



Clean Air Status Report

Three Decades of Progress

Environmental Protection Agency

September 22, 2004

Key Points:

1. **America's air is the cleanest ever in three decades.**

- Emissions have been cut by more than half (51%) since the Clean Air Act was passed in 1970.
- The economy has grown 176% during this same time.

2. **The Acid Rain Program is a major reason for our success and a national success story.**

- Early reductions
- Cost effective
- Near-perfect compliance
- Measurable results

3. **The Bush Administration's Clean Air Interstate Rule will ensure another generation of clean air progress.**

- Modeled after the Acid Rain Program
- Approximately 70% reduction in sulfur dioxide and nitrogen oxides
- When combined with the Administration's clean diesel and other existing measures, CAIR will bring nearly every community in the United States into attainment with the new, more productive standards.
- Plan to sign this fall

Clean Air Status Report

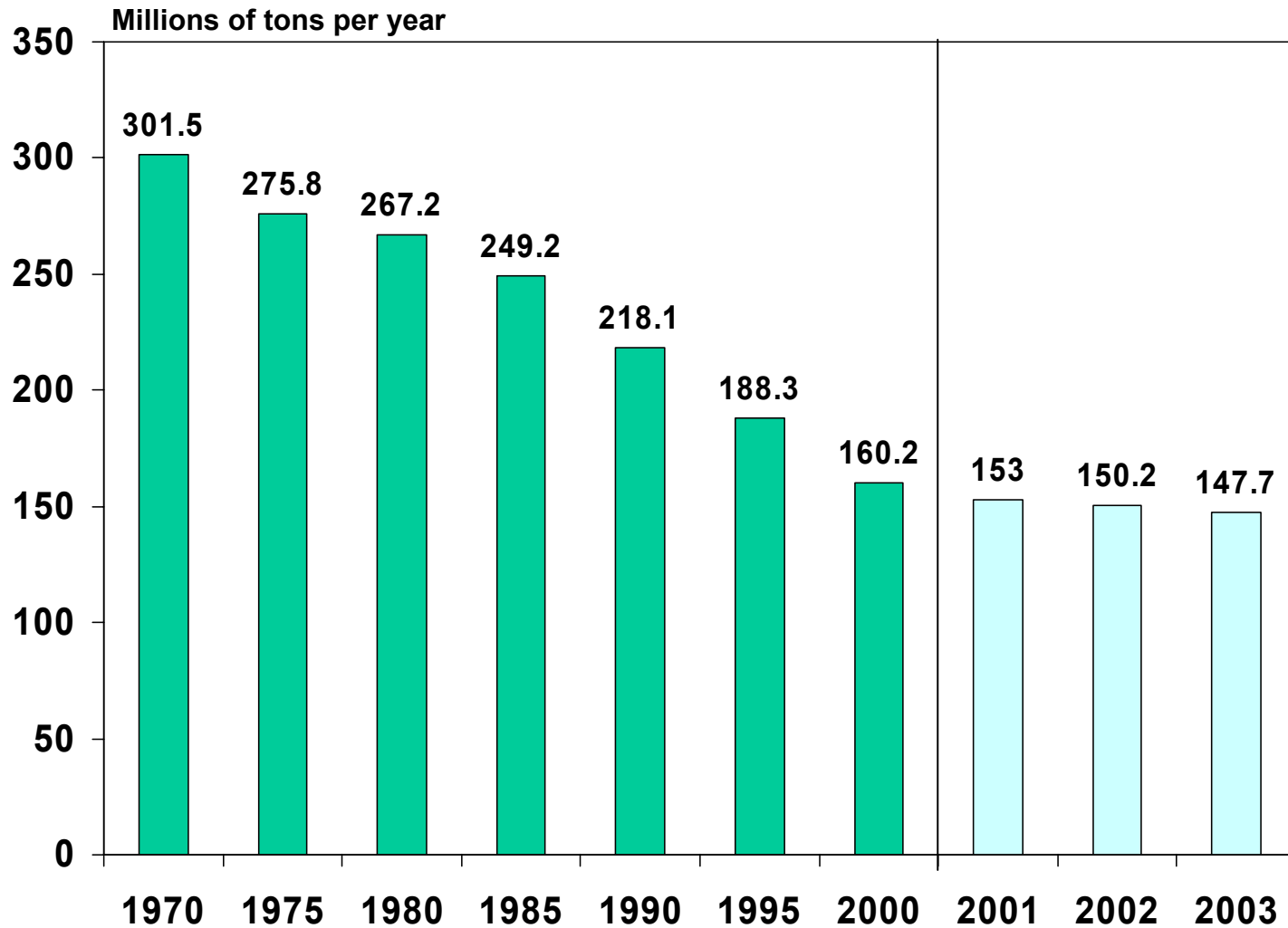
Dramatic reductions have occurred in all six principal pollutants

Millions of Tons Per Year

	1970	1975	1980	1985	1990	1995	2000	2003*
Carbon Monoxide (CO)	197.3	184.0	177.8	169.6	143.6	120.0	102.4	93.7
Nitrogen Oxide (NOx)	26.9	26.4	27.1	25.8	25.1	24.7	22.3	20.5
Particulate Matter (PM)								
PM10	12.2	7.0	6.2	3.6	3.2	3.1	2.3	2.3
PM2.5	NA	NA	NA	NA	2.3	2.2	1.8	1.8
Sulfur Dioxide (SO2)	31.2	28.0	25.9	23.3	23.1	18.6	16.3	15.8
Volatile Organic Compounds (VOC)	33.7	30.2	30.1	26.9	23.1	21.6	16.9	15.4
Lead	0.221	0.016	0.074	0.022	0.005	0.004	0.003	0.003
Totals	301.5	275.8	267.2	249.2	218.1	188.0	160.2	147.7

