
Recent Developments in New York's Energy Sector

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Recent Developments in New York

- Key Activities In New York in 2004
 - *Resource Adequacy and Diversity*
 - *Reliability and Safety*
 - *Rates*
 - *Competitive Markets*
- Regional Energy Activities
 - *Elimination of Export Fees*
 - *Installed Capacity Markets*
 - *Intra-Hour Transaction Schedules*
 - *Cross-Border Tie Line Scheduling*
 - *Global Climate Change/Carbon Caps*
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Key Activities in New York in 2004

Resource Adequacy and Diversity

- Key Factors for New York
- Facilities Siting
- ISO Reliability Planning Process
- Installed Capacity Market Redesign/Recalibration
- Renewable Portfolio Standard
- Other Efforts

Key Activities in New York in 2004

Resource Adequacy and Diversity

➤ Key Factors for New York

- *Unlike neighboring regions (New England-Pennsylvania-New Jersey-Maryland), New York was not successful in siting and building significant amounts of generation capacity before investment for merchant facilities dried up in 2000/2001*
- *Investors currently require that developers obtain a secure revenue stream with a credit worthy buyer (usually a long term contract with a utility)*
- *New York enjoys diverse resources for generating electricity, but almost all new planned or proposed capacity is fired by natural gas*
- *Restrictions on power plant air emissions will limit the use of oil and coal*
- *Natural gas pipeline capacity is becoming limited, especially in New York City and on Long Island, as more gas is used for electricity generation*
- *Natural gas prices are volatile, and are forecast to increase*

Key Activities in New York in 2004

Resource Adequacy & Diversity

➤ Facilities Siting

- *Generation plants of greater than 80 MW must obtain a certificate of environmental compatibility and public need from the Siting Board*
- *Since 1998, facilities representing 8467 MW (net) have applied for certification, mostly in southeastern NY, under Article X*
 - 13 (7367 MW net) have been granted certificates
 - 4 (2050 MW net) under construction
 - 2 (1330 MW net) completed and operational
 - 1 (1100 MW) application pending
- *The statute establishing the siting process expired on January 1, 2003, and has not been renewed or replaced*
- *Smaller plants continued to be sited and built under the State Environmental Quality Review Act (SEQRA)*

Key Activities in New York in 2004

Resource Adequacy and Diversity

- ISO Reliability Planning Process
 - *Pre restructuring, vertically integrated utilities built (or contracted for) needed resources to ensure reliability of the system*
 - *In a restructured market, some envisioned the market will address all resource needs to ensure reliability*
 - *We believe that a planning process should be primarily designed to provide information to the market participants*
 - *While the market may still address resource needs, there could be instances of “market failure” and the market may not satisfy the resource needs*
 - *In that case, there is a need for a back-stop solution to procure adequate resources to ensure reliability*

Key Activities in New York in 2004

Resource Adequacy and Diversity

- ISO Reliability Planning Process
 - *Comprehensive Reliability Plan – Filed at FERC in August 2004*
 - Provides for market response (transmission, generation, demand response)
 - Certifies projects that would technically meet the identified need without identifying a preferred solution
 - Provides for regulated backstop process with TO obligations and optional developer participation
 - Beneficiaries-pay methodology
 - *Allows Transmission, Generation and Demand Response Alternatives to Compete*
 - Areas of system where cost of transmission and generation are substitutes
 - Maturing demand response market mechanisms should be allowed to compete

Key Activities in New York in 2004

Resource Adequacy and Diversity

- Installed Capacity Market Redesign/Recalibration
 - *Reliability rules require utilities and other load serving entities to buy capacity to meet forecast peak load plus 18% reserve margin*
 - *Similar ICAP market rules are in place in surrounding markets: PJM (Delaware, Pennsylvania, New Jersey, Maryland) and New England*
 - *Reliability Impacts of ICAP Requirement*
 - ICAP reserves impact the energy market
 - Reduce the chance of real-time shortages
 - Reduce energy price spikes
 - ICAP payments contribute toward fixed cost of generating units

