EPA CROSS-STATE AIR POLLUTION RULE (CSAPR)

What's happening?

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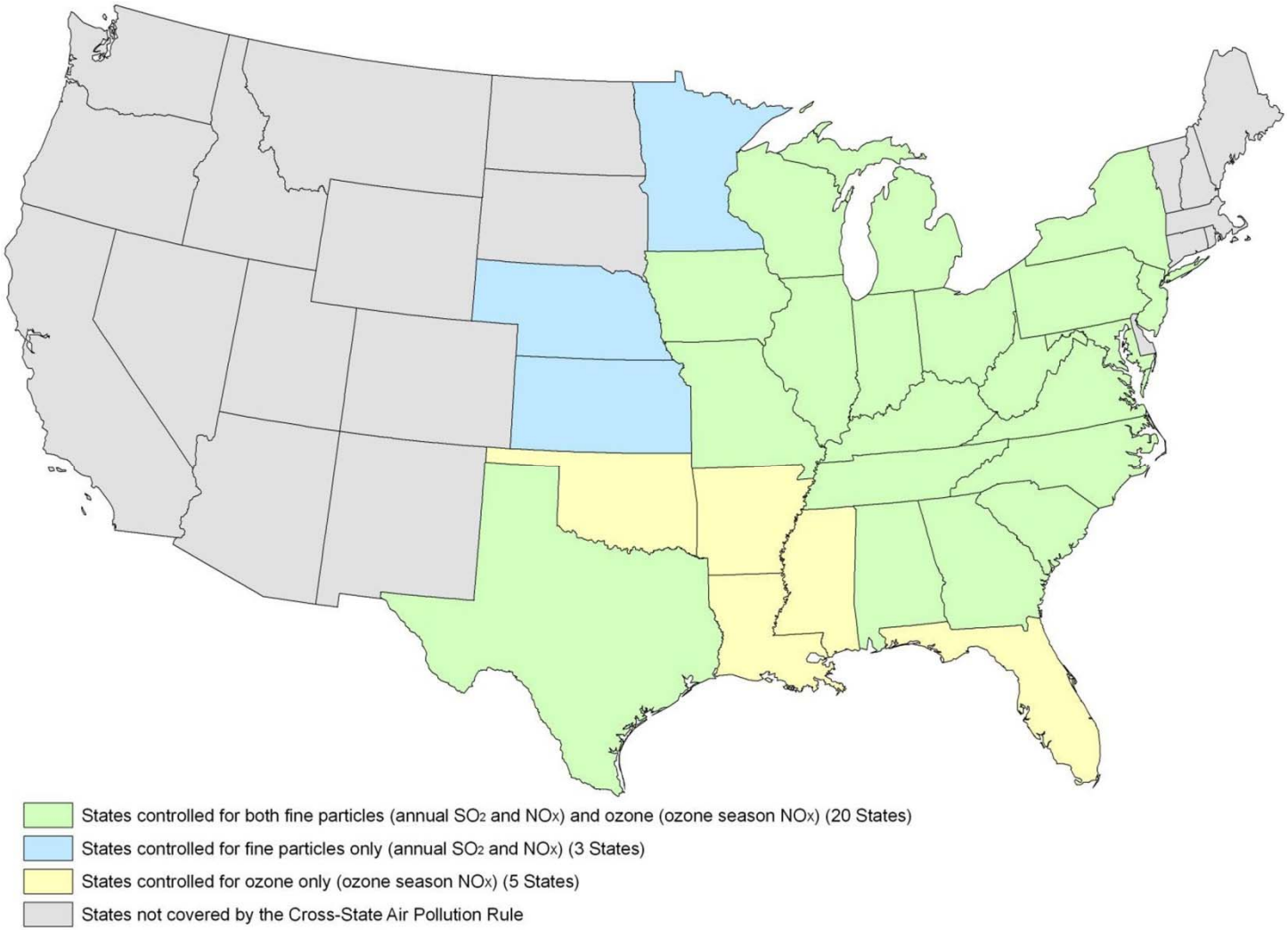
CSAPR

- Promulgated July 2011 Under Good Neighbor Provisions of CAA
- 28 States to Reduce Power Plant Emissions
- Emissions Cross State Lines Contribute to O_3 (1997 NAAQS) and Fine Particle (2006 NAAQS) Pollution
- Three separate cap-and-trade programs
  - NO_X O_3 Season
  - NO_X Annual
  - SO_2 Annual

