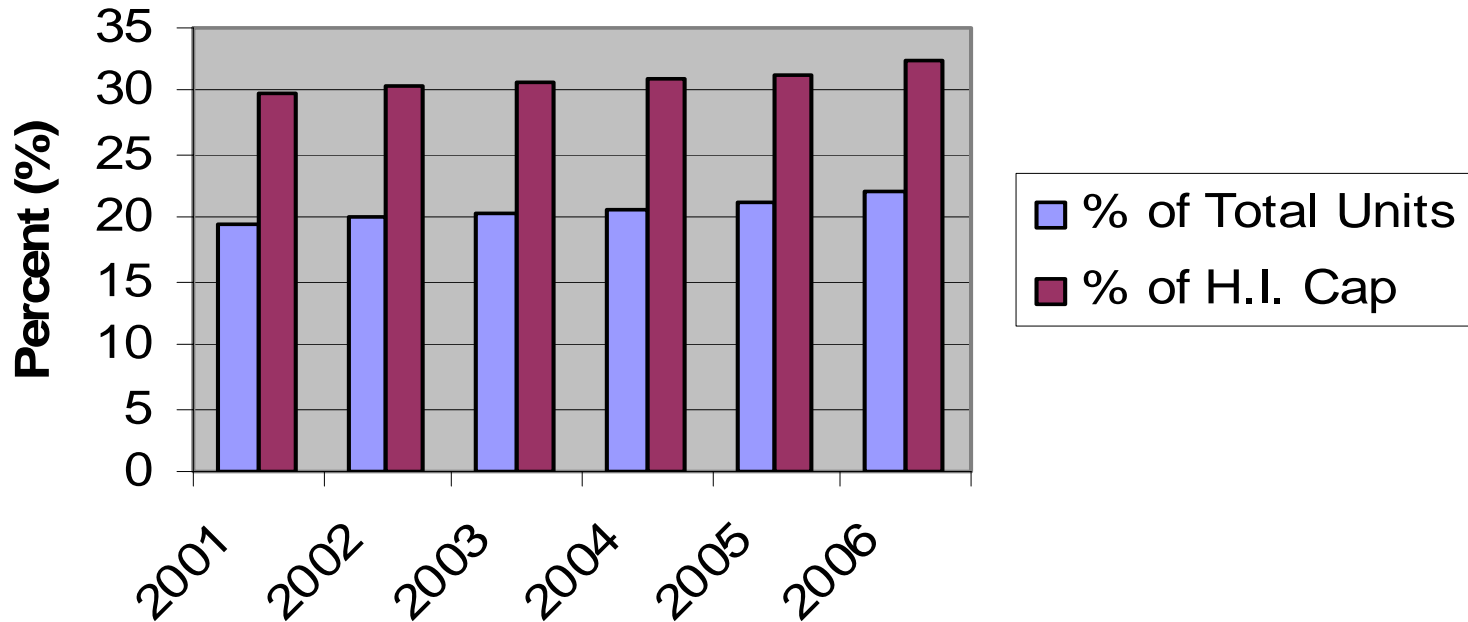


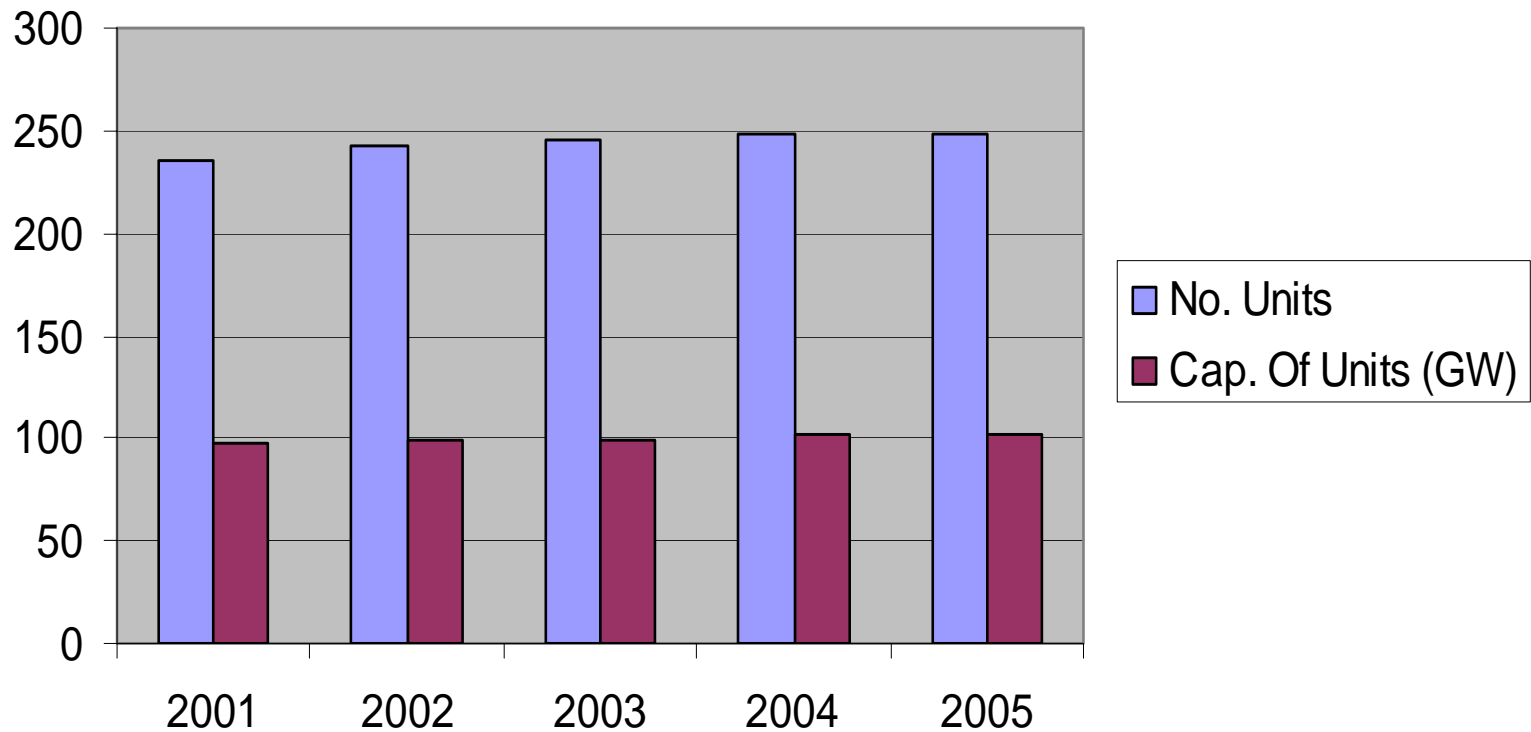
Multi-Pollutant Update CAIR, CAIR Plus, CAIR III

