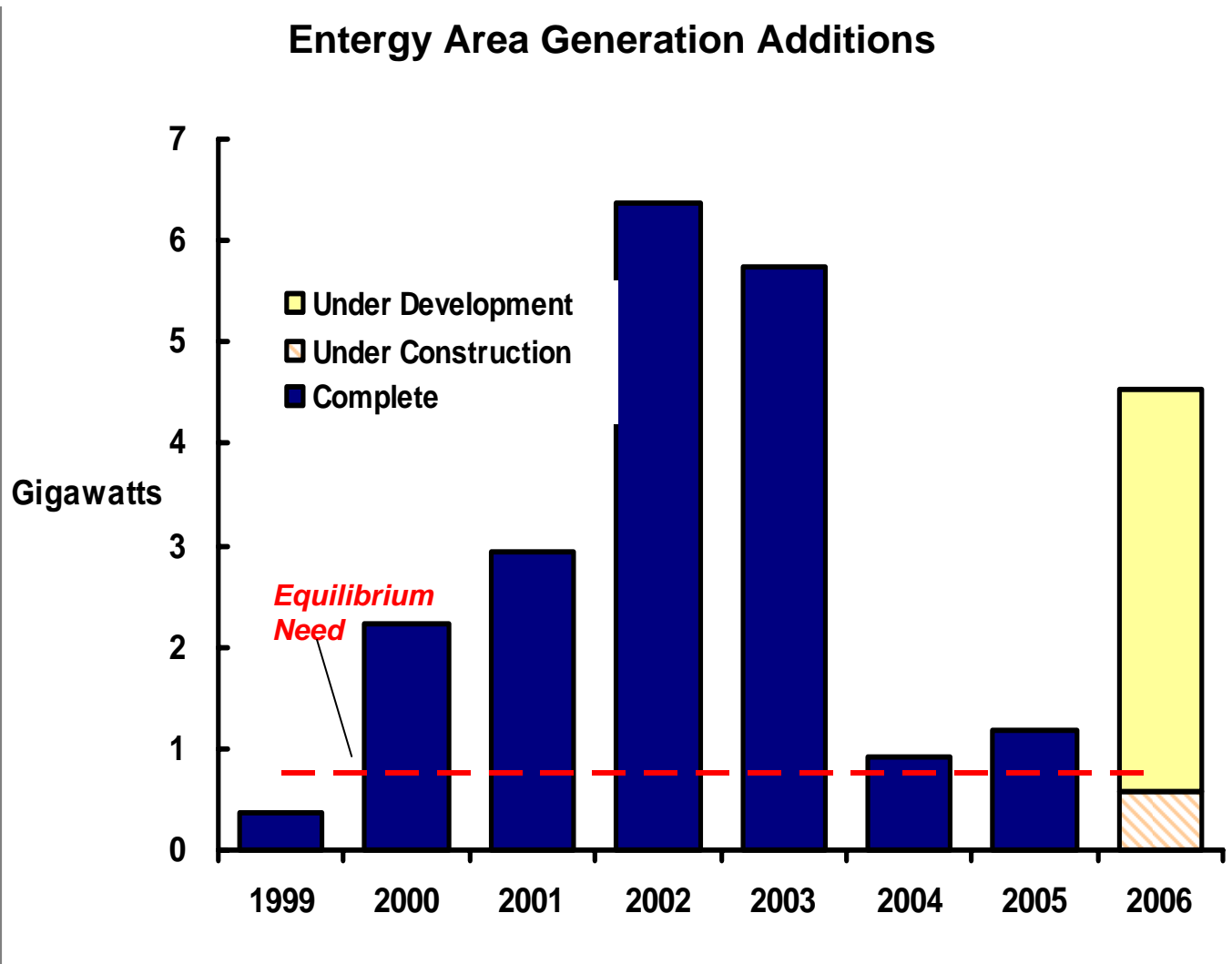
- CCGT (Complete)
- CCGT (Under Const.)
- Cogen/CCGT (Complete)
- Cogen/CCGT (Under Const.)
- Cogen (Complete)
- CT (Complete)
- CT (Under Const.)