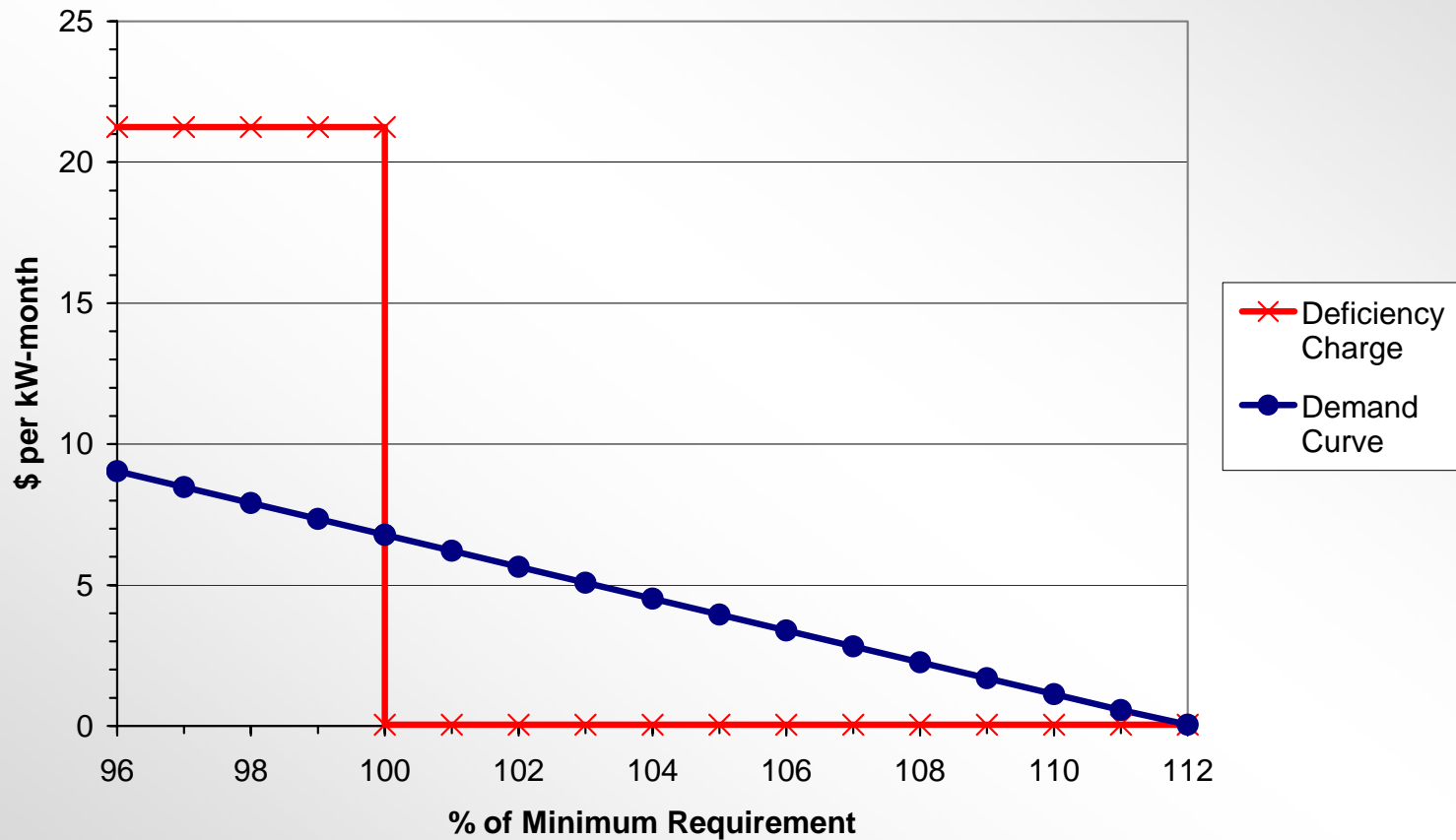
Key Activities in New York in 2004

Resource Adequacy and Diversity

- ICAP Market Redesign/Recalibration (continued)
 - *ICAP Demand Curve*
 - *Original design used a “vertical” demand curve*
 - Fixed minimum requirement
 - Fixed deficiency charge
 - Proved to be dysfunctional, with extremely erratic prices, and potential market power abuse
 - *New design (adopted 2003) uses “sloped” demand curve*
 - Price decreases gradually as supply increases
 - *Market function greatly improved*
 - Prices less erratic
 - Prices vary predictably with ICAP supply
 - Suppliers have no incentive to withhold
 - *Work in 2004 has centered on recalibrating the curve to the cost of a new generation unit (peaking unit)*
 - Resetting the peak cost will move the curve up the y-axis, creating more capacity revenues for generators (and costing customers more money), unless more capacity is attracted into the state (moving the price down the curve)

