

*Recent and Upcoming*

# Major Clean Air Rules of Importance to Electric Power and Related Industries

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*Presentation for*

**LADCO Regional Air Quality Workshop**

by

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# Major Upcoming Rules Facing the Power Industry

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- Suite of Clean Air Rules:
  - Ozone Implementation
  - PM Implementation
  - **Interstate Rule**
  - **Mercury Rule**
  - **Visibility Rule**
- **NSR Reform**

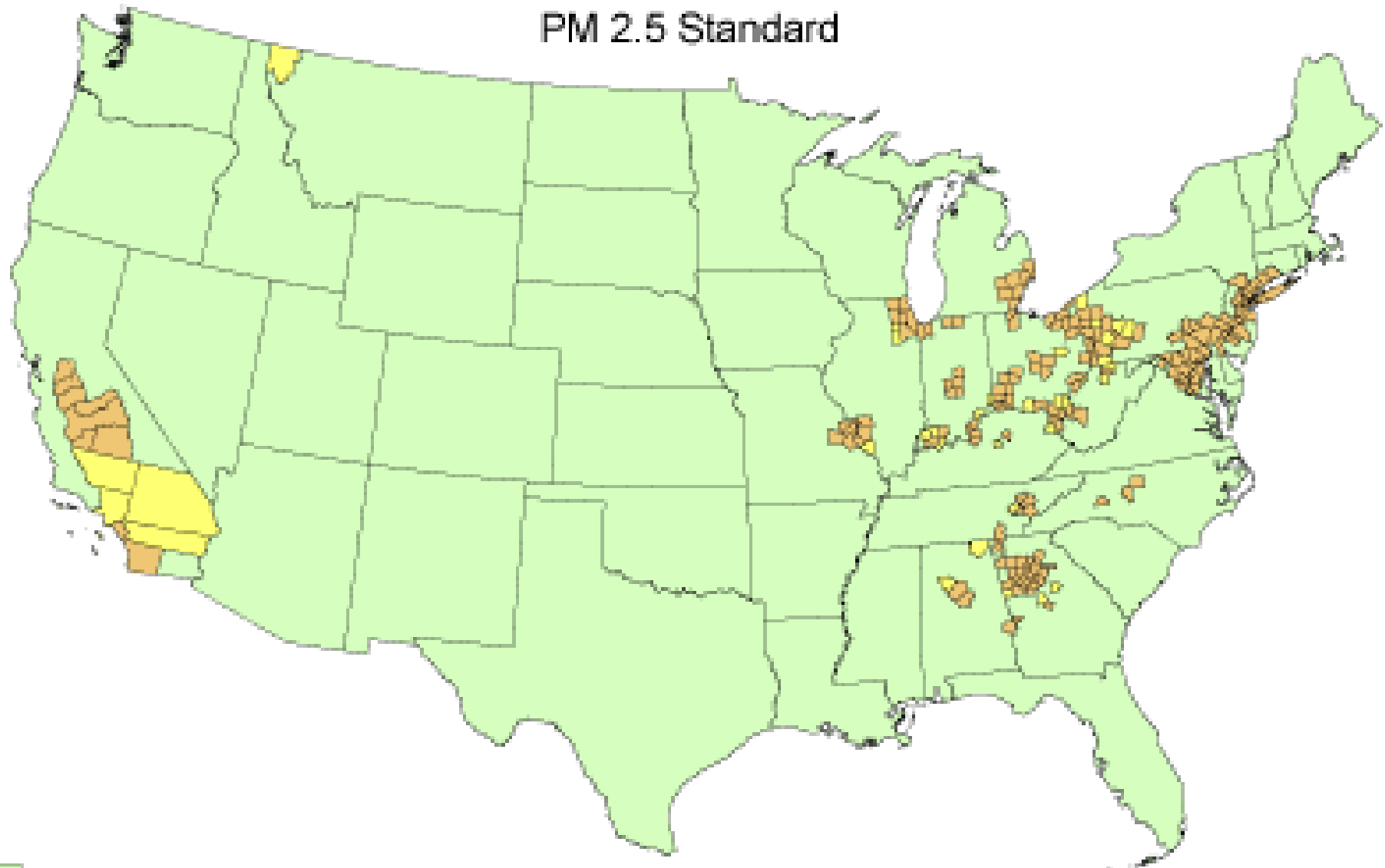


## Attainment and Nonattainment Areas in the U.S. 8-hour Ozone Standard



- Attainment (or Unclassifiable) Areas (2668 counties)
- Nonattainment Areas (432 entire counties)
- Nonattainment Areas (42 partial counties)