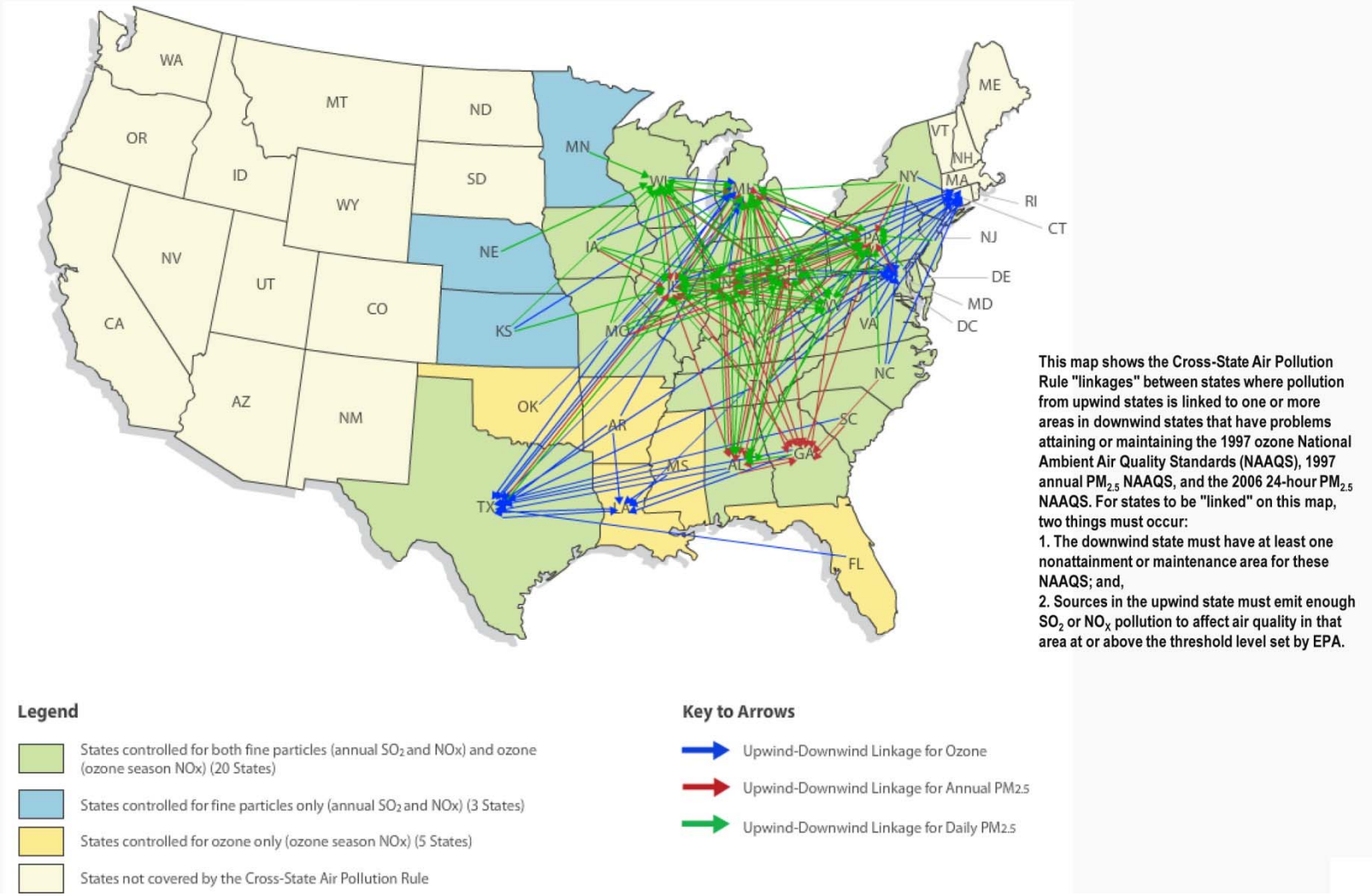
CSAPR

- D.C. District Court
  - December 30, 2011 stayed CSAPR
  - August 21, 2012 vacated CSAPR (split 3-judge panel)
- U.S. Supreme Court Reviewed District Court's Decision December 10, 2013
- Supreme Court Decision Expected Second Half 2014

CSAPR States



Upwind-Downwind Linkages in CSAPR States



This map shows the Cross-State Air Pollution Rule "linkages" between states where pollution from upwind states is linked to one or more areas in downwind states that have problems attaining or maintaining the 1997 ozone National Ambient Air Quality Standards (NAAQS), 1997 annual $PM_{2.5}$ NAAQS, and the 2006 24-hour $PM_{2.5}$ NAAQS. For states to be "linked" on this map, two things must occur:

1. The downwind state must have at least one nonattainment or maintenance area for these NAAQS; and,
2. Sources in the upwind state must emit enough SO_2 or NO_X pollution to affect air quality in that area at or above the threshold level set by EPA.