A Dramatically Over-Supplied Region

The Merchant Boom has Added More and More Capacity...

Far Outstripping Any Reasonable Equilibrium Need...

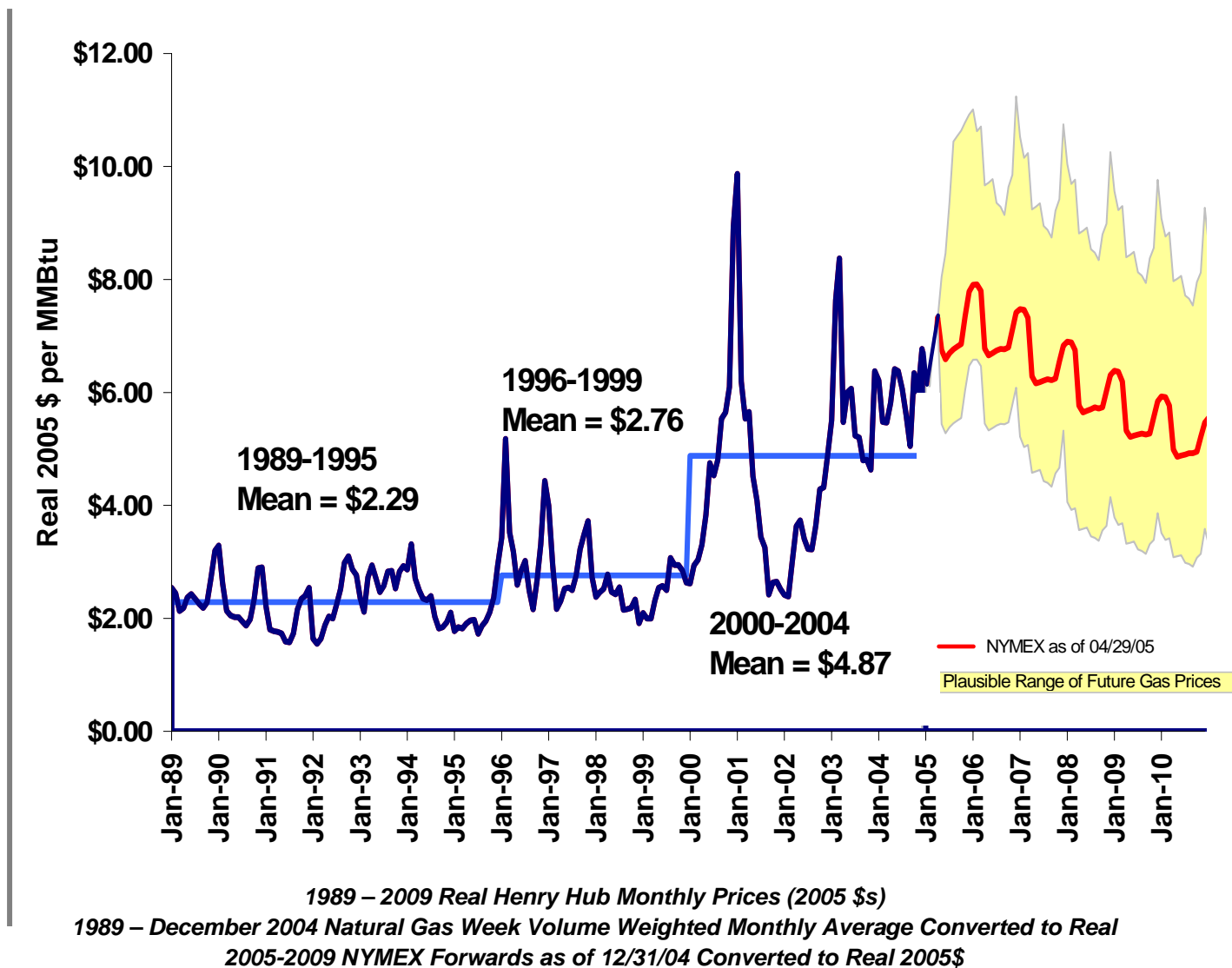


As Prices Have Risen, So Have Expectations of Future Prices

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.