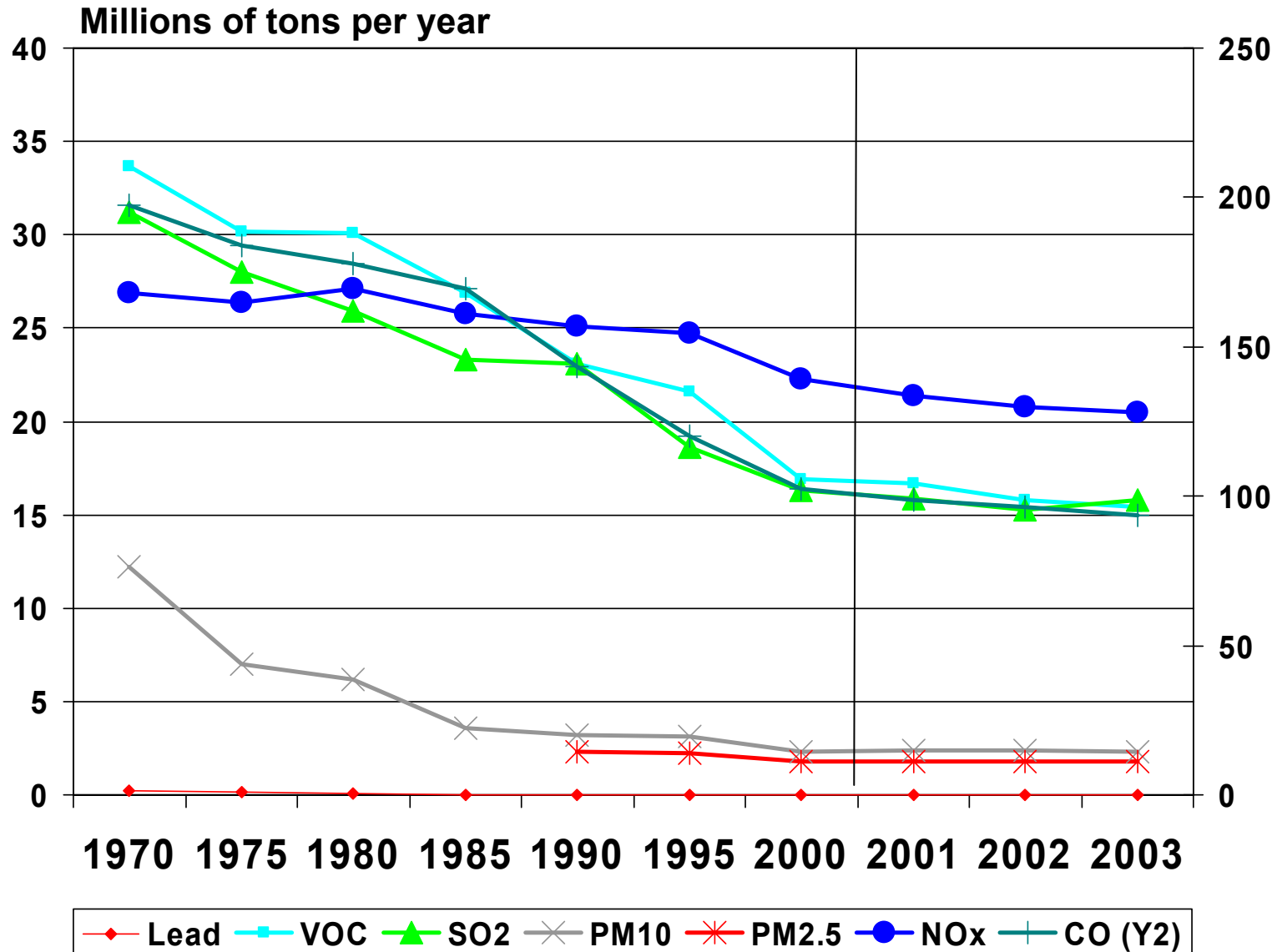
*Preliminary estimates

Total emissions have been cut in half



Note: Includes the five principal criteria pollutants identified in the Clean Air Act: lead, volatile organic compounds, sulfur dioxide, particulate matter, nitrogen oxides and carbon monoxide.

