OTC Annual Meeting

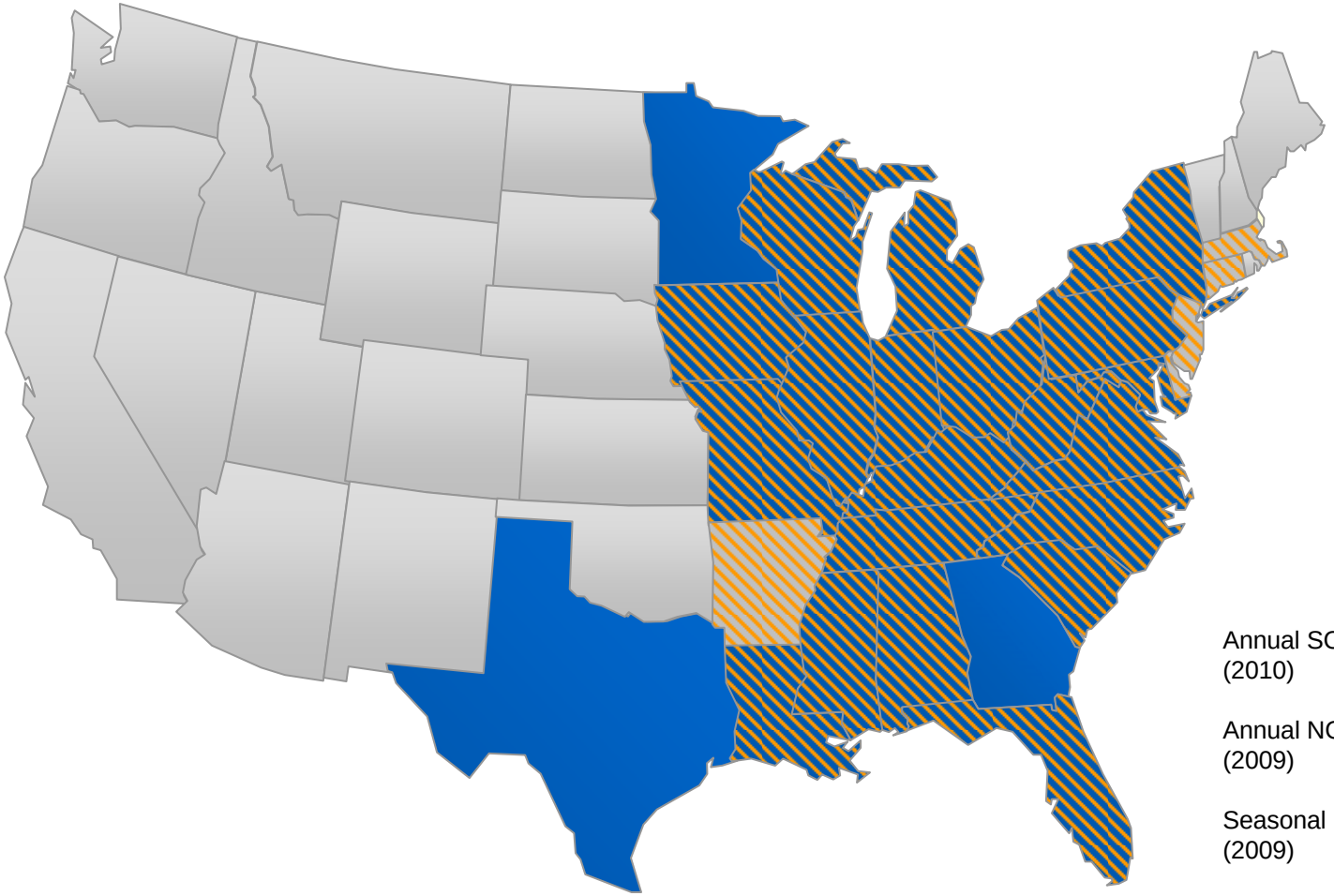
Jeffrey R. Holmstead

Assistant Administrator

U.S. EPA, Office of Air & Radiation

June 7, 2005

CAIR: Affected Region and Emission Caps



States controlled for fine particles (annual SO_2 and NO_x)

States controlled for ozone (ozone season NO_x)

States controlled for both fine particles (annual SO_2 and NO_x) and ozone (ozone season NO_x)

