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# Multi-Pollutant Workgroup Update

*Power Plants, Peaking Units and ICI Boilers*



OTC Annual Meeting

June 6, 2006



# Topics Covered

- Background
- Status of “CAIR Plus”
  - Power plants and other sources
- Tougher than CAIR power plant effort
  - State collaborative
  - Status of CAIR Plus model rule
- Peaking Units
- Industrial, Commercial and Institutional (ICI) Boilers

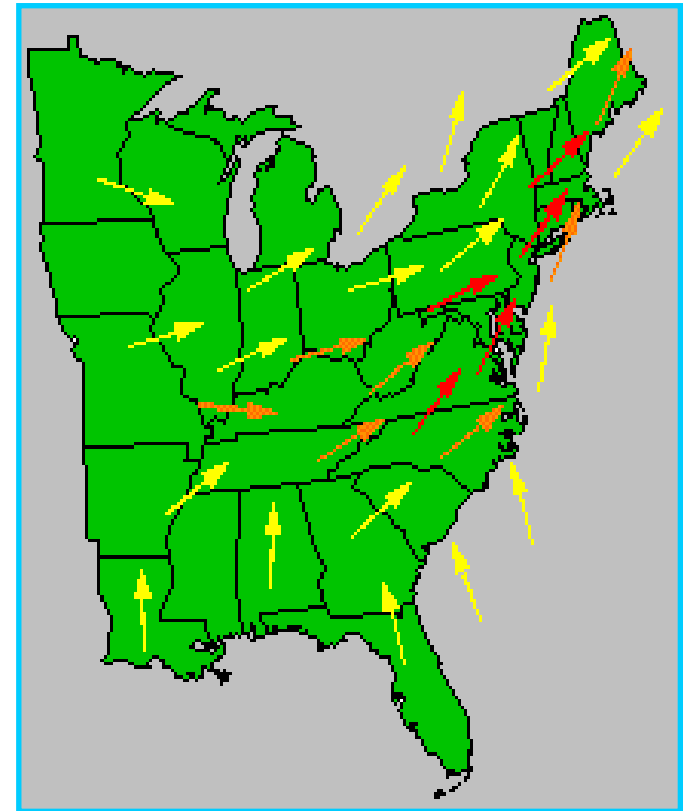




# Background

## Multi-Pollutant Actions

- March 4, 2003
  - Statement of Principles re: Air Pollutant Emissions
- September 24, 2003
  - Resolution on Electric Generating Unit (EGU) emissions
- January 27, 2004:
  - Multipollutant Position approved.
- November 10, 2004:
  - Charge to SAS Committee on Multipollutant Control
- June 8, 2005:
  - Resolution on program development





# The June 2005 Resolution

- Key concepts:
  - Develop a regional multipollutant program
  - Work with other states outside of the Ozone Transport Region (OTR)
  - Include power plants and other sources
  - For EGUs
    - Build from EPA's Clean Air Interstate Rule (CAIR)





# The State Collaborative

- Small group of OTC Commissioners began meeting with a small group of Commissioners from the Midwest in the late 2005
- The “State Collaborative” now includes about 22 states and continues to meet routinely
- Goal is to identify, and work in partnership on, regional control programs to help address air pollution transport and issues of mutual concern
  - Ozone, fine particulate and haze





# The June 2005 Resolution

- Key concepts:
  - Develop a regional multipollutant program
  - Work with other states outside of the Ozone Transport Region
  - **Include power plants and other sources**
  - For EGUs, Build from EPA's Clean Air Interstate Rule (CAIR)





# Super-Regional Control Measures

- Measures being considered
  - First out of the blocks:
    - Consumer products (including gas cans)
    - Paints (AIM)
    - Chip reflash
    - Diesel retrofit
  - Still in the works:
    - EGUs
    - Industrial, commercial and institutional (ICI) boilers
    - Regional fuel
    - Others ...