Legend

- States controlled for both fine particles (annual SO_2 and NOx) and ozone (ozone season NOx) (20 States)
- States controlled for fine particles only (annual SO_2 and NOx) (3 States)
- States controlled for ozone only (ozone season NOx) (5 States)
- States not covered by the Cross-State Air Pollution Rule

Key to Arrows

- Upwind-Downwind Linkage for Ozone
- Upwind-Downwind Linkage for Annual PM2.5
- Upwind-Downwind Linkage for Daily PM2.5

CSAPR

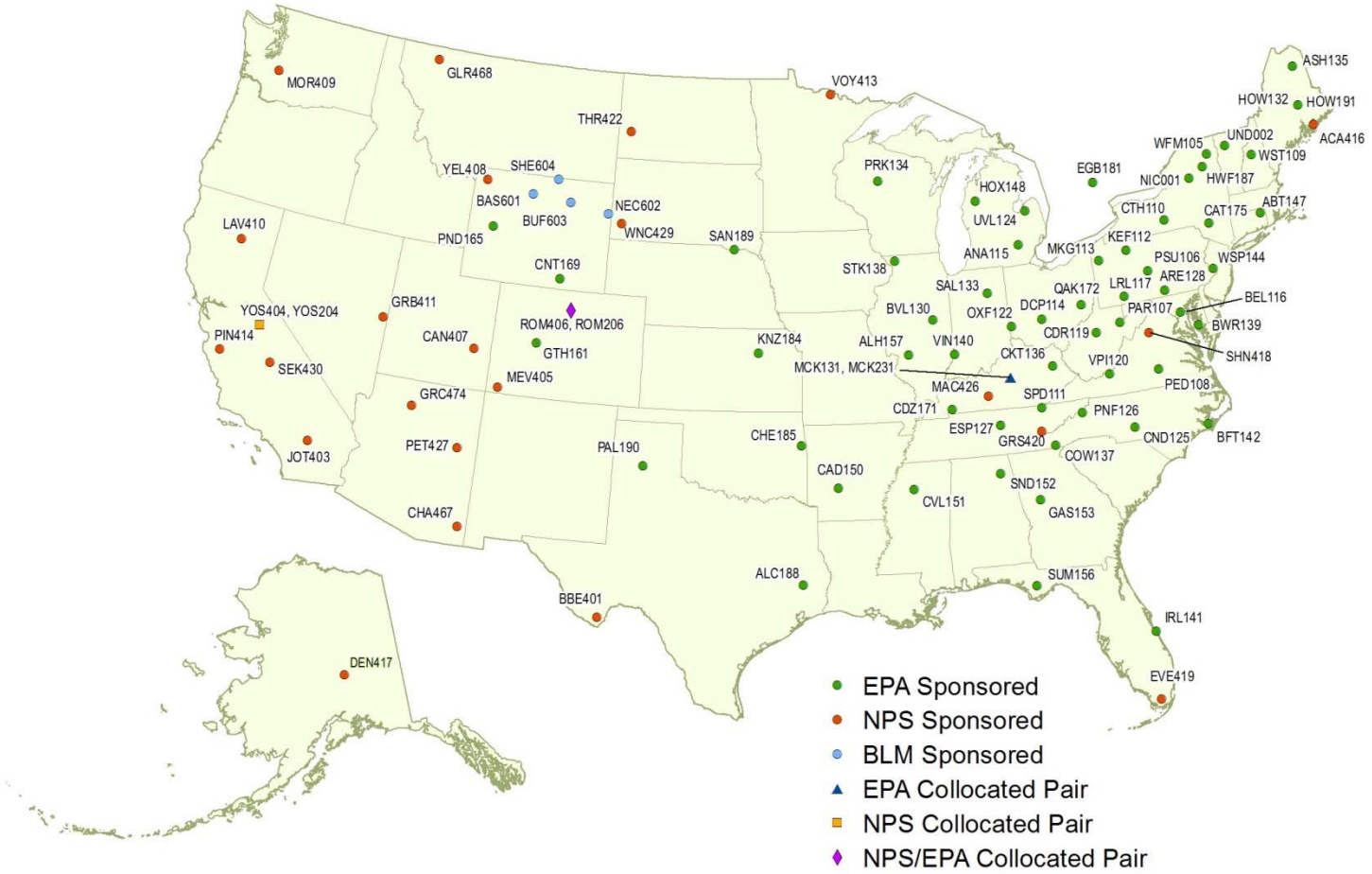
Ramifications of Supreme Court decision

- Do we need CSAPR?
- Confusion and chaos?
- SO_2 and NO_x emission reductions will already have been achieved through CAIR, ARP, and other emission reduction programs for eastern U.S., although with some state-by-state differences
- Effect of New NAAQS?
- BART and SIPs