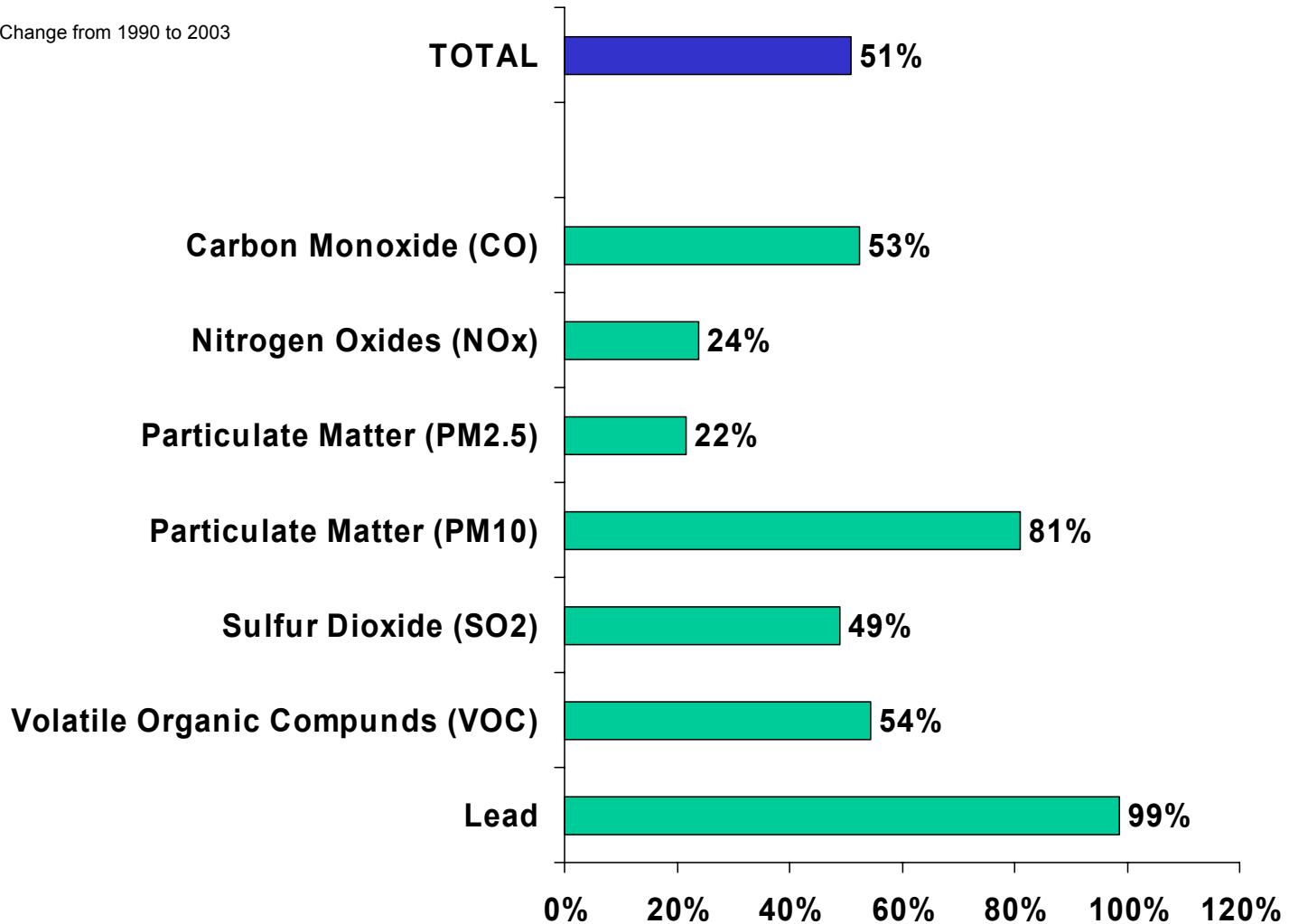
Emissions of all six principal pollutants have declined