• ECO spouts are self-venting, stop fuel flow automatically and shut automatically





# EGUs

- General consensus that going beyond CAIR will be needed to allow certain areas to meet the ozone and fine particulate standards
  - OTC and LADCO modeling
- One of many strategies being considered - but still on the plate
- Discussions seem to be moving towards
  - tougher for NO<sub>x</sub>, less tough for SO<sub>2</sub>
- Current “rates” under discussion
  - NO<sub>x</sub> = .125 in 2009 and .08 in 2015
    - CAIR = .15 and .13
  - SO<sub>2</sub> = .41 in 2010 and .28 in 2015
    - CAIR = .51 and .37







# The June 2005 Resolution

- Key concepts:
  - Develop a regional multipollutant program
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  - Include power plants and other sources

**– For EGUs, Build from EPA's Clean Air Interstate Rule (CAIR)**



2. Ammonia is added to the flue gas.

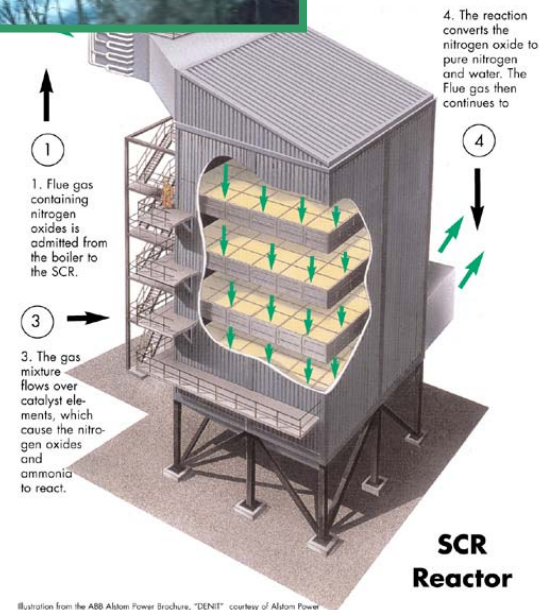
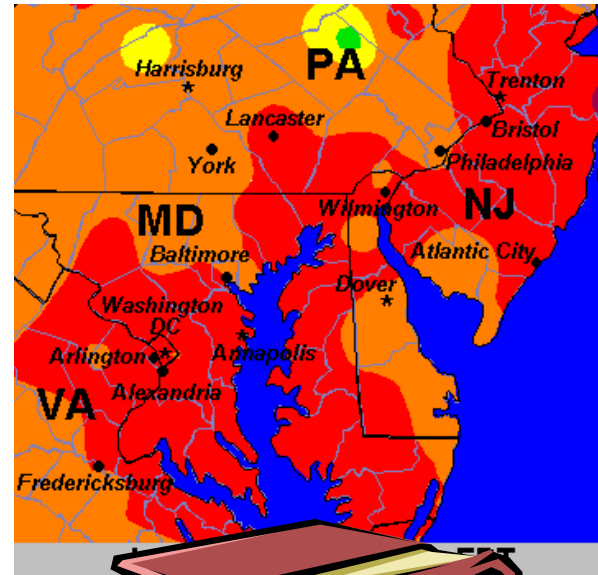


Illustration from the ABB Alston Power Brochure, "DENIT" courtesy of Alston Power