States not covered by CAIR

Emission Caps*

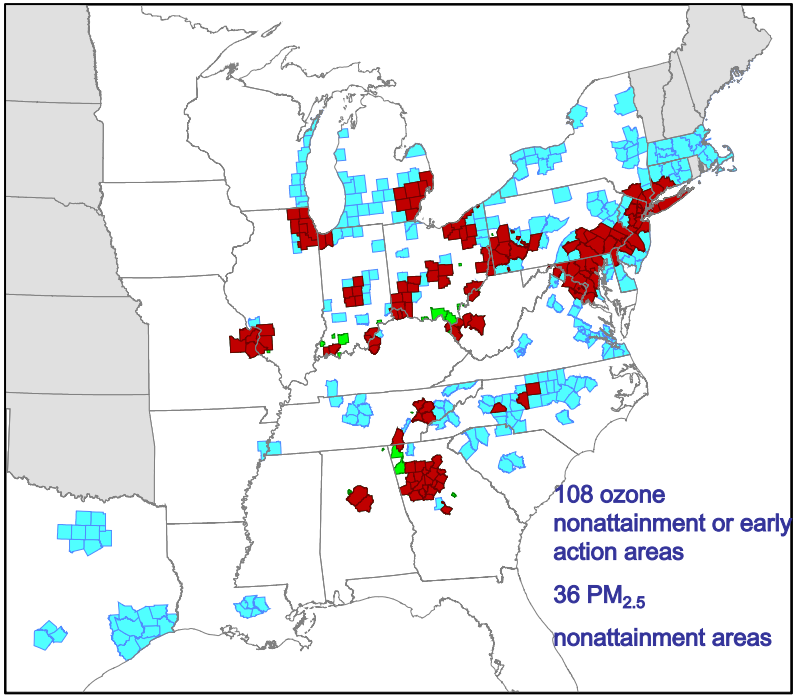
(million tons)

	2009/2010	2015
Annual SO_2 (2010)	3.6	2.5
Annual NO_x (2009)	1.5	1.3
Seasonal NO_x (2009)	.58	.48

**For the affected region.*

Ozone and PM Attainment Forecast with CAIR and with Other Clean Air Programs – Eastern U.S. -- 2010

Ozone and Fine Particle Nonattainment Areas* (April 2005)

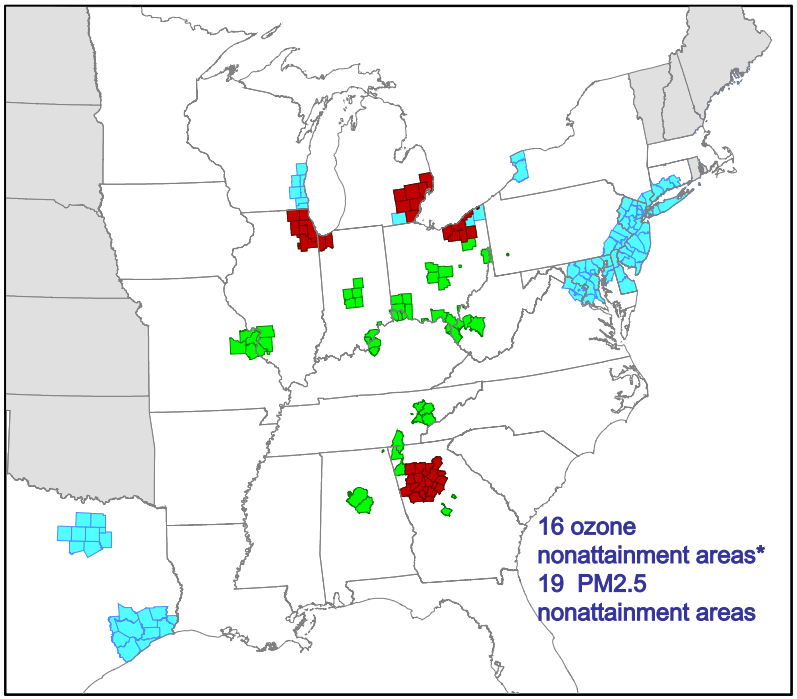


Nonattainment areas for 8-hour ozone pollution only

Nonattainment areas for fine particle pollution only .