OTC Fall Meeting
Washington, DC
November 14, 2007

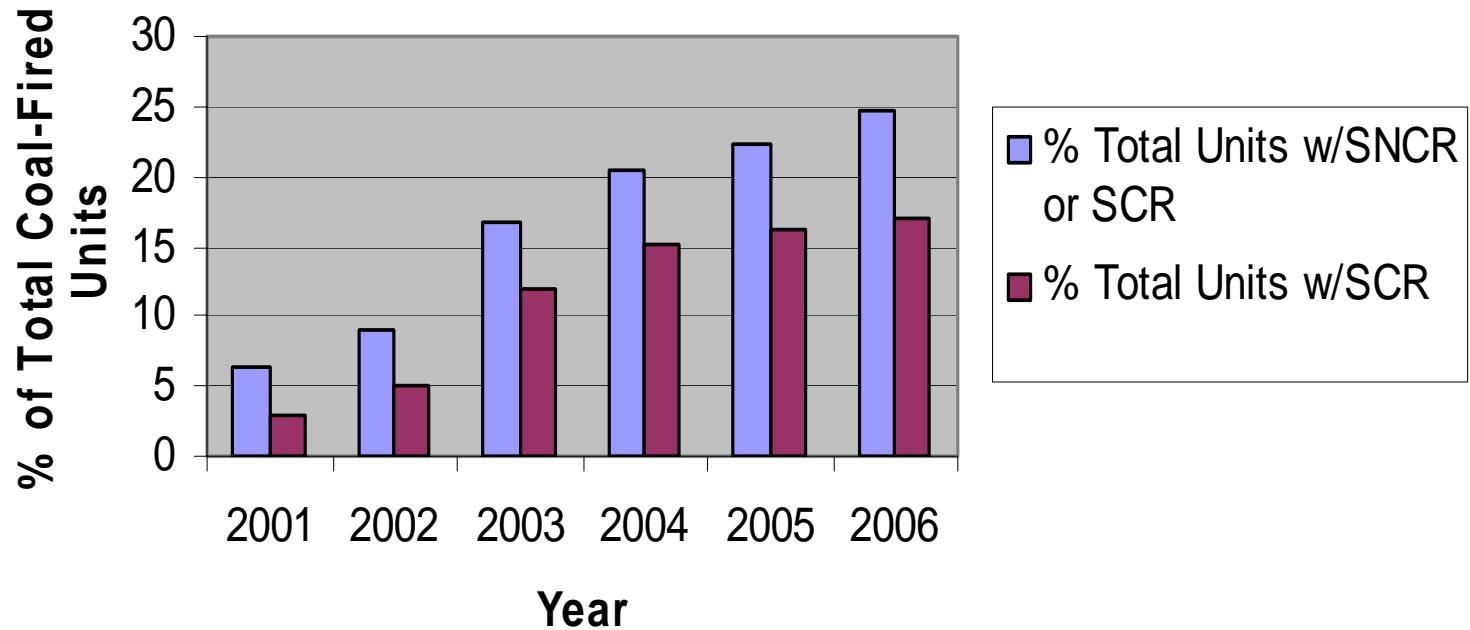
% Scrubber Coal Units - Acid Rain Non-CFB