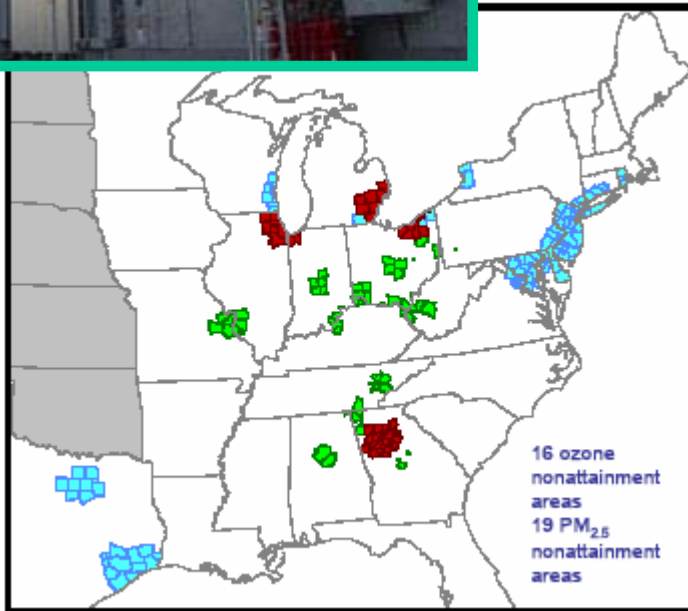


# Developing CAIR Plus

- Key themes
  - Consider other measures
  - Build from EPA's CAIR model rule
  - Borrow from STAPPA/ALAPCO effort
  - Meet CAIR submittal deadlines
    - If more time is needed to finalize agreement within the State Collaborative ...
      - Build in a transition to CAIR Plus later
  - Keep it simple



# Is CAIR Enough?

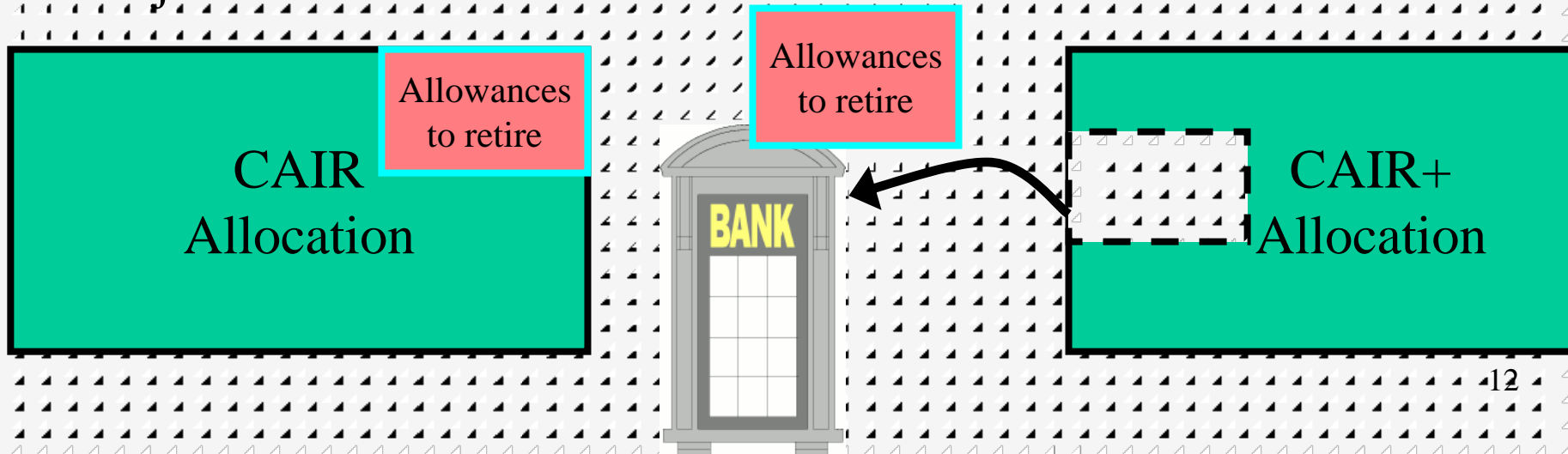


- Working with EPA and the State Collaborative on this issue
- Step 1 – Using modeling, see if ozone and fine particle standards can be met with
  - Existing control (OTB/OTW) programs
  - CAIR, and
  - New measures (in OTR and across a super-region)
- Step 2 – Add CAIR Plus
- Modeling is not complete, but seems to indicate that we will need to go to step 2