# Attainment and Nonattainment Areas in the U.S. PM 2.5 Standard



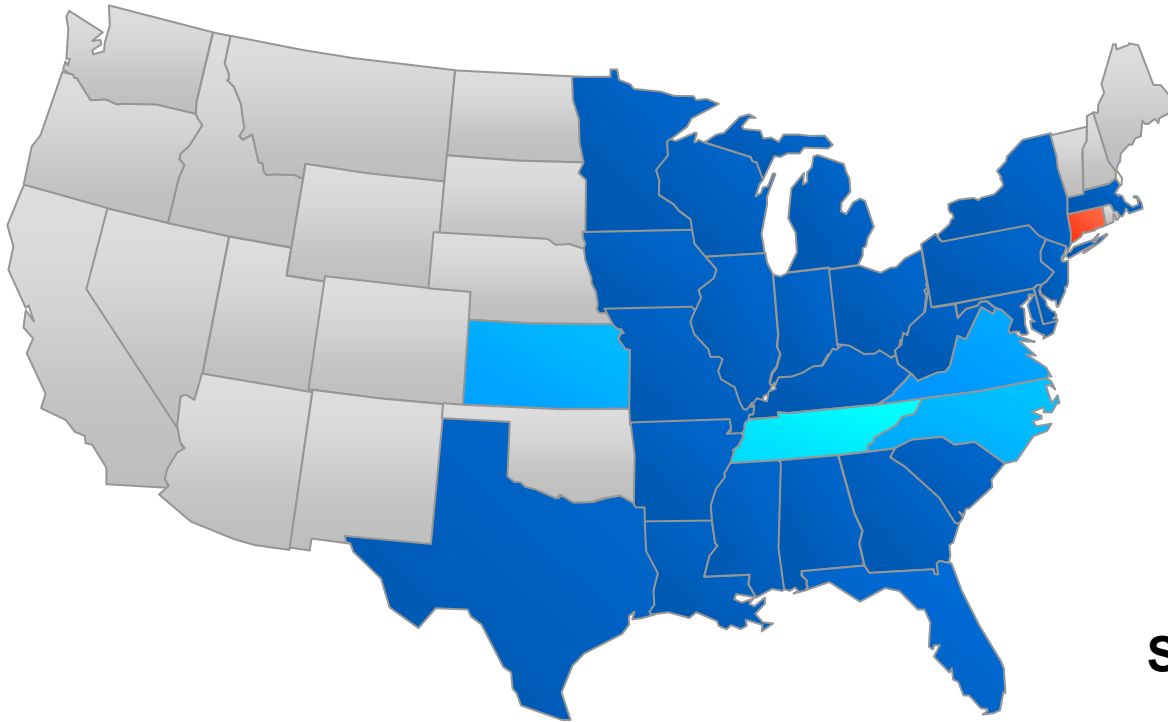
- Attainment (or Unclassifiable) Areas (2916 counties)
- Nonattainment Areas (191 entire counties)
- Nonattainment Areas (34 partial counties)

# Clean Air Interstate Rule (CAIR)

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- Determines geographic coverage based on “significant contribution” of state  $\text{NO}_x$  and  $\text{SO}_2$  emissions to nonattainment of the 8-hour Ozone and  $\text{PM}_{2.5}$  standards.
- Sets annual  $\text{SO}_2$  and  $\text{NO}_x$  emissions caps for covered region based on application of highly cost-effective controls in the power sector.
  - Two phases of reductions, in 2010 and 2015, due to limits on construction labor for pollution control
  - Emissions caps are divided into state  $\text{NO}_x$  and  $\text{SO}_2$  budgets
- Includes optional cap and trade program based on the Acid Rain Trading Program.
- Allows states flexibility on how to achieve the reductions, including which sources to control and whether to join the trading program.

# Proposed CAIR: Affected Region and Emission Caps



- States controlled for both SO<sub>2</sub> and NO<sub>x</sub>
- States controlled for ozone season NO<sub>x</sub> only
- States not covered under the IAQR rule

## Emissions Caps\*

(million tons)

	2010	2015
<b>SO<sub>2</sub></b>	3.9	2.7
<b>NO<sub>x</sub></b>	1.6	1.3

\*For the affected region.