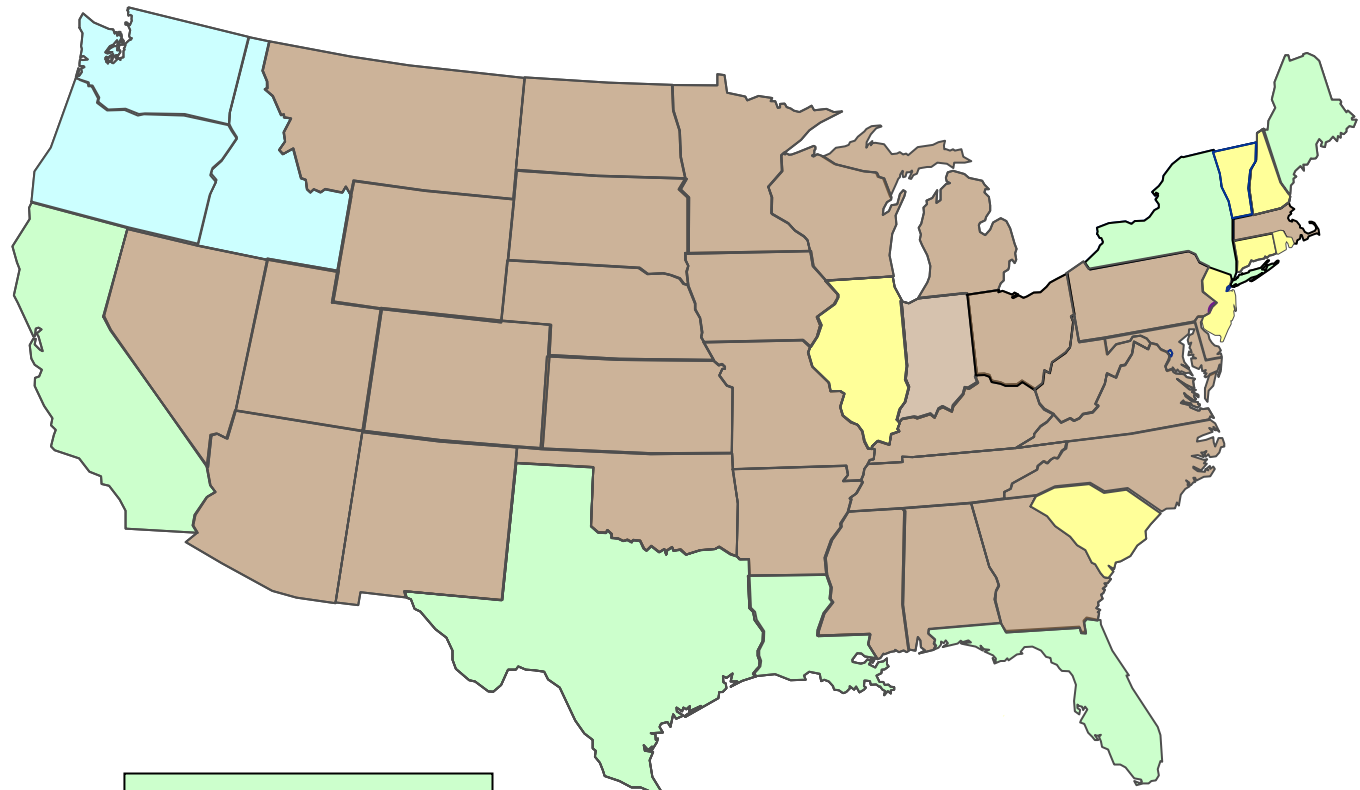


The Impact of Dominant Fuel Source

Both Louisiana and Texas have a significant dependence on gas as a boiler fuel.