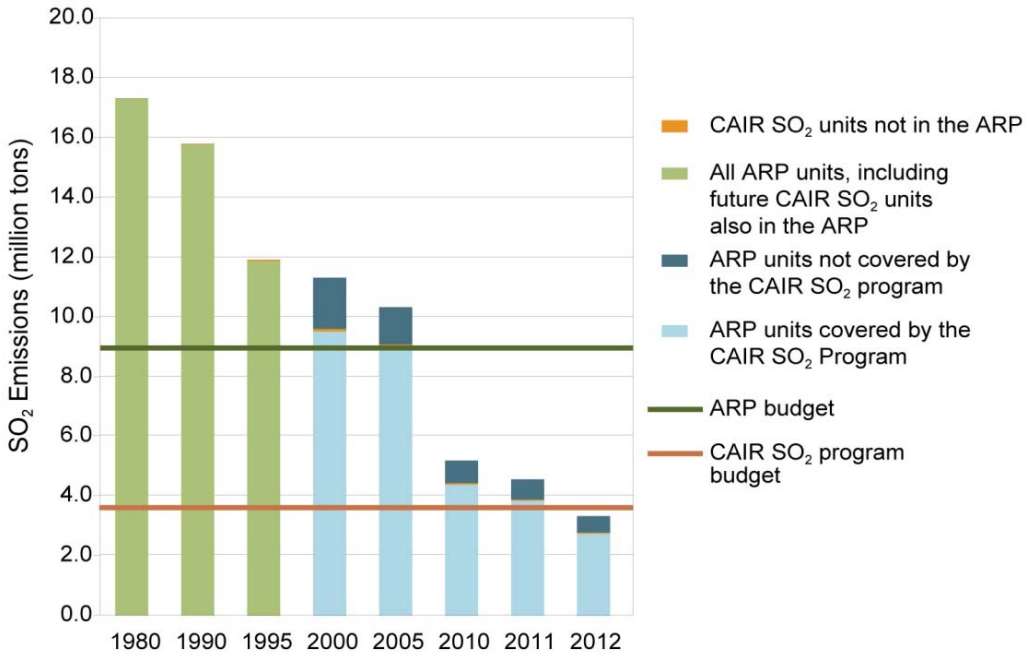
EMISSION BUDGETS UNDER CSAPR AND CAIR

(MILLION TONS)	CAIR	CSAPR	2012 Actual
ANNUAL SO_2	3.25	3.24	3.3
ANNUAL NO_X	1.33	1.16	1.7
O_3 SEASON NO_X	0.56	0.49	0.51

CASTNET Sites Operational During 2012



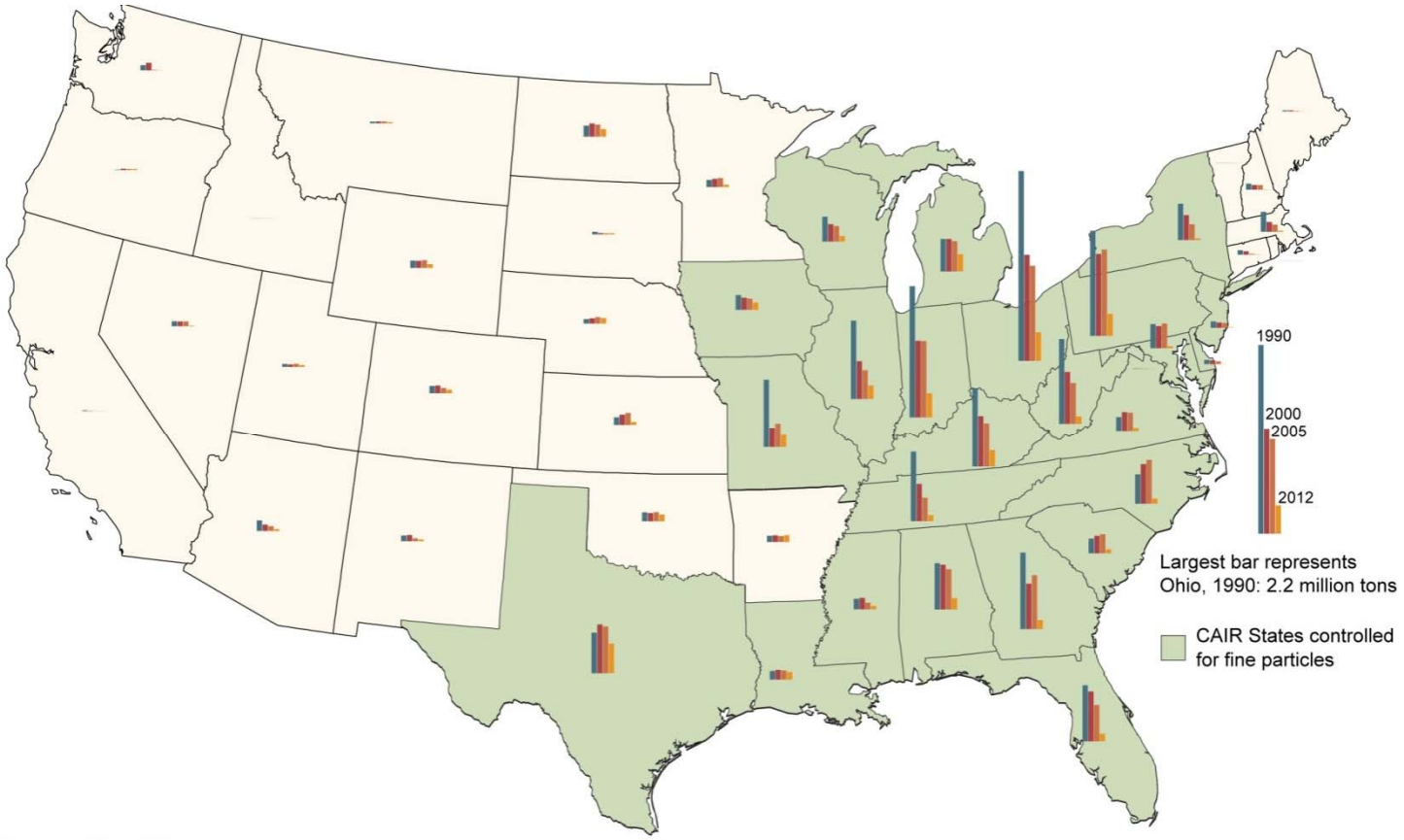
Trends in SO_2 Emissions



Note: For CAIR units not in the ARP, the 2009 annual SO_2 emissions were applied retroactively for each pre-CAIR year following the year in which the unit began operating.
Source: EPA, 2013