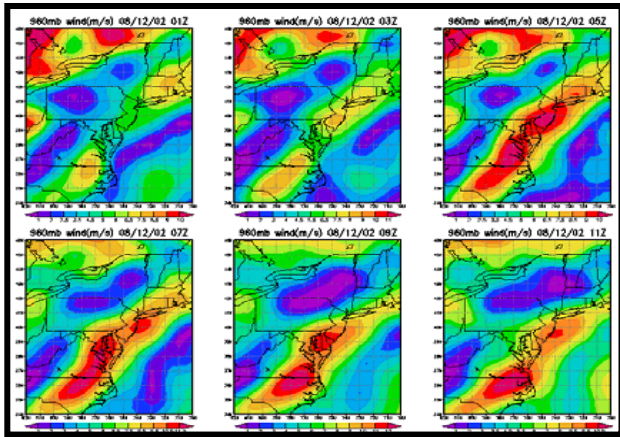
# Basic CAIR Plus Implementation Concept

- Start from NO<sub>x</sub> and SO<sub>2</sub> tons allocated per CAIR
- Develop approaches for “retiring” a percentage of this allocation to ensure attainment
- Implement CAIR Plus with adjusted allocations



# How Do We Retire Allowances?

## Different Approaches Needed For NO<sub>x</sub> and SO<sub>2</sub>

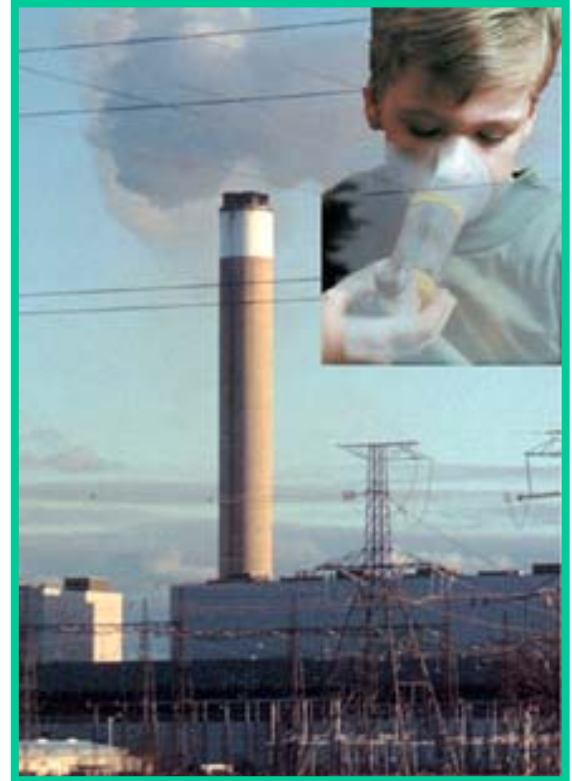


- CAIR uses slightly different regulatory mechanisms for NO<sub>x</sub> and SO<sub>2</sub>
- NO<sub>x</sub> builds off of the NO<sub>x</sub> SIP Call
  - States allocate to sources
- SO<sub>2</sub> builds off of the Title IV (Acid Rain) requirements
  - EPA allocates to sources



# Retiring SO<sub>2</sub> Allowances

- States set up a general state retirement account that allows for retirements outside of the CAIR program
- In state rules
  - Outside of the CAIR program
  - Sources are required to transfer a percentage of EPA allocated SO<sub>2</sub> allowances into a state retirement account before they are used
- Based on EPA and Connecticut concepts





# Retiring NO<sub>x</sub> Allowances

- Could mimic SO<sub>2</sub> approach
  - Outside of the CAIR program
  - States set up a retirement account
  - Sources are required to transfer a percentage of EPA allocated NO<sub>x</sub> allowances into a state retirement account before they are used
  - Consistent approaches for SO<sub>2</sub> and NO<sub>x</sub>
- Or ...





# NO<sub>x</sub> State Attainment Reserve

## *Because States Allocate NO<sub>x</sub>*

- Inside the CAIR program
  - States set up an attainment (retirement) reserve
  - States allocate portion of allowances to the attainment reserve prior to allocating to sources.
- Appears to be within states' powers under the CAIR framework
- Fairly simple
  - Straight forward accounting
  - Reductions up front