Nonattainment areas for both 8-hour ozone and fine particle pollution

Projected Nonattainment Areas* in 2010 after Reductions from CAIR and Existing Clean Air Act Programs

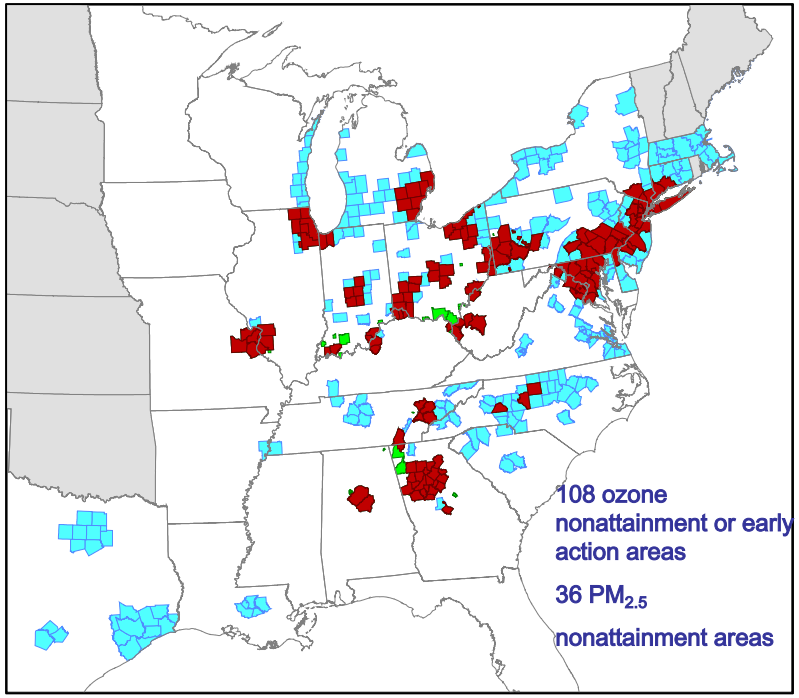


*Although tallies include all eastern nonattainment areas, the maps show only the nonattainment areas in States covered by CAIR requirements. Four current ozone nonattainment areas in New England are not pictured. Rhode Island (not colored blue) is the 16th area projected to be nonattainment for ozone in 2010.

Projections concerning future levels of air pollution in specific geographic locations were estimated using the best scientific models available. They are estimations, however, and should be characterized as such in any description. Actual results may vary significantly if any of the factors that influence air quality differ from the assumed values used in the projections shown here.

Ozone and PM Attainment Forecast with CAIR and with Other Clean Air Programs – Eastern U.S. -- 2015

Ozone and Fine Particle Nonattainment Areas* (April 2005)