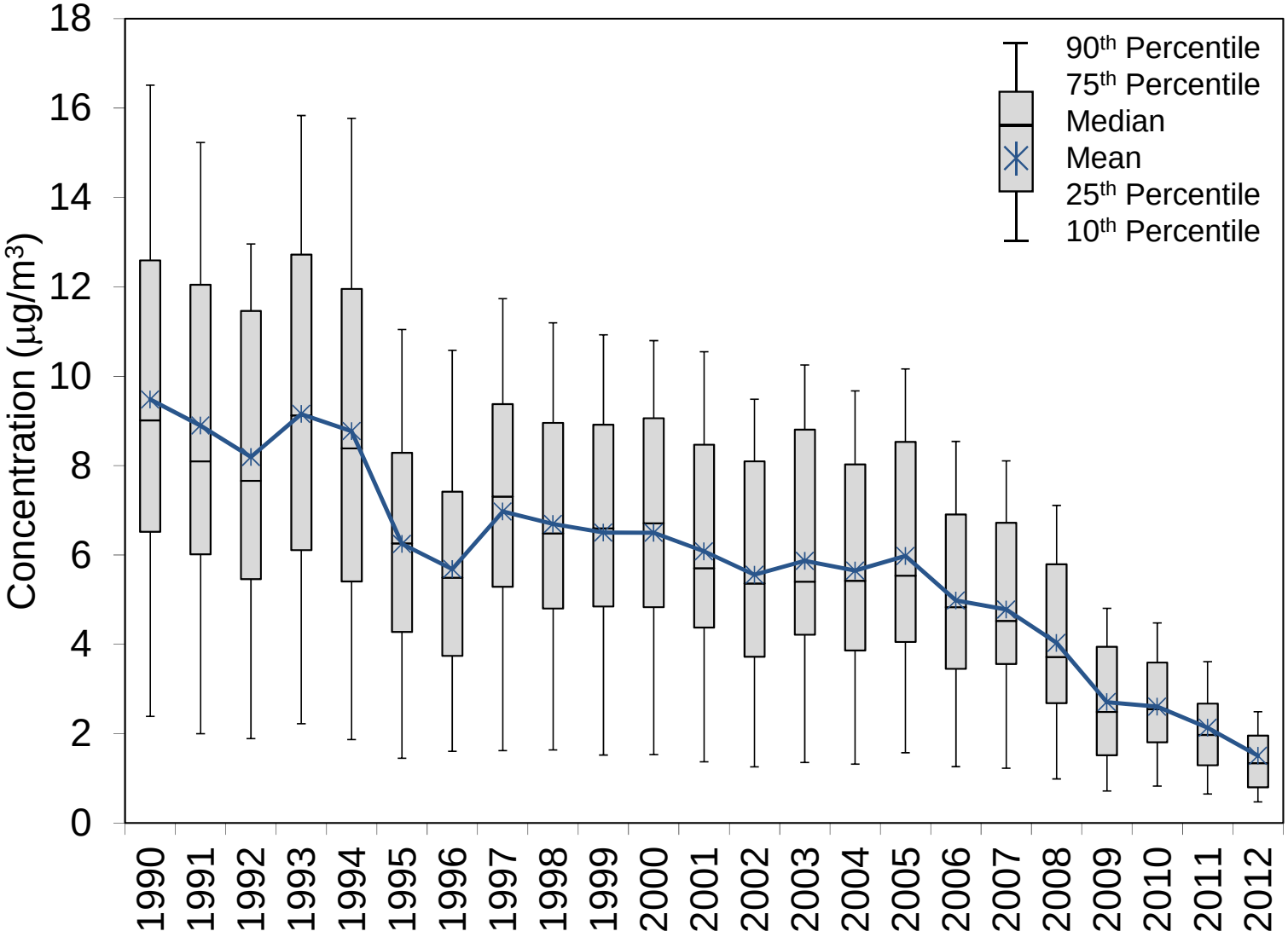
Annual SO_2 Emissions

State-by-State Annual SO_2 Emission Levels for CAIR and ARP Sources, 1990-2012

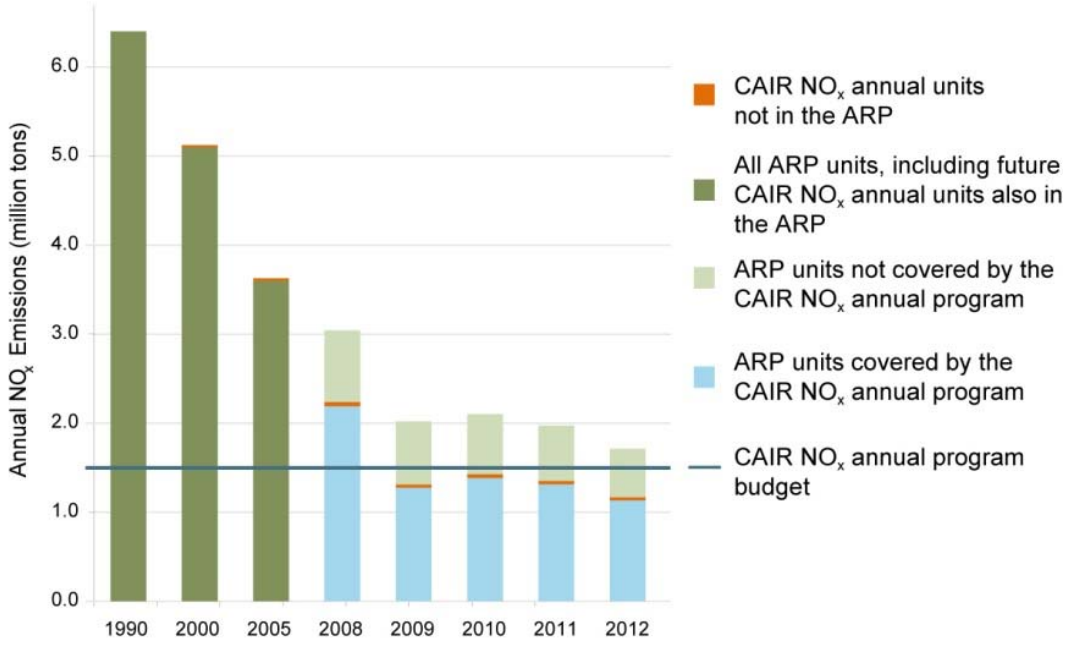


Source: EPA, 2013

Trends in Annual Mean SO_2 Concentrations ($\mu g/m^3$)