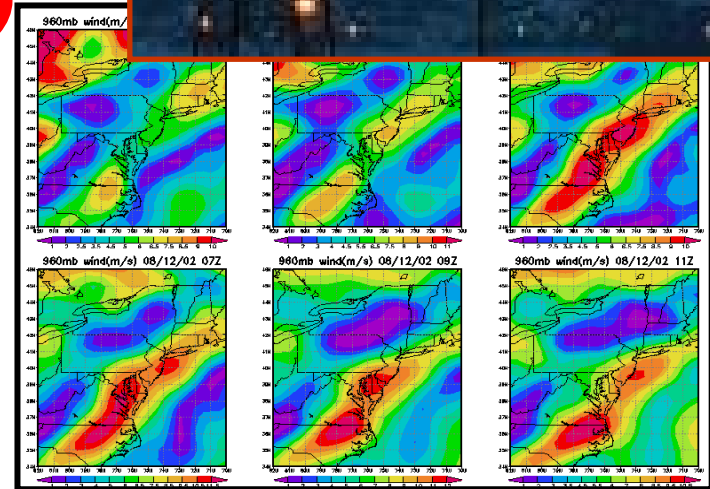
# SO<sub>2</sub> Backstop – Separate Program



- Retirement concept for SO<sub>2</sub> (used in CAIR) is being challenged
- Also developing a separate CAIR Plus interstate trading program that would supplement CAIR.
  - Building from existing NY intrastate trading program
- No need for NO<sub>x</sub> backstop

# Key Dates

- Continue to work with Collaborative on basic policy issues
- Prepare to submit CAIR or CAIR Plus SIPs by **March 2007**
  - Full CAIR Plus SIPs if policy process is complete
  - CAIR SIPs that can easily be transitioned to CAIR Plus SIPs if not





# Next Steps

- Model rule language for November 2006 OTC meeting
- More detailed input from stakeholders
- Continue to work with Collaborative states
- Continue to work with EPA





# Other Issues

- Two other issues linked to CAIR Plus effort
- Peaking units
  - Run mostly on the hottest days of the summer
- Industrial, Commercial and Institutional (ICI) Boilers
  - Large manufacturers, schools, government operations



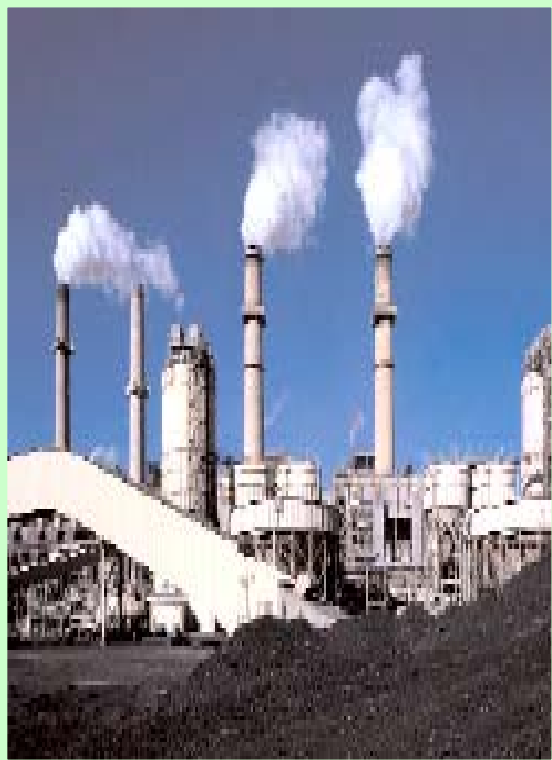
# Current Thinking

- Peaking Units

- May be significant contributor to peak day ozone
  - More later from NJ
- Considering a voluntary effort with generators and ISOs to cut peak day NO<sub>x</sub> emissions by 2010

- ICI Boilers

- Potential reductions are significant
  - More from Control Measure WG later
- Current approach sets performance standards that can be met by:
  - Adding specific controls on site, or
  - Purchasing CAIR allowances



# Wrap-Up

- State Collaborative process has been very successful
- Modeling seems to indicate that even after all of the other new measures are implemented that a tougher than CAIR program will be needed
- Ready to move ahead with CAIR Plus regulations and SIPs to meet upcoming CAIR deadlines
- Work on Peaking Units and ICI Boilers continues