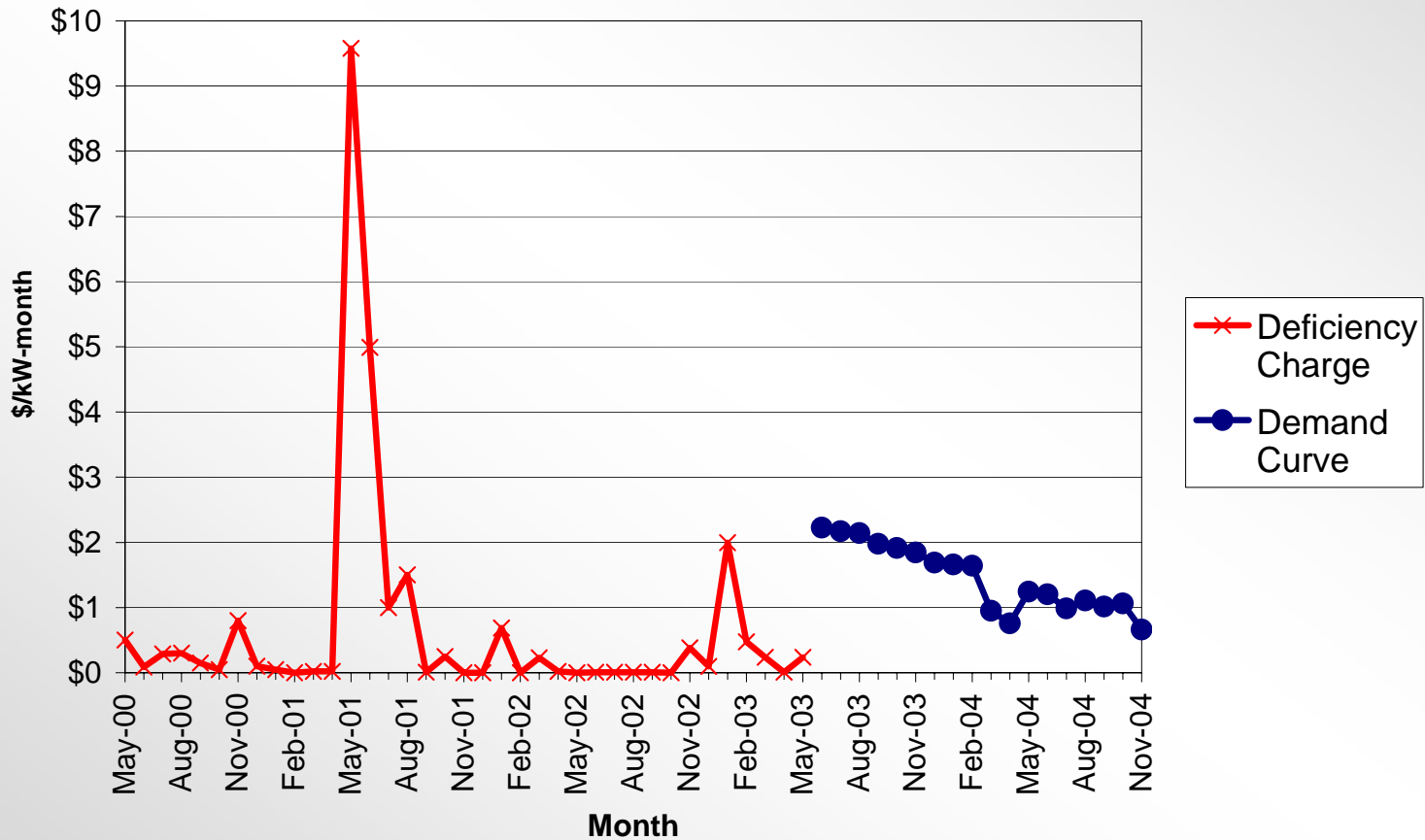
Resource Adequacy & Diversity

ICAP Deficiency Charge vs. Demand Curve



Resource Adequacy & Diversity

ICAP Spot Market Prices Deficiency Charge vs. Demand Curve



Key Activities in New York in 2004

Resource Adequacy and Diversity

➤ Renewable Portfolio Standard

- *Established a policy framework that seeks to increase the amount of renewable energy used by New York consumers from 19.3 percent to at least 25 percent by the end of 2013*
- *Decision is based on a detailed examination of the costs, benefits and potential impacts on system reliability of implementing an efficient and forward-thinking renewable energy policy for New York State*
- *In addition to establishing the 25 percent goal and a start date of January 1, 2006, the policy framework addresses the fundamental components of New York's RPS Program, including:*
 - determining what types of facilities should be eligible for participation in the RPS Program, choosing an appropriate procurement structure, and identifying issues that must be addressed during the RPS implementation phase.
 - Other key policy decisions include establishing two tiers of eligible resources, recognizing the importance of the state's existing green marketing program by relying on it to provide at least one percent of the renewable sales necessary to meet the overall 25 percent goal, and committing to a review of the RPS in 2009

Key Activities in New York in 2004

Resource Adequacy and Diversity

- Other Efforts
 - *Oil/Gas infrastructure study (ISO and NYSERDA)*
 - *Continued support for energy efficiency/peak load reduction through Systems Benefit Charge Programs and ISO Programs*
 - *Continued support for Distributed Generation*

Key Activities in New York In 2004

Reliability & Safety

- August 14, 2003 Blackout Inquiry
- Stray Voltage Testing and Inspection
- Ensuring Adequate T&D Investment

Key Activities in New York in 2004

Reliability & Safety

➤ The Blackout

▪ *What we Know*

- The events that caused 15.9 out of 19.2 million New Yorkers to lose power on August 14, 2003 were caused by actions/inactions in the Midwest.
 - Poor vegetation management
 - Inadequate system monitoring and operator training
 - Poor inter-control area communications

▪ *Reports:*

- US/Canadian Power Outage Task Force
- New York ISO
- North American Reliability Council
- Initial Report of the NYS Department of Public Service

Key Activities in New York in 2004