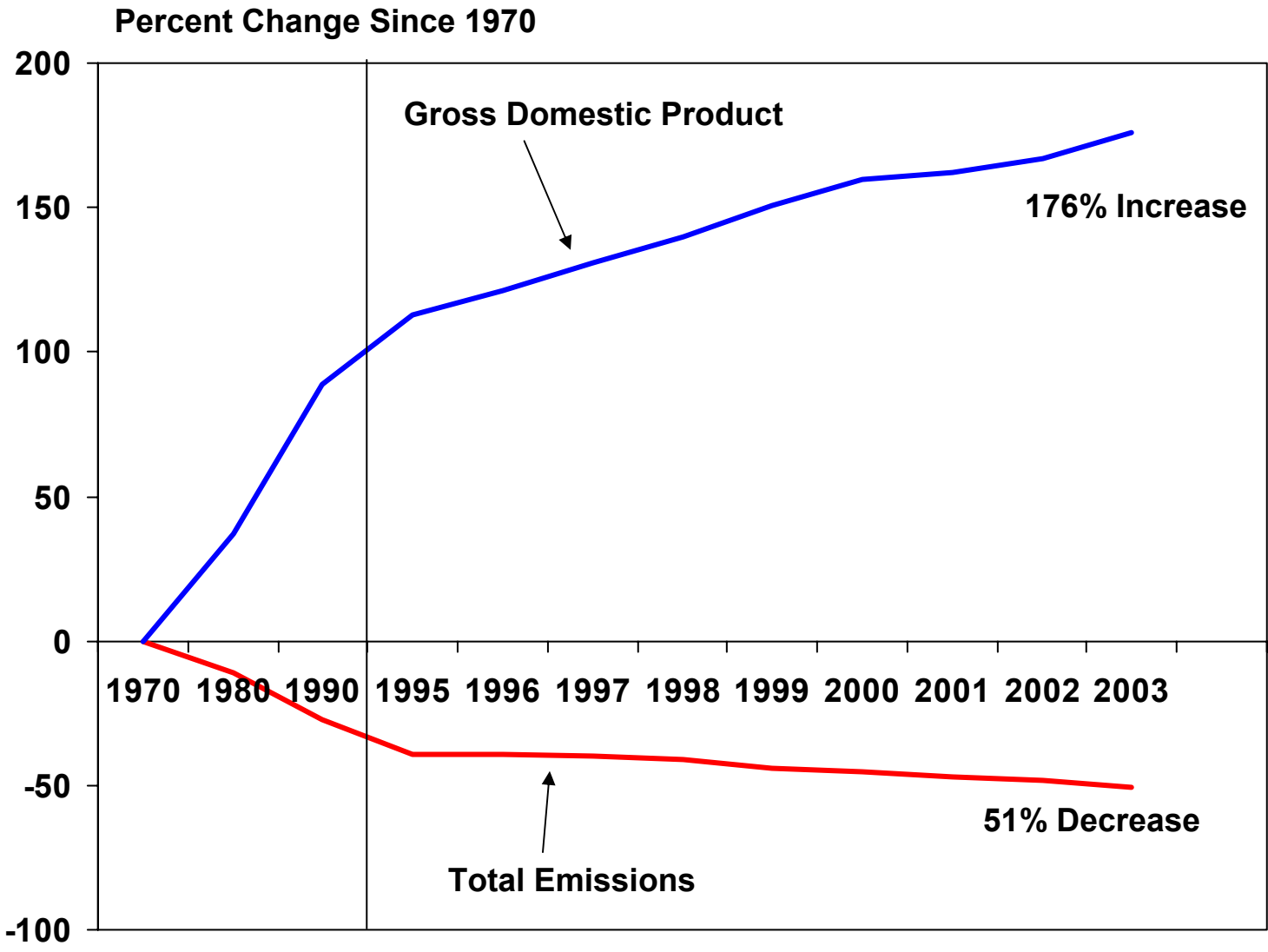
Percent Reduction in Major Pollutants

1970-2003 Percent Change

PM 2.5 Percent Change from 1990 to 2003



The economy has prospered as emissions have declined

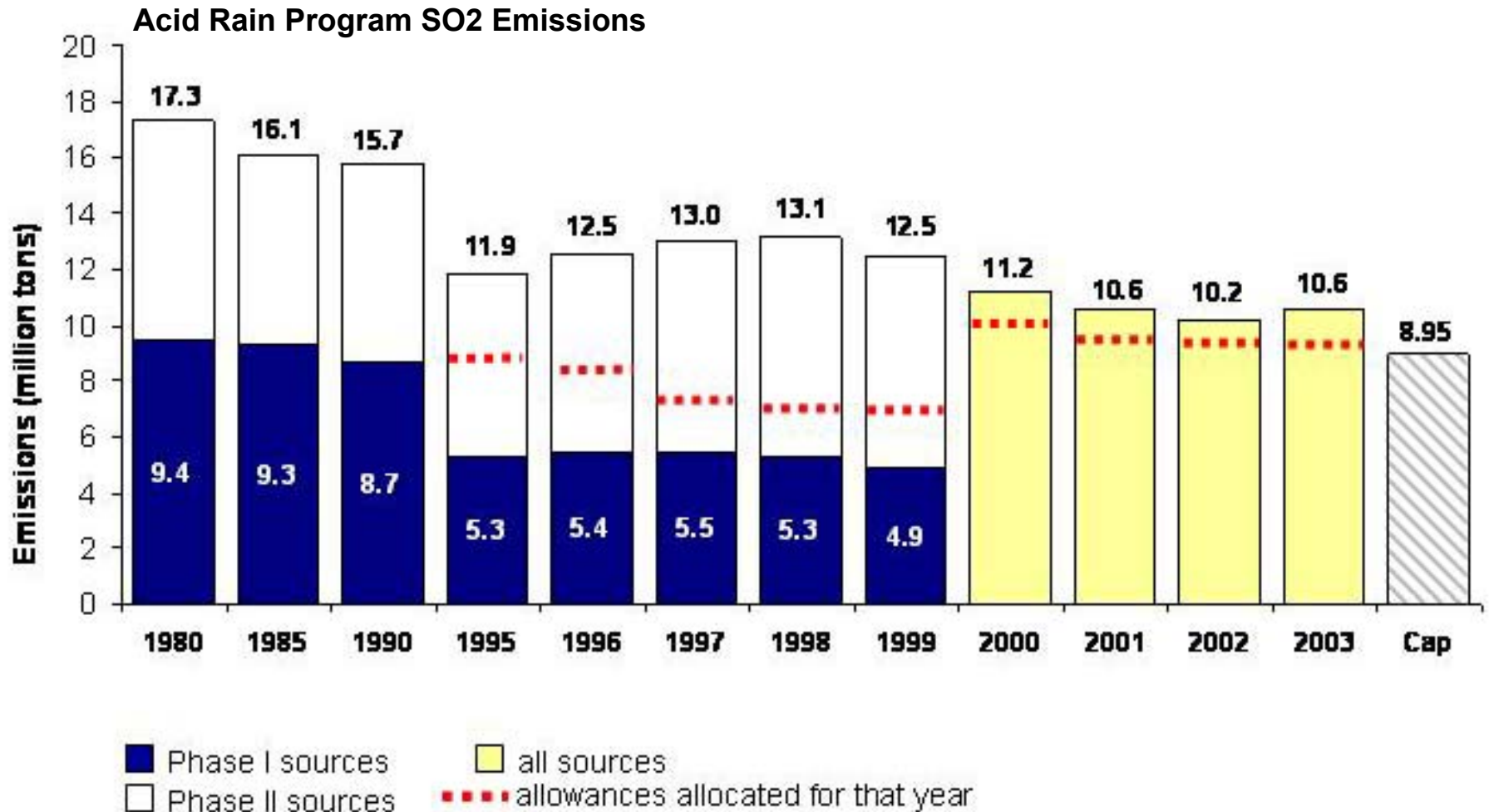


The Acid Rain Program is a major reason for our success

- ***Ahead of schedule and under budget*** – Emissions have declined faster and at far lower cost than anticipated.
- ***Dramatic reductions*** – Sulfur dioxide emissions from power plants have been reduced by 5.1 million tons since 1990, a 32% reduction. Nitrogen oxide emissions have been reduced by approximately 4 million tons since 1990, a 37% reduction.
- ***Early reductions*** – In the early years emissions averaged about 25% below allowable levels.
- ***Near perfect compliance*** – Last year, only one unit out of the nearly 3,500 units in the SO₂ program was out of compliance.
- ***Lakes, rivers and forests recovering*** – Acid deposition has declined over 30% in the Adirondacks and throughout most of the Northeastern United States.

