Reducing Air Pollution from Power Plants

U.S. Environmental Protection Agency
Office Air and Radiation

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Power Sector Provides a Major Share of Our Air Emissions

**SO₂ Emissions, 2007**
- Total: 12.9 Million Tons

**NOₓ Emissions, 2007**
- Total: 17.0 Million Tons

**Hg Emissions, 2005**
- Total: 102.7 Tons

**PM₁₀ Emissions, 2007**
- Total: 2.2 Million Tons

**Carbon Dioxide, 2005**
- Total: 5.8 Billion Tons

Sources: SO₂, NOₓ, PM₁₀, and Hg are from NEI trends data; PM₁₀ excludes condensibles and fugitive dust; CO₂ is from EPA’s U.S. Greenhouse Gas Emissions and Sinks: 1990-2005 “Other” sources include transportation, other mobile sources, and industrial sources.
Upcoming EPA Clean Air Act Power Plant Rules

- **Interstate Pollution Transport Rule for existing PM and ozone NAAQS**
  - Proposed rule unveiled in June, published August 2, 2010
  - Final rule planned June 2011

- **Utility MACT (section 112/hazardous air pollutants)**
  - Propose March 2011, finalize November 2011

- **Utility NSPS (section 111/criteria pollutants)**
  - Same schedule as MACT
  - 2006 utility NSPS is under reconsideration and subject to pending litigation
  - Section 111(b) for new and modified/reconstructed sources,

- **Interstate Pollution Transport Rule for 2010 reconsidered ozone NAAQS**
  - Proposed rule in 2011, final rule in 2012

- **Response to court remand on Utility NSPS (section 111) for greenhouse gases**
  - EPA is considering substance and timing of its response.
Figure 1 - Average Retail Price of Electricity - State Rankings 2008 (¢/kWh)

States with potential economic impacts and benefits from new air regulations – but with exposure to electricity price impacts

Regions with more coal

Data: Energy Information Administration, 826 Data series (electricity expenditures by state)
Electricity Use Per Person (KWh) by State and US: 2007

Data: Energy Information Administration, State Energy Data System (most recent annual data available as of)

Opportunities for more efficiency improvements – as a way to lower the total expenditures on electricity as compliance occurs and as a way to induce more retirements of marginal plants?

Regions with lower prices, more coal
In 2008 EPA estimated that 127 million Americans lived in non-attainment areas.