Fossil-Fired Generating Units with Scrubbers



Coal-Fired Acid Rain Units with Post Combustion NO_x Controls



Timeline

- OTC 2004 position
- EPA CAIR program
- OTC CAIR Plus Proposal

New Information & Next Steps

- Health Benefits of Beyond CAIR (NESCAUM)
- Revisiting the OTC Multi Pollutant Position
 - CAIR phase III discussion

OTC 2004 Position

- OTC Multipollutant Position was adopted by Commissioners January 24, 2004
 - Proposed aggressive and timely controls for NO_x, SO₂, and Hg from power plants
- Two purposes:
 - Influence development of EPA proposals
 - Provide basis for state action if final EPA response found inadequate

EPA CAIR

- Acknowledges the significant role of pollution transport
- Requires NO_x reductions in 2009 and 2015
 - Includes a seasonal NO_x cap
- Requires SO₂ reductions in 2010 and 2015
- Covers a number of states of concern

OTC CAIR Plus

- Outcome of State Collaborative discussions between OTC and LADCO states
- CAIR Plus levels bounded by OTC Multi-P position and LADCO EGU1/EGU2 analysis
- OTC decided to do IPM and cost analysis to further evaluate the policy

NOx Emissions Rates

| Year | USEPA CAIR | OTC Multi-P | CAIR+ |
|------|------------|-------------|-------|
| 2008 | -- | 0.13 | -- |
| 2009 | 0.15 | 0.13 | 0.13 |
| 2010 | 0.15 | 0.13 | 0.12 |
| 2012 | 0.15 | 0.09 | 0.08 |
| 2015 | 0.13 | 0.09 | 0.07 |
| 2018 | 0.13 | 0.09 | 0.07 |

SO₂ Emission Rates

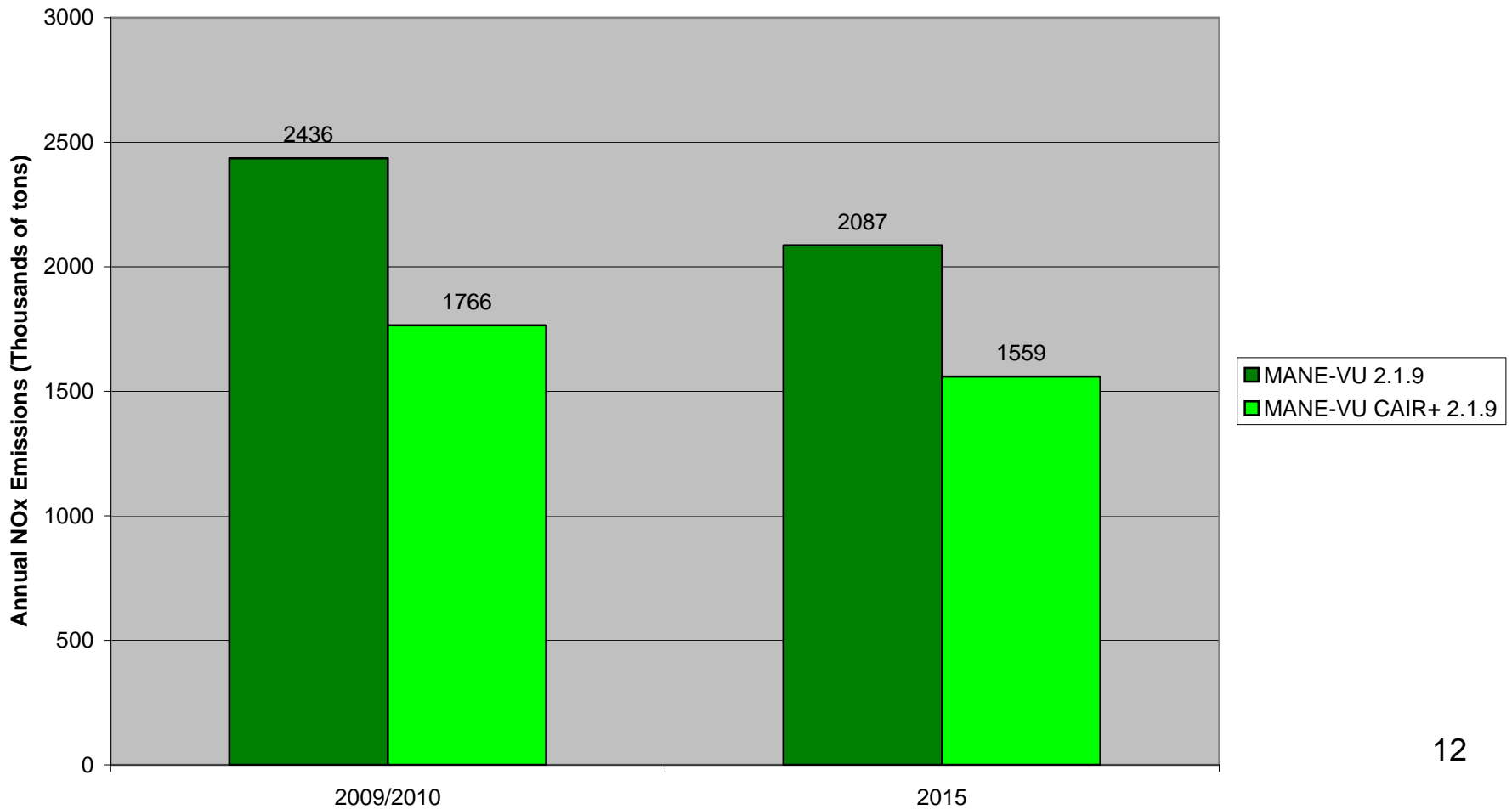
| Year | USEPA CAIR | OTC Multi-P | CAIR+ |
|------|------------|-------------|-------|
| 2008 | -- | 0.21 | -- |
| 2009 | -- | 0.21 | -- |
| 2010 | 0.37 | 0.21 | 0.35 |
| 2012 | 0.37 | 0.14 | 0.25 |
| 2015 | 0.26 | 0.14 | 0.21 |
| 2018 | 0.26 | 0.14 | 0.18 |