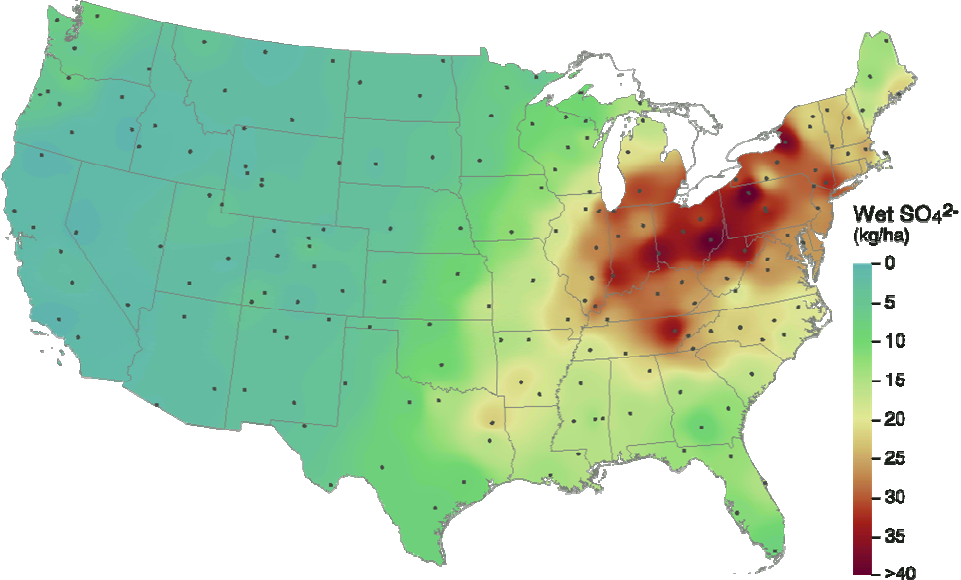
Cap and trade programs work

- Current SO₂ emissions from power plants are 5.1 million tons (32%) below 1990 levels.
- The program remains on track to meet the mandatory cap.