Entergy has more than 70% of its capacity fired by natural gas.

Thus, rising natural gas prices put pressure on electricity prices.



Natural Gas / Oil
Nuclear
Coal
Hydro

Regulated Procurement Process

***Given the
Uncertainty and
Glut of Capacity,
Energy Focused
on the Short-Term***

***Since 2001, we
Seek to Broaden
our Resources***

***But the Objective
Remains Reliable
Service at Lowest
Reasonable Cost.***

- **Resource Planning Under Uncertainty**
 - Supply needs met through a variety of short-term supply options.
 - Limited procurement of mid- to long-term supply options.
- **Resource Planning in Future Years**
 - Broaden range of supply options while meeting both short and longer term reliability needs
- **Primary Objective**
 - Provide for both the short-term and long-term capacity and energy needs of the regulated Companies' retail customers through the selection of a supply portfolio that is expected to result in the lowest reasonable total production costs consistent with operational constraints.

Regulated Procurement Process

***Historically,
Utilities Planned,
Built and Operated
the Capacity they
Needed.***

***Now, the LPSC has
Adopted new
Rules Requiring a
Competitive
Solicitation
Process.***

- **Historical Process**
 - Regulated monopoly
 - Obligation to serve
 - Responsibility to manage and plan business
 - Subject to prudence review
- **Louisiana**
 - Initiated a Market Based Mechanisms (MBM) Order in April 2002.
 - Requires competitive solicitation process.

LPSC Market Based Mechanism (MBM)

Meets Justification Requirement Exemptions

Object is Reliability at the Lowest Reasonable Costs.

Service Obligation Remains with the Utility.

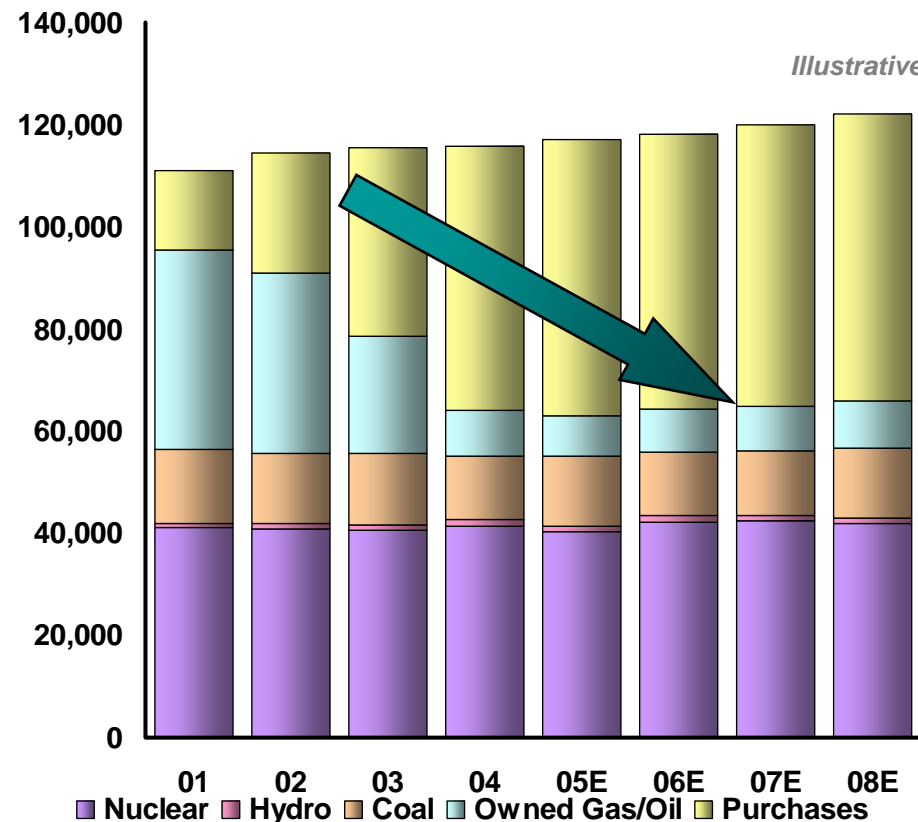
- Results of MBM serve as “justification” required in 1983 General Order
- Exemptions
 - Resources less than 35 MW
 - Upgrades less than 50 MW or 10%
 - Incremental Installed capacity < \$100 KW
 - Economy or Emergency Energy
- “The electric utility shall conduct its planning and RFP process with the objective being the provision of reliable electric service at lowest reasonable cost.”
- In all cases, “the Utility remains obligated to prudently, implement, construct and/or manage the resource consistent with the objective to provide reliable service at lowest reasonable cost.”