Reliability & Safety

➤ The Blackout

- *February 2004 – Phase I – DPS Staff Initial Report*
 - Focused on the impacts on and performance of electric, gas, water and telecommunications providers in New York.
 - Conditions immediately before the blackout
 - How the utilities operated during and immediately after the blackout
 - Retail utilities' communications with customers
 - A copy may be obtained on our website at:
www.dps.state.ny.us under the “What’s New” section

Key Activities in New York in 2004

Reliability & Safety

➤ The Blackout

▪ *Conclusions of the DPS Initial Report*

- The New York electric system did not cause or contribute to the cascading blackout of August 14, 2003
- The transmission system operated according to the bulk system reliability requirements
- The nuclear and non-nuclear generators in New York performed as designed and avoided significant damage.
- Con Edison, unfortunately, did not have a plan in place for the restoration of the steam system under conditions of total shutdown
- The total restoration of electric service in New York was accomplished in 30 hours.

Key Activities in New York in 2004

Reliability & Safety

➤ The Blackout

▪ *Key Recommendations of DPS Initial Report*

- Each electric utility and the NYISO should consider:
 - The need for back-up power for electronic devices used in protecting physical security
 - Improved communications capabilities for security personnel, enhanced computer-based identification systems, and the need for prompt patch management on its cyber systems
 - Telecommunications providers should re-assess their needs for back-up power, and the maintenance of back-up power equipment
 - Wireless providers should examine what could be done to improve call completions (during period of heavy calling)

Key Activities in New York in 2004

Reliability & Safety

➤ The Blackout

▪ *Key Recommendations of DPS Initial Report*

- Con Edison should conduct studies and develop procedures to avoid a steam system shutdown or implement measures to facilitate a more rapid return to normal steam system operations as the result of an electric blackout
- Nuclear plant licensees, together with the affected counties, should perform an analysis of whether to provide back-up power for certain alarm sirens
- All electric utilities should review their procedures for communicating with life support equipment (LSE) customers based on lessons learned from the blackout