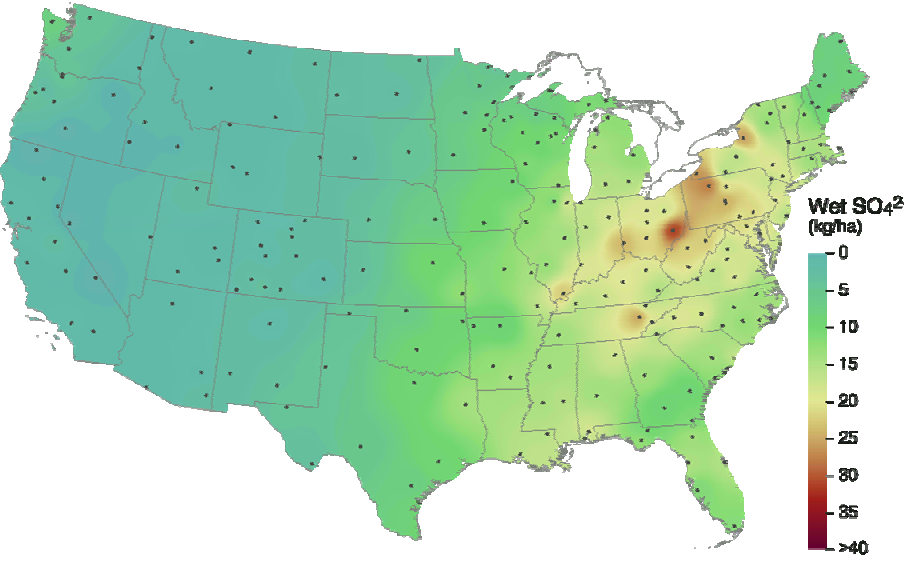


Monitored reductions in Acid Rain

Wet Sulfate Deposition
Average 1989 - 1991

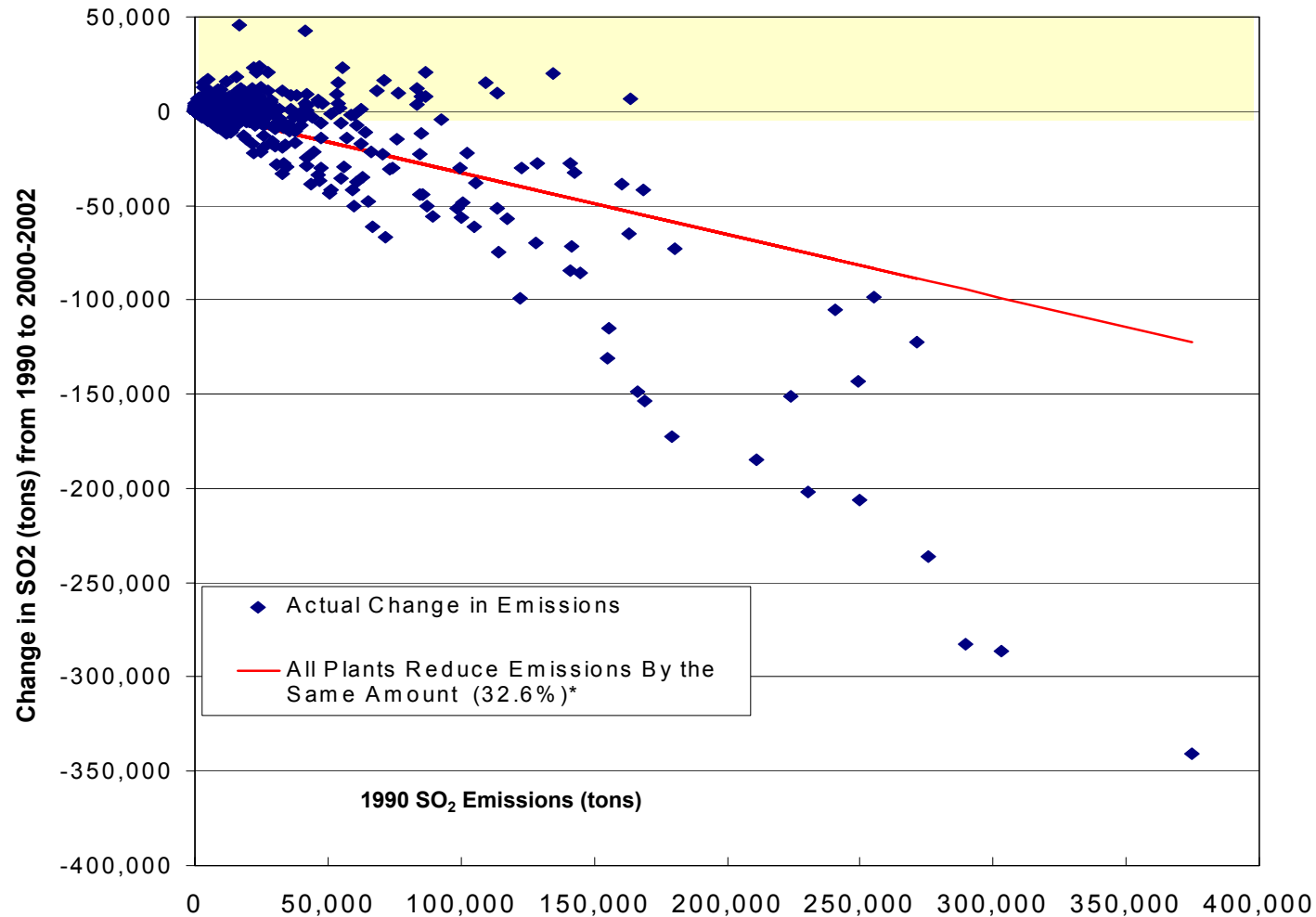


Wet Sulfate Deposition
Average 2001 - 2003



Plants with the highest emissions achieve the greatest reductions

Plant-Level 1990 SO₂ Emissions and SO₂ Emissions Changes by 2000-02

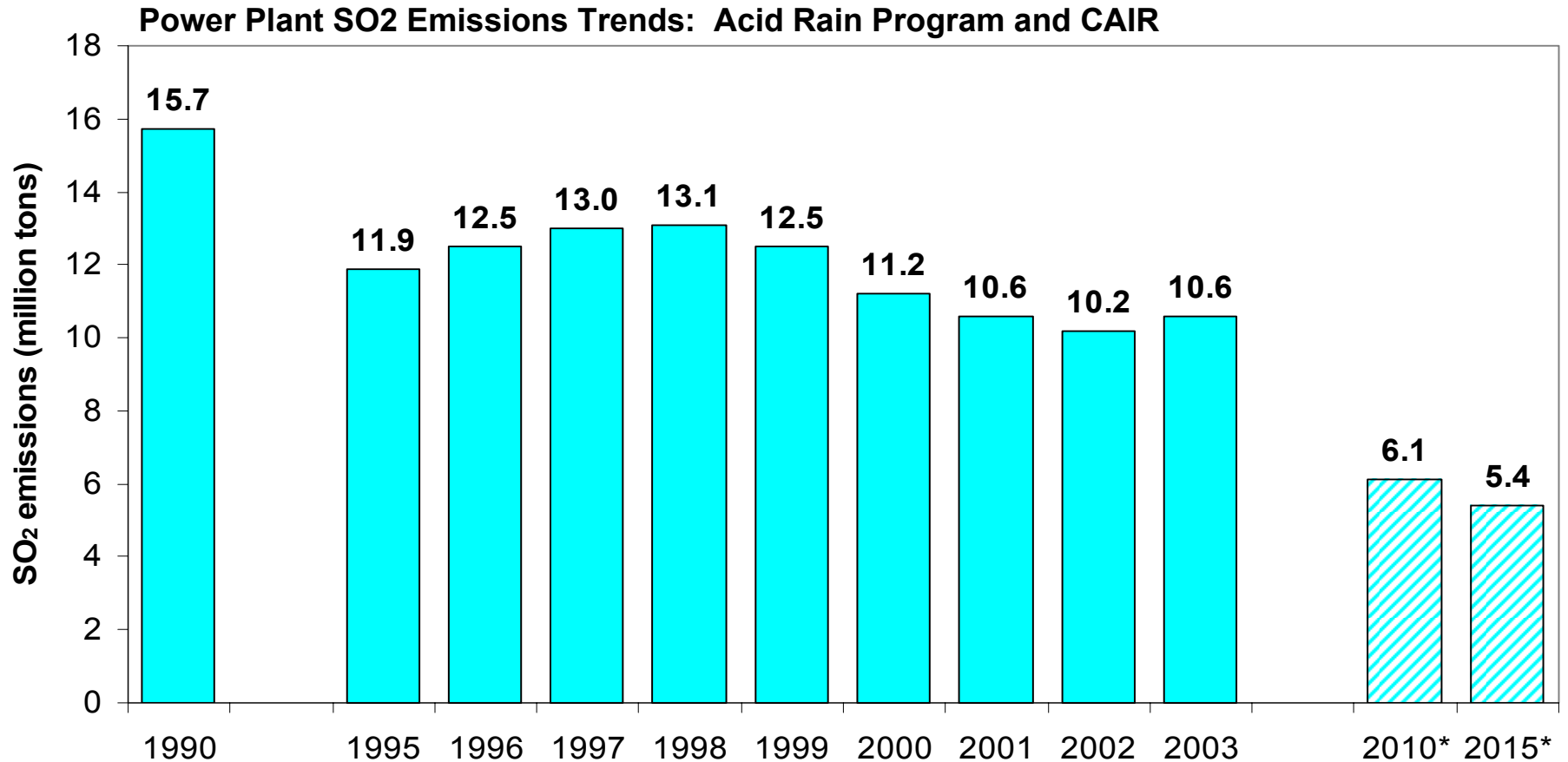


* This line represents the expected change in SO₂ from 1990 levels if each plant achieved the same percent reduction as the entire universe of affected sources did in aggregate (32.6%). This assumes that there are no new plants with emissions since 1990.

The Clean Air Interstate Rule

- **Next Steps** – The Bush Administration will act to finalize the Clean Air Interstate Rule (CAIR) this Fall.
- **New tool** – CAIR is an Acid Rain Program for this decade. It will use the same proven market-based approaches to dramatically reduce SO₂ and NO_x emissions in a cost-effective way.