CAIR Plus IPM Analysis

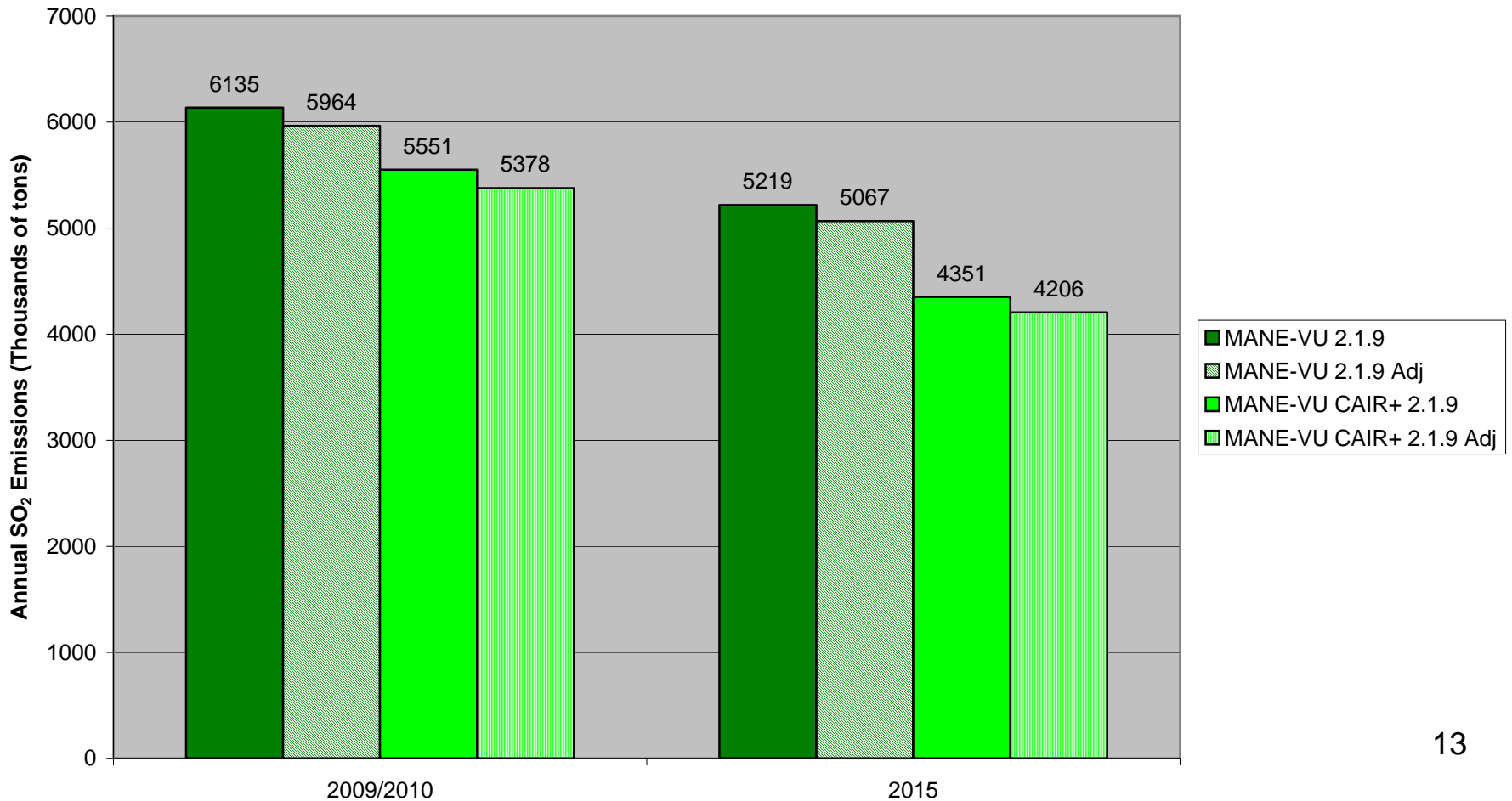
- In comparing the CAIR Base Case with the CAIR Plus scenario, the annual incremental costs* increase by:
 - \$419 Million in 2018 in OTC States
 - \$2.6 Billion (+2.1%) in 2018 Nationally