# Clean Air Mercury Rule

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- **Winter 2004 Federal Register**

- Proposed section 112 MACT requirements for coal-fired generation units
- Reduces mercury emissions from 48 to approximately 34 tons by 2008 with controls based on coal type.
- Proposed cap-and-trade approach to address mercury from coal-fired generation units under section 111
- Revises December 2000 determination to use section 112 MACT requirements.
- Commits to phased-in annual caps: first cap at co-benefits level in 2010; second cap at 15 tons in 2018 and thereafter.
- Also, discusses cap-and-trade approach under section 112(n)(1)(A)

- **Late Fall 2004 Federal Register**

- Notice of Data Availability



# Clean Air Visibility Rule: BART

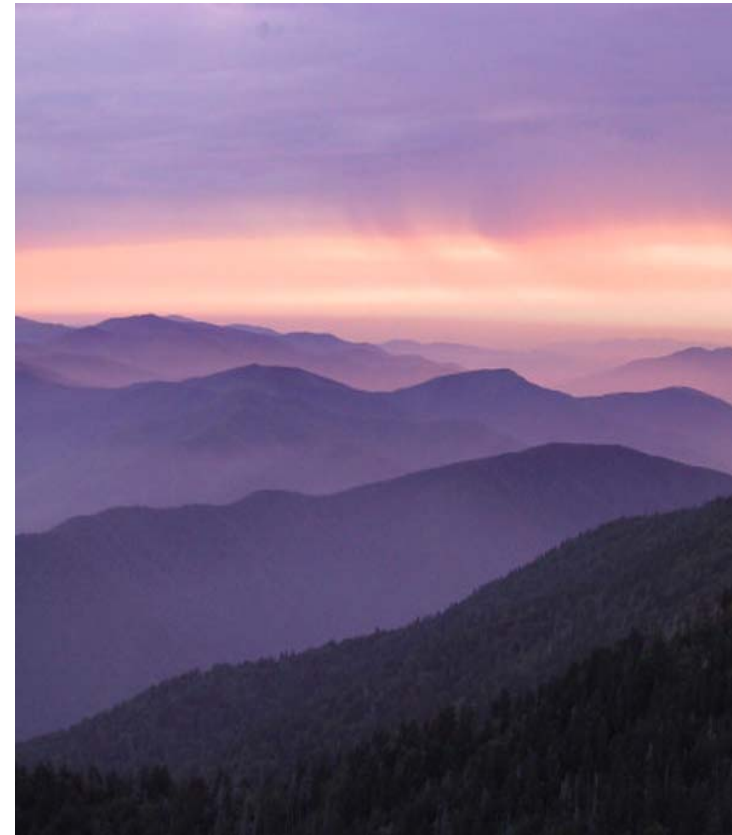
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- Control Levels for SO<sub>2</sub> and NO<sub>x</sub> from Electric Generation Units
  - As required by the CAA we are establishing, in the guidelines, control levels for >750 MW power plants.
  - We also include presumptive control levels for units >250 MW at *all* power plants.
    - **SO<sub>2</sub>**
      - Propose choice of 95% control **or** 0.1 to .15 lbs/MMBtu.
        - » Facilities using Eastern coal can meet 95% control
        - » Facilities using Western coal can meet 0.1 to 0.15 lbs/MMBtu.
    - **NO<sub>x</sub>**
      - All sources currently using selective catalytic reduction (SCR) for the ozone season (those subject to the NO<sub>x</sub> SIP call), keep and extend controls to year-round.
      - All sources currently without SCR, propose control to 0.2 lbs/MMBtu, and request comment on range from 0.15 to 0.24 lbs/MMBtu.

# BART - *continued*

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- Depending on approach taken by the States, reductions associated with BART or its alternative would go into effect in 2014 with full implementation as late as 2018.
- EPA is also soliciting comments on whether CAIR could satisfy BART's requirements for power generators in the affected States.



# Background: NSR Reform

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- Basic rules were promulgated in 1980.
- Advisory committee was formed in 1992 to investigate the need for and opportunities for NSR improvement.
- Proposed rule issued by EPA in 1996.
- Additional issues addressed in 1998.
- Altogether, the reform effort resulted in:
  - Thousands of pages of public comments.
  - Hundreds of meetings with interested stakeholders.
  - General agreement NSR can and should be improved.
  - No consensus as to how it should be improved.

# NSR Reform

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- **Finalized Changes:**

- Baseline Actual Emissions
- Actual-to-Projected-Actual Applicability Test
- Plantwide Applicability Limitations (PALs)
- Clean Unit Test
- Pollution Control Project (PCP) Exclusion
- **Equipment Replacement Provision**

- **Upcoming Proposals:**

- Debottlenecking Policy
- Project Aggregation Policy
- Allowables PALs



# Schedule for Major Rules

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- **Final CAIR** **March 2005**
- **Final CAMR – Mercury** **March 2005**
- **Final CAVR - BART** **April 2005**
- **Additional NSR Reform** **End of 2005**