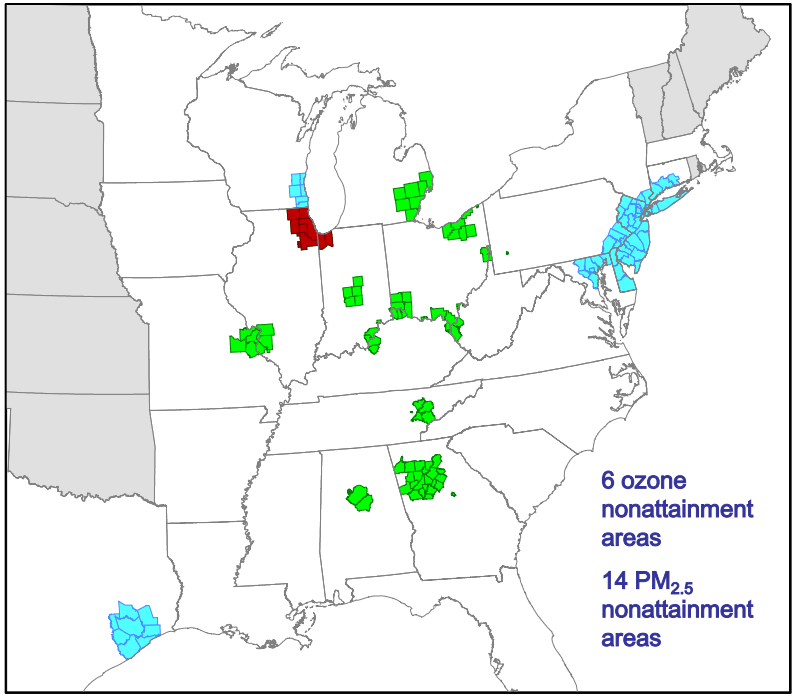


Nonattainment areas for 8-hour ozone pollution only

Nonattainment areas for fine particle pollution only

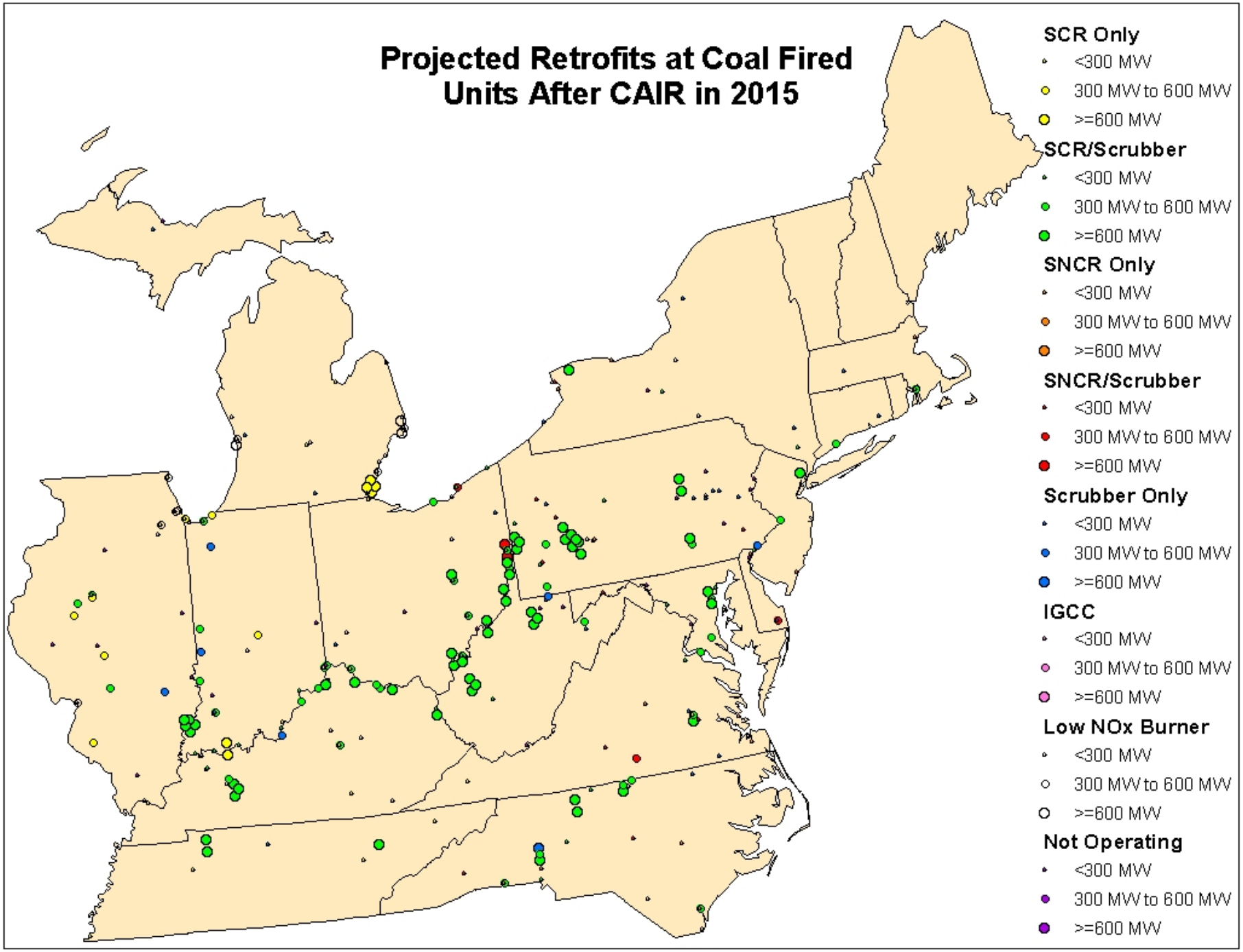
Nonattainment areas for both 8-hour ozone and fine particle pollution

Projected Nonattainment Areas* in 2015 after Reductions from CAIR and Existing Clean Air Act Programs