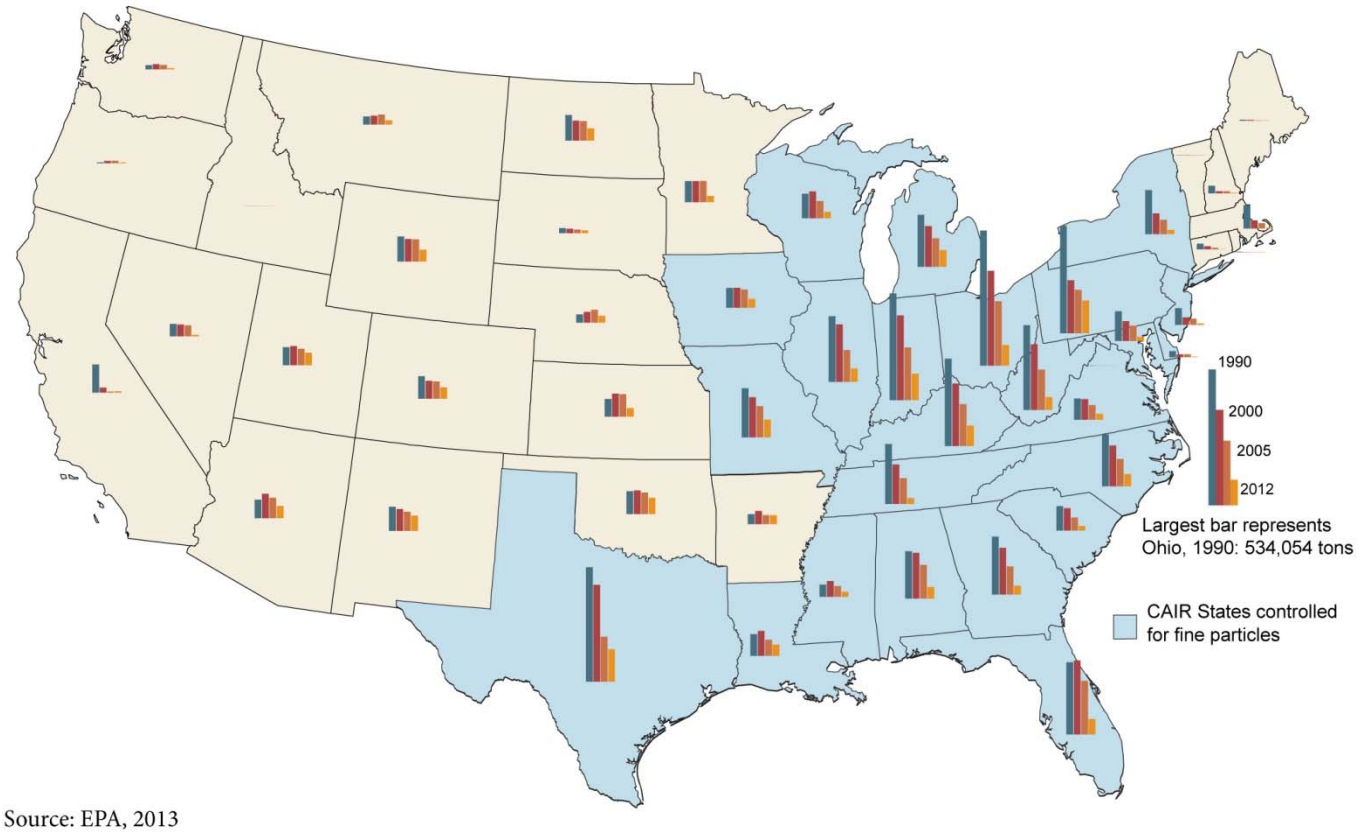


Trends in NO_x Emissions



Note: For CAIR units not in the ARP in 1990, 2000, and 2005, the 2008 annual NO_x emissions were applied retroactively for each pre-CAIR year following the year in which the unit began operating.
Source: EPA, 2013