Using Market Opportunities to Lower Generation Costs

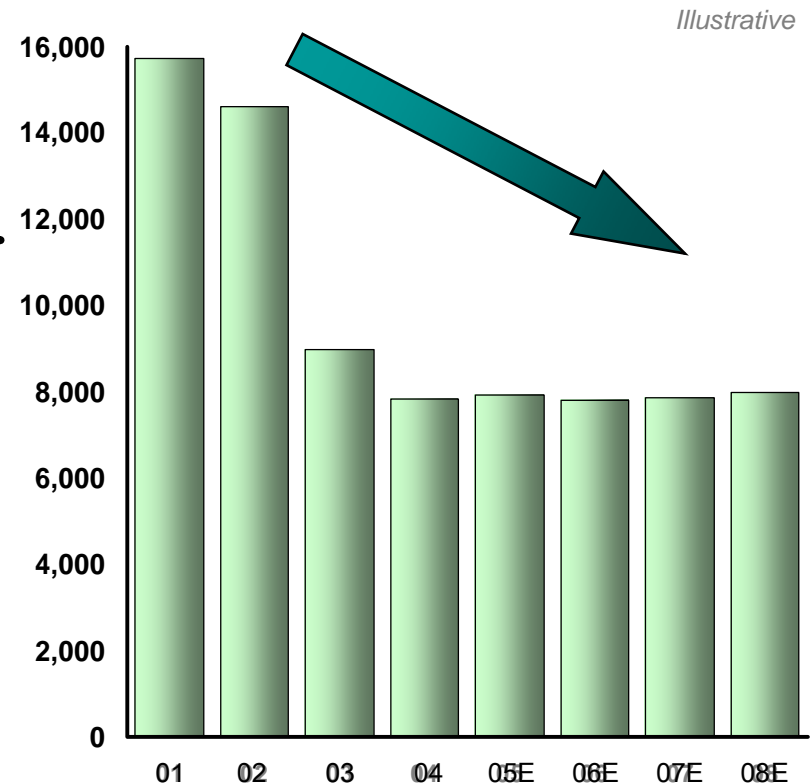
We have reduced our dependence on older, less efficient gas resources...

... and have seized market opportunities, reducing the implied heat rate, and lowering fuel costs.

Net Area Load by Resource (GWh)



Gas/Oil and Purchases Heat Rate Improvement (Btu/kWh)



Utilities Need Regulatory Certainty

Achieving and maintaining diverse, effective generating resources requires regulatory certainty.

Utilities will not supply needed capital without certainty that prudent investments are recovered.

- Early 1990s saw IPPs add significant natural gas generation
 - Construction was easy and shorter lead times.
- Later in 1990s and 2000, increases in natural gas prices caused a market failure
 - Lack of long term commitment
 - IPPs suffered numerous credit downgrades
- Environment for new technology generation
 - Higher installation costs
 - Longer development time
- Need Regulators to set a path and plan to help build a new diverse generation portfolio
 - Need clarity pertaining to emission standards
 - Need clarity regarding the rules on market power
 - Must avoid fuel restrictions