Key Activities in New York in 2004

Reliability & Safety

➤ The Blackout

▪ *Responses to the Report*

- Companies have filed implementation plans and bi-monthly status reports
- November status reports will be the basis for a final report on implementation efforts
- Staff intends to complete its review on the implementation of the recommendations before year end

▪ *Next Steps*

- Phase II Report
 - Restoration – actions and performance of the transmission owners, generators and the NYISO immediately following the blackout

Key Activities in New York in 2004

Reliability & Safety

- The Blackout
 - *Unanswered questions that require modeling by the Northeast Power Coordinating Council (NPCC)*
 - Why did the transmission system separate from PJM and ISO-NE and collapse as it did?
 - Are there design flaws in the transmission system, or did equipment not function as expected?
 - Are there possible changes in the design or operation of the New York system that could prevent a similar event from happening?
 - Studies to date by NPCC and others have simulated the events leading up to the separation of New York from adjacent systems and replicated system conditions to that point.

Key Activities in New York in 2004

Reliability & Safety

- Stray Voltage Testing and Inspection
 - *On January 16, 2004, a woman named Jodi Lane was electrocuted after coming into contact with an electric service box in Manhattan (Consolidated Edison's territory)*
 - *DPS Staff discovered that Con Ed receives many shock reports but only notified DPS of shocks resulting in injuries or fatalities*
 - *The PSC has issued a DPS staff proposal that would require utilities to:*
 - Test annually all facilities with which the public might come into contact
 - Inspect all such facilities once every five years
 - Pay penalties for failure to meet testing and inspection requirements
 - *Staff is analyzing comments and plans to make recommendations to the PSC in December*

Key Activities in New York in 2004

Reliability & Safety

- Ensuring Adequate T&D Investment
 - *Multi-year plans for utility rates create utility cost control/efficiency/productivity incentives*
 - *Incentive effects can be so strong as to create under-investment in transmission and distribution infrastructure*
 - *Several recent plans decouple the link between spending and earning by establishing spending targets and capturing under-spent amounts for ratepayers*
 - *This issue will continue to be addressed in rate cases*

Key Activities in New York in 2004

Rates

➤ Major Rate Cases

▪ *Rochester Gas and Electric*

- 5 year plan freezes electric and gas base delivery rates
- Preserves \$343 million of \$360 million from the sale of the Ginna nuclear plant
- Stronger reliability and service quality programs
- Infrastructure investment targets
- Competition facilitation incentives

Key Activities in New York in 2004

Rates

- Consolidated Edison
 - *Gas and steam case decided in September*
 - Joint proposal was supported by wide array of diverse interests
 - Gas rates increased 7.5% (assuming steady gas costs) and steam rates increased
 - *Electric Case*
 - Con Ed filed for an increase of 22% on delivery rates to cover: increased infrastructure investment; cost allocation among customer types; pension costs; and energy efficiency
 - Negotiations held by all parties to the case
 - Decision expected in March or April 2005 for rates starting on 4/1/04

Key Activities in New York in 2004

Competitive Markets

➤ Wholesale

▪ *Improvements in Market Operations*

– Real Time Scheduling (RTS)

– Designed to fix existing inconsistency between scheduling and dispatch programs

– Real Time Commitment (RTC)

» Executes every 15 minutes and schedules in 15 minute increments

» Looks 2-1/2 hours out

– Real Time Dispatch (RTD)

» Executes every 5 minutes

» Looks ahead 1 hour

» Dispatches generation

Key Activities in New York in 2004

Competitive Markets

➤ Retail Markets

- *Retail Competition in NY is Continuing to Make Steady Progress*
 - There have been a number of positive benefits as a result of the restructuring of the energy industry in New York
 - \$8 billion in rate savings throughout the state since 1996
 - Nearly 100% of the state's largest gas customers and 65% of the large time-of-use commercial and industrial electricity load being supplied by Energy Service Companies (ESCOs).
 - Success in the small customer market, highlighted by Orange and Rockland's territory, which has achieved migration levels of approximately 33% for both electric and natural gas residential and small business customers.
 - ESCO Community is growing. There are approximately 60 ESCOs providing electricity and/or gas to customers.
 - There are at least three ESCOs serving electricity and five ESCOs serving gas in every major service territory in NY. Most service territories have many more.