*Costs include the capital costs of new investment decisions, fuel costs and the power plant operation and maintenance costs in 1999 dollars.

USA Total IPM Annual NOx Emissions CAIR versus CAIR Plus Comparison



USA Total IPM Annual SO₂ Emissions CAIR versus CAIR Plus Comparison



Health Benefits New Data

NESCAUM Presentation

OTC Multi-Pollutant Review

Additional needs since OTC 2004 Multi pollutant positions.

- Inform a Congressional Process
- Revisions to Ozone NAAQS
- Non - Attainment Area Needs
- Multi Pollutant SIPs
- Health Information

Timeline

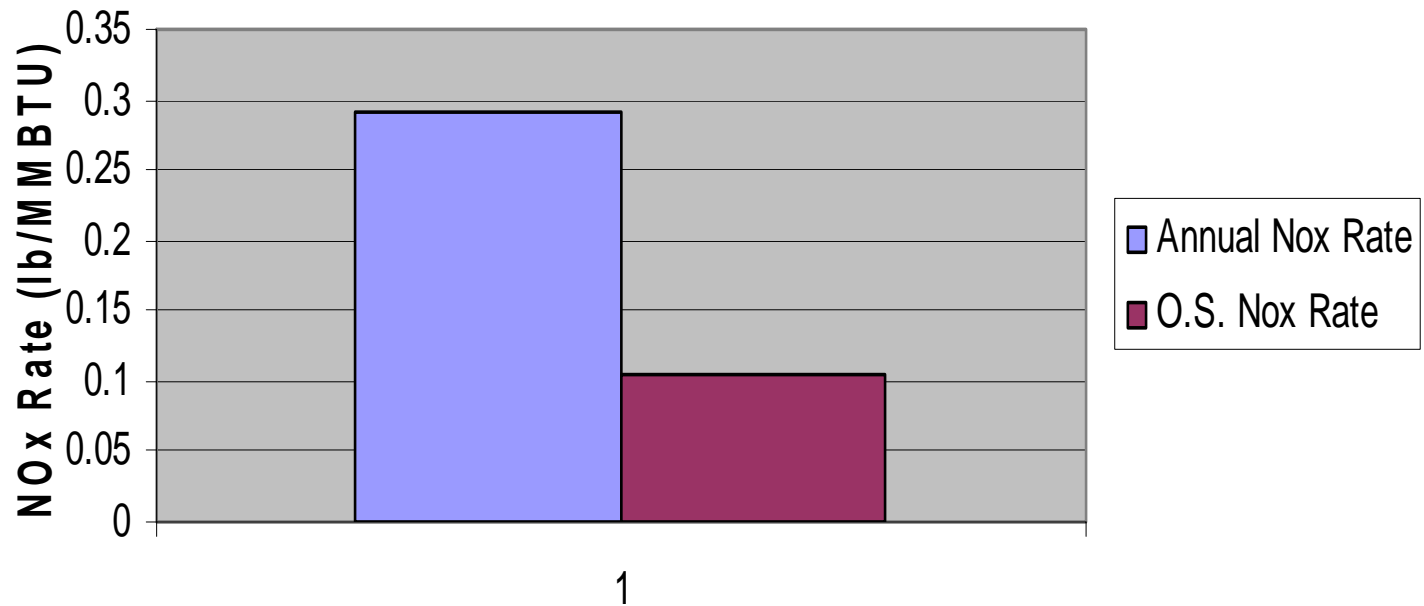
Timeline for Reductions

- CAIR 2009
- CAIR plus 2012
- CAIR phase III 2018

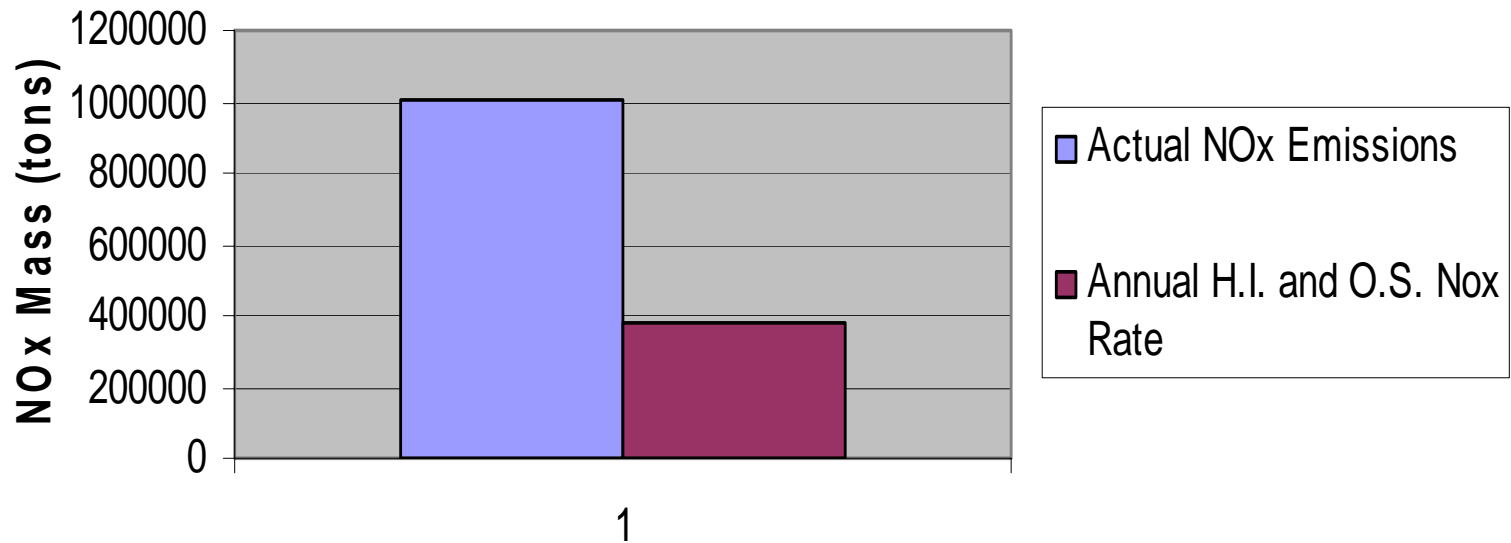
Next Steps

- Solicit review and comment of health benefits analyses
- Engage other states, EPA and stakeholders in dialogue
- Complete Multi-P review for OTC Annual Meeting in June 2008

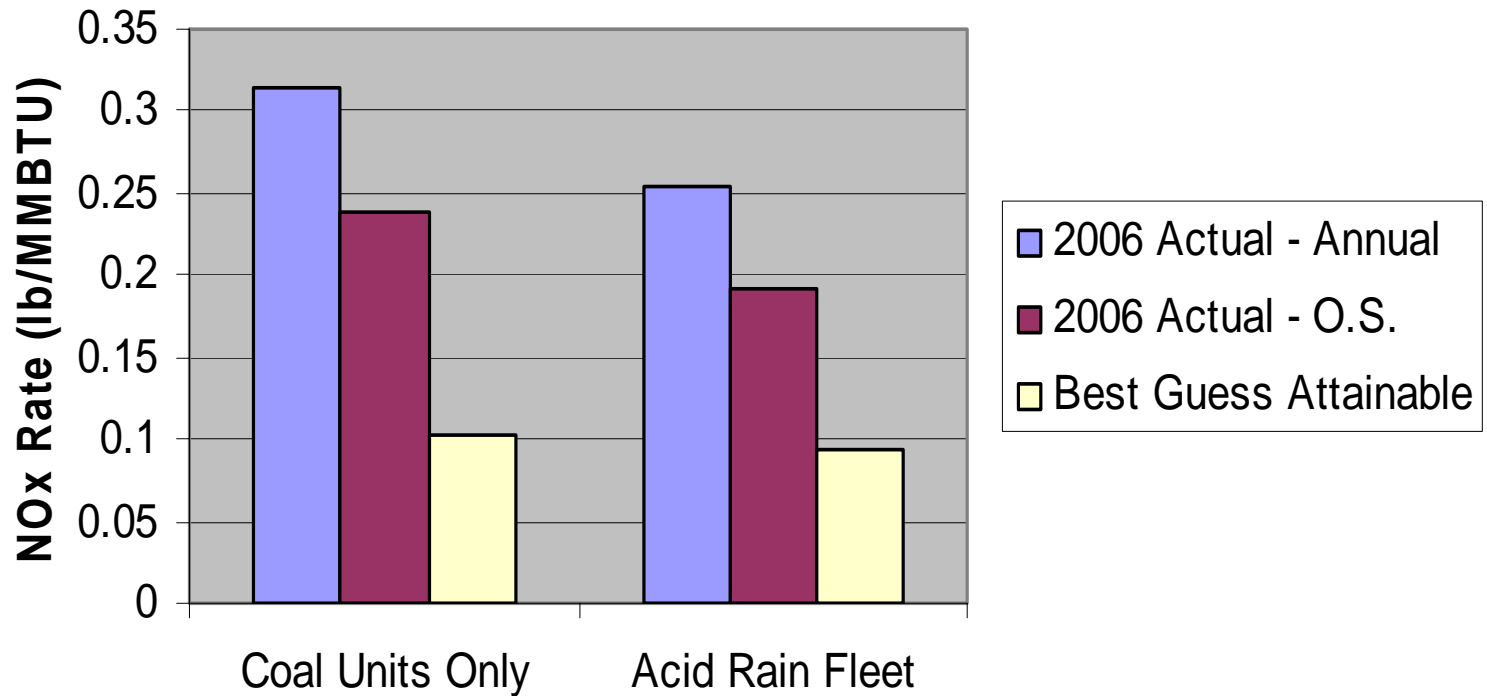
2006 NO_x Rate - Coal Fired Units with Post-Combustion NO_x Controls