- **Market programs work** – CAIR, like the Acid Rain Program, will achieve early reductions, produce measurable and cost-effective results, establish mandatory emission caps, achieve high compliance and create incentives for technological innovation.
- **Cleaner smokestacks** – CAIR will double the number of scrubbers and other pollution-control devices in smokestacks and power plants in this country.
- **Health benefit** -- People will live longer, healthier lives.
- **Transported pollution** – Without CAIR, many communities will fail to meet the national, health-based clean air standards solely because of their neighbor's pollution.
- **Clean air attainment** – *When combined with the Administration's clean diesel and other existing measures, CAIR will bring nearly every community in America into attainment with the new, more protective standards.*

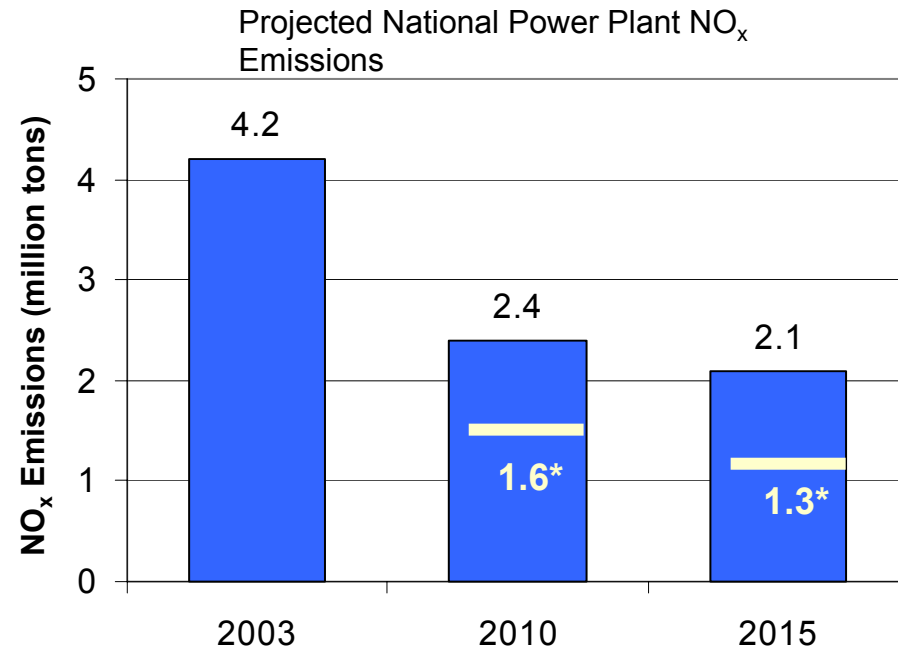
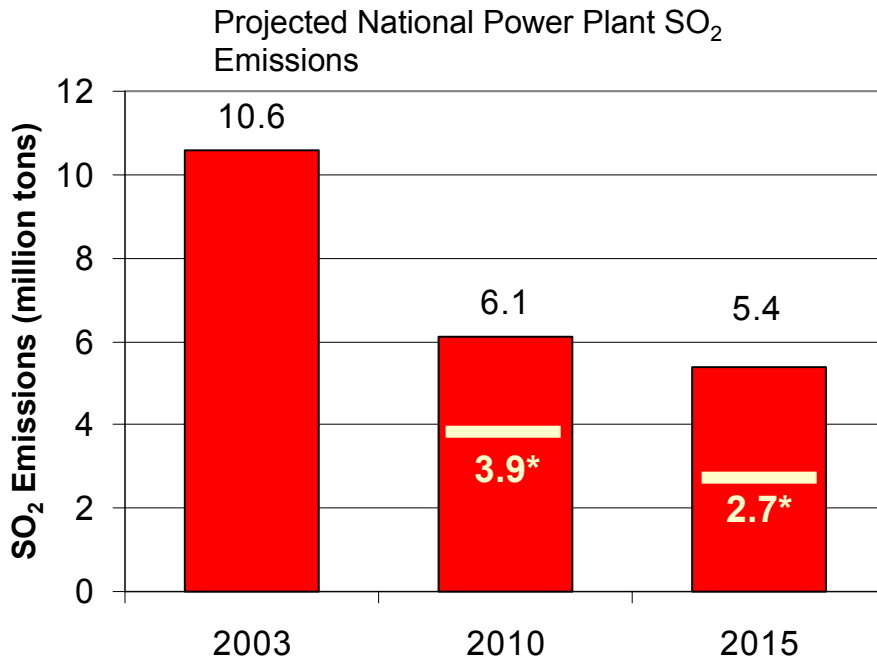
The Clean Air Interstate Rule extends the benefits of the Acid Rain Program



* Nationwide emissions projected under December 2003 Clean Air Interstate Rule (CAIR) proposal; CAIR proposal includes 28 eastern states and the District of Columbia.