Key Activities in New York in 2004

Competitive Markets

➤ Retail

- *Competitive Markets Case – initiated in 2000 to examine ultimate role of the utilities and barriers to competition*
 - Policy Statement issued August 25, 2004 outlined the Commission's end state vision of electric and gas retail markets and contained the following:

"The provision of safe, adequate, and reliable gas and electric service at just and reasonable prices is the primary goal. Competitive markets, where feasible, are the preferred means of promoting efficient services, and are well suited to deliver just and reasonable prices, while also providing customers with the benefit of greater choice, value, and innovation. Regulatory involvement will be tailored to reflect the competitiveness of the market."

Key Activities in New York in 2004

Competitive Markets

- Retail (continued)
 - *Policy Statement issued August 25, 2004 outlined the Commission's end state vision of retail markets and contained the following recommendations:*
 - Statewide use of O&R Switch & Save (Power Switch) Program (ESCOs offer a discount for several months)
 - Utility purchase of ESCO accounts receivable
 - Retail Auctions
 - Market Match/Market Expo
 - Aggregation Pilot Programs
 - Coordinated Utility/ESCO/PSC Education and Marketing Campaign
 - Utility Portfolio Management and Pricing
 - Monitoring the Market for Anti-Competitive Behavior

Regional Energy Activities

- Elimination of Export Fees
 - *Currently, each region (NY, NE, PJM) charges a fee on energy exported from or wheeled through their respective control areas.*
 - *These fees distort regional economic dispatch decisions and often prevent least cost power from flowing across control area boundaries*
 - *NY and NE have reached an agreement on eliminating export fees between their two regions*

Regional Energy Activities

- Installed Capacity Markets
 - *NY PSC and ISO staff are working with PJM and New England to adopt a regional design for the ICAP markets, including a regional demand curve. A regional market would allow ICAP sales between control areas*
 - NE Implementation in January 2006
 - PJM will file 1Q 2005 for approval at FERC
- Intra-Hour Transaction Schedules
 - *The ISOs are discussing how to allow more frequent schedule changes to react to current market conditions*
- Cross Board Controllable Line (HVDC and/or PAR Scheduling)
 - *The ISOs are working to provide separate proxy bus representation and scheduling rules to improve utilization of tie-lines*

Regional Energy Activities

- Global Climate Change/Carbon Caps
 - *Initiative began in April 2003 by NYS Governor Pataki*
 - Participating states: New York, Maine, Massachusetts, New Hampshire, Vermont, Connecticut, Rhode Island, New Jersey, Delaware
 - Observers: Pennsylvania, Maryland and several eastern Canadian provinces.
 - *Policy Goals*
 - Develop a multi-state cap-and-trade program for greenhouse gas emissions (GHGs);
 - Initially cover carbon dioxide (CO₂) emissions at electric generating plants;
 - Agree on program design by April 2005; and
 - Consider expanding the program to other kinds of sources in a future phase of the program

Upcoming Events/Activities

- 4Q 2004
 - *Staff's interim report on Blackout to the PSC*
 - *Staff recommendation on Stray Voltage Testing and Inspections*
 - *Roll out of RTS*
- 1Q 2005
 - *Con Ed rate case decision*
 - *RPS Implementation Plan to be filed with PSC*
 - *System Benefits Charge (SBC) Phase III proceeding to begin*
 - The SBC is a mechanism established to fund public benefit programs such as previously run by the utilities during the transition to competitive markets

Upcoming Events/Activities

- *System Benefits Charge (continued)*
 - The SBC is collected from utility distribution customers and is used by the New York State Energy Research and Development Authority (NYSERDA) to fund three types of programs:
 - Energy efficiency/peak load control
 - Research and development
 - Low income energy efficiency
 - \$150 million collected per year
 - Phase II of the program will expire in June 2006
 - Major issues to be discussed in Phase III
 - Redesign of renewables program in light of the RPS
 - Inclusion of transmission and distribution R&D
 - Whether to create a natural gas SBC

Upcoming Events/Activities

- 2Q 2005
 - *Global Climate Change/Carbon Cuts recommendations*
 - *Conference sponsored by state public utility commissions in the northeast on regional transmission issues*