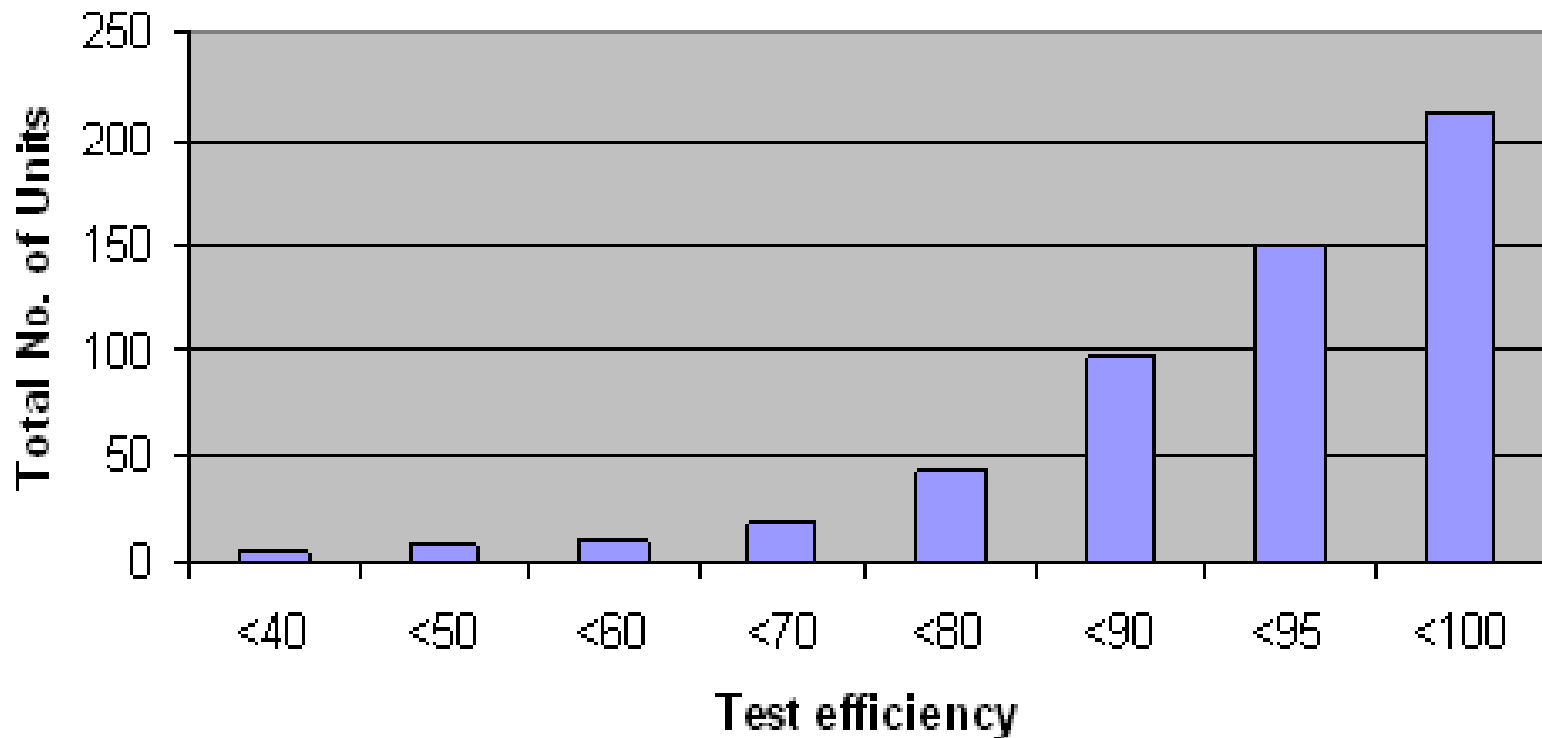
2006 Coal-Fired Units with Post-Combustion NOx Controls - Projected Annual NOx Emissions Using 2006 Annual Heat Input and Ozone Season NOx Rate