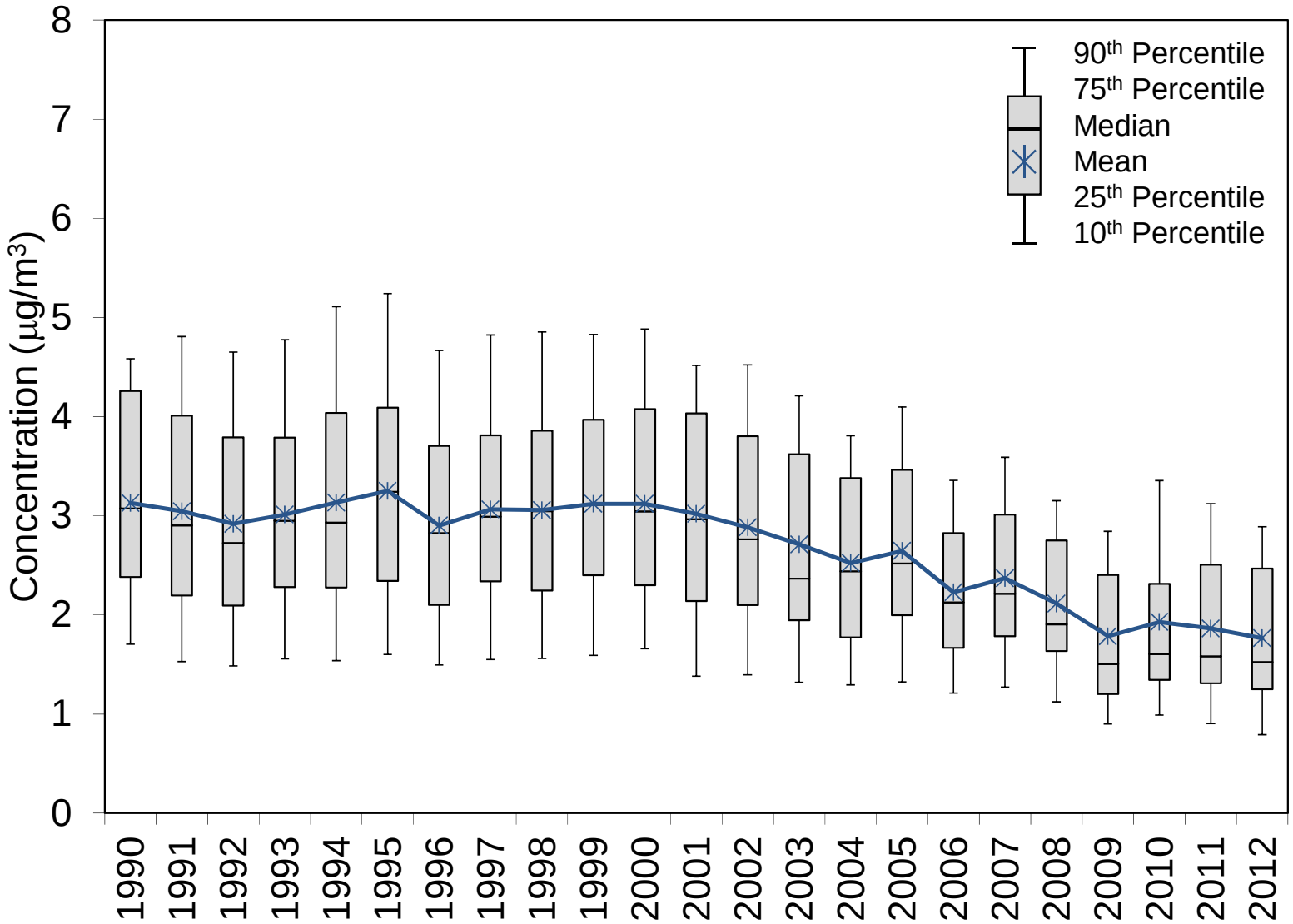
Annual NO_x Emissions



Source: EPA, 2013

SO_2 and NO_x Emissions, Compliance, and Market Analyses

Trends in Annual Mean Total NO^-_3 Concentrations ($\mu g/m^3$)

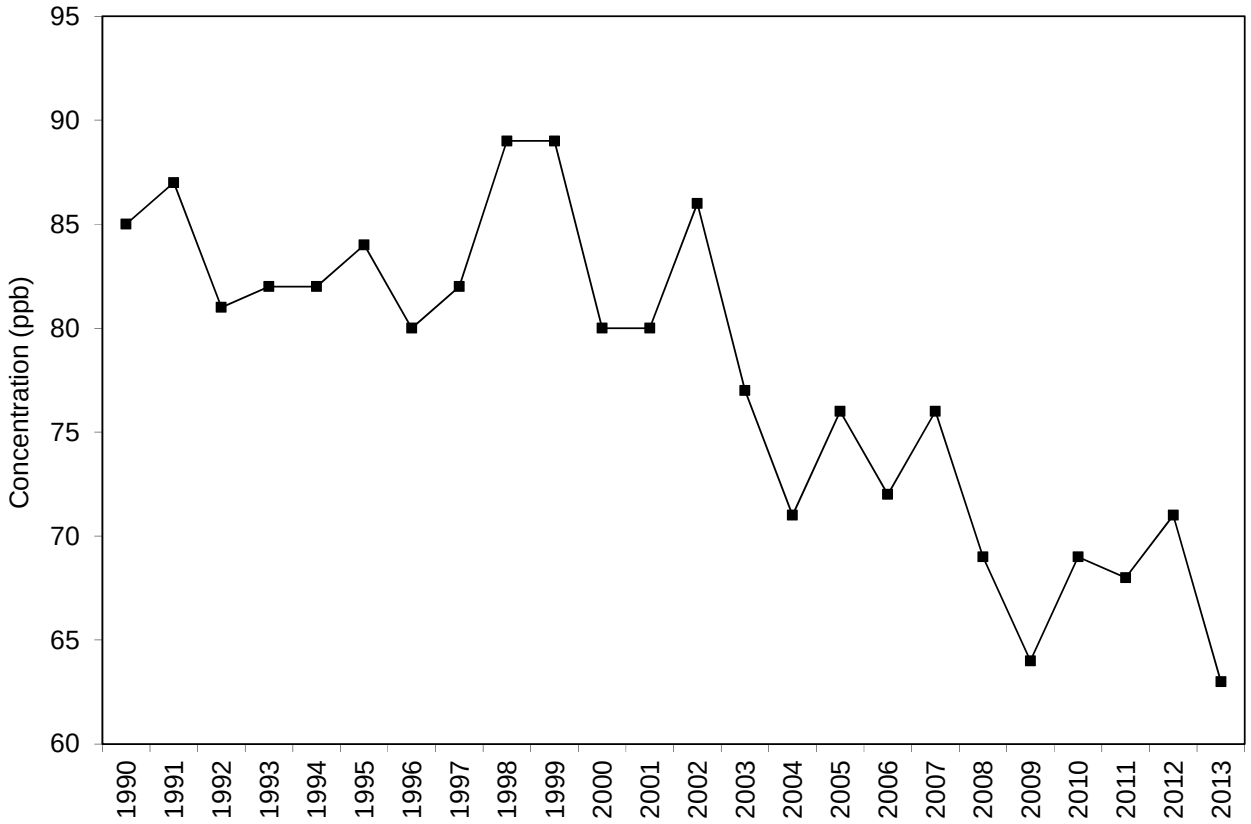


TRENDS IN AIR QUALITY AT ABINGTON, CT

	1990-92	2010-12
SO_2 (µg/m^3)	8.9	2.1
Total NO_3 (µg/m^3)	3.0	1.8
O_3 (ppb)	98	75

Trend in Ozone Aggregated over 34 Eastern Sites

Trend in Average of Fourth Highest Daily Maximum Rolling 8-hour Averages for Reference Sites (as of 09/30/13)



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