CAIR: An Acid Rain Program for this Decade

- Emissions have declined and the environment is beginning to improve, but full environmental recovery from acid deposition will not happen without additional emission reductions.
- Reducing interstate transport is critical to solving the problems of ozone, fine particles, and regional haze.
- CAIR will further reduce and cap emissions of SO₂ and NO_x in the eastern U.S.

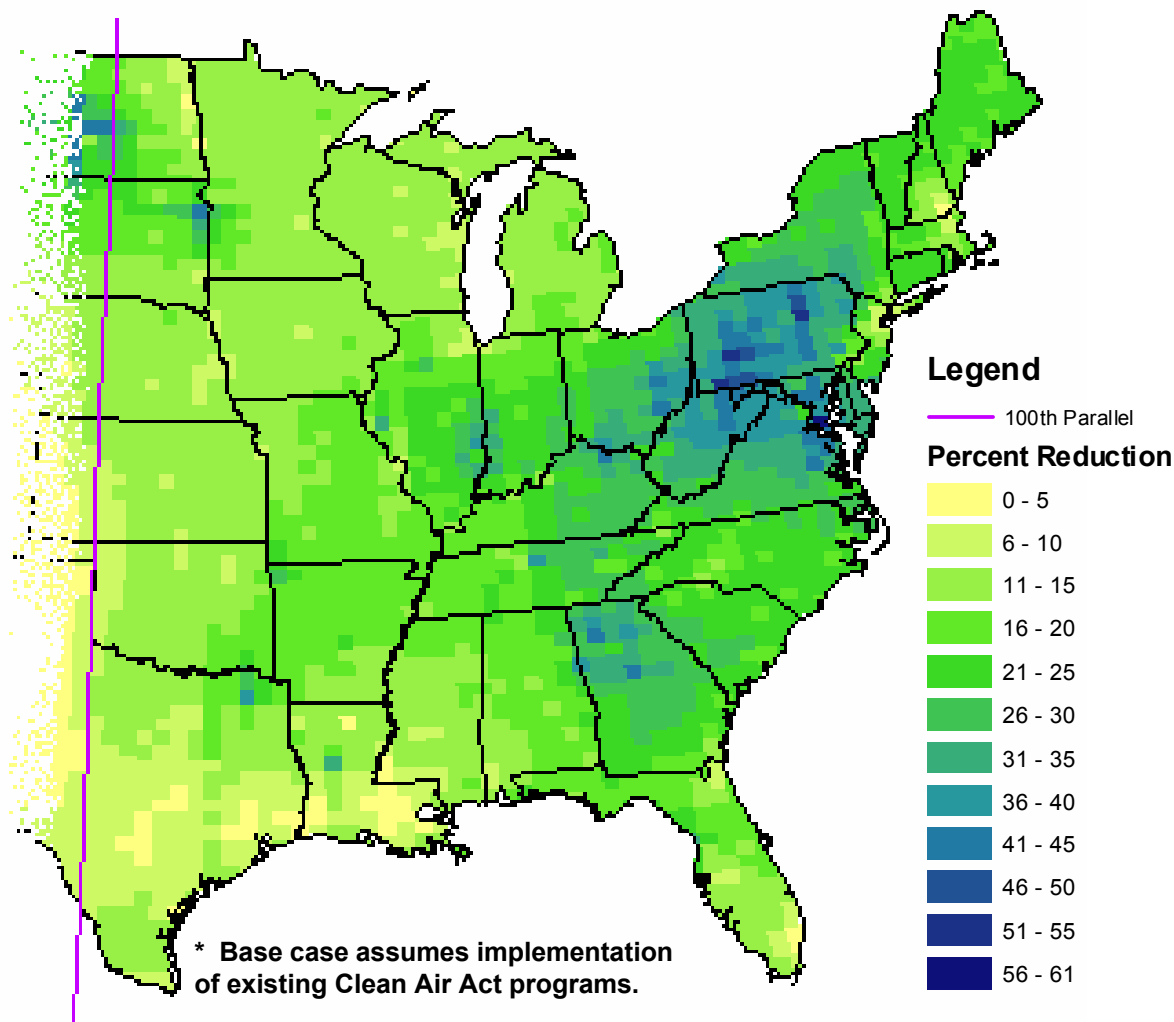


Columns indicate projected nationwide emissions for the December 2003 CAIR proposal

* Yellow bars indicate level of caps for the CAIR region (eastern U.S.).

The Clean Air Interstate Rule Will Further Reduce Acid Rain in the East

Projected changes in sulfur deposition in 2015 (CAIR compared to the base case)



Across most of the East, CAIR would achieve additional reductions in total sulfur deposition of approximately 20-25%.

Larger reductions of 35-50% are projected for some areas of the OH Valley and the Mid-Atlantic region.