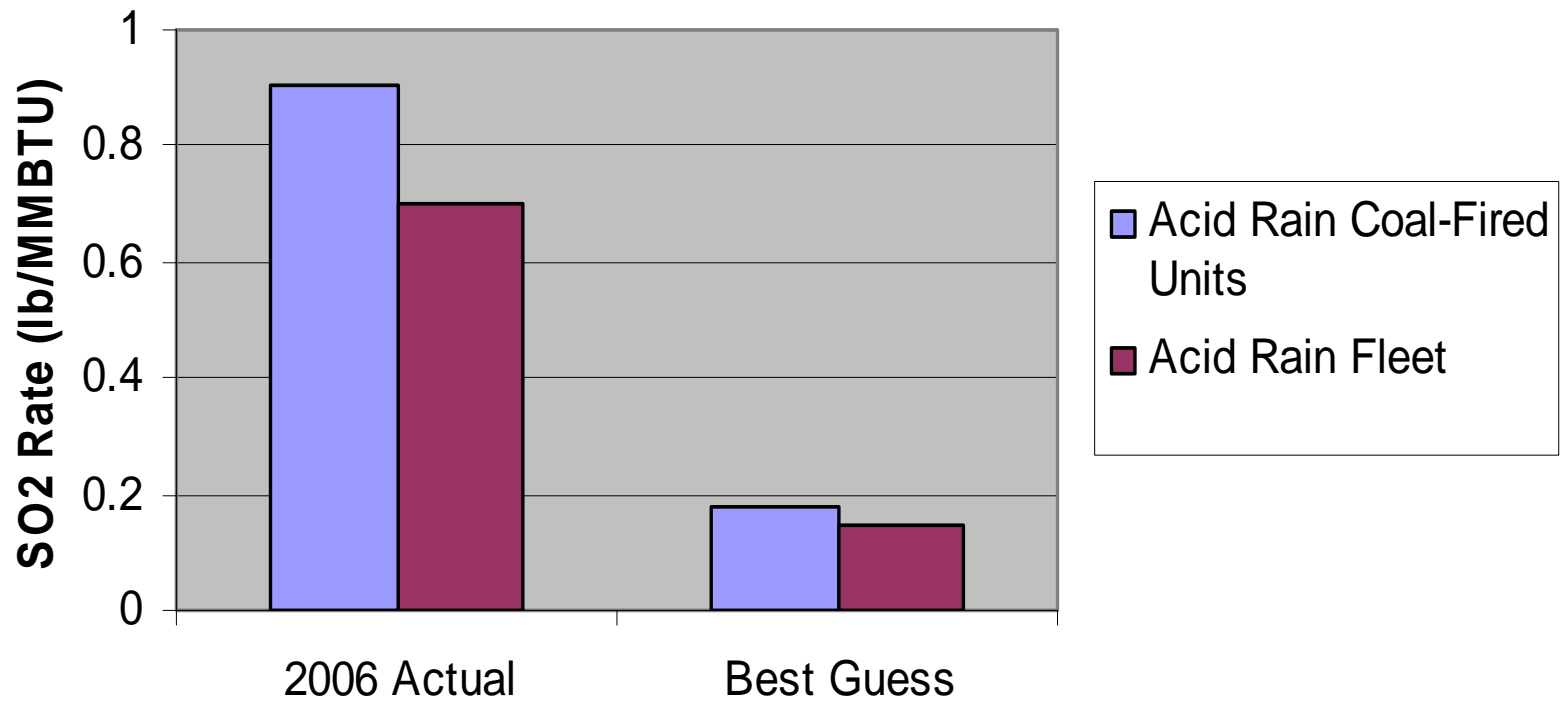
Acid Rain Unit NOx Rates



EIA Scrubber Efficiency Test Data - 2005



Acid Rain Unit SO₂ Rates



CAIR Region SO2 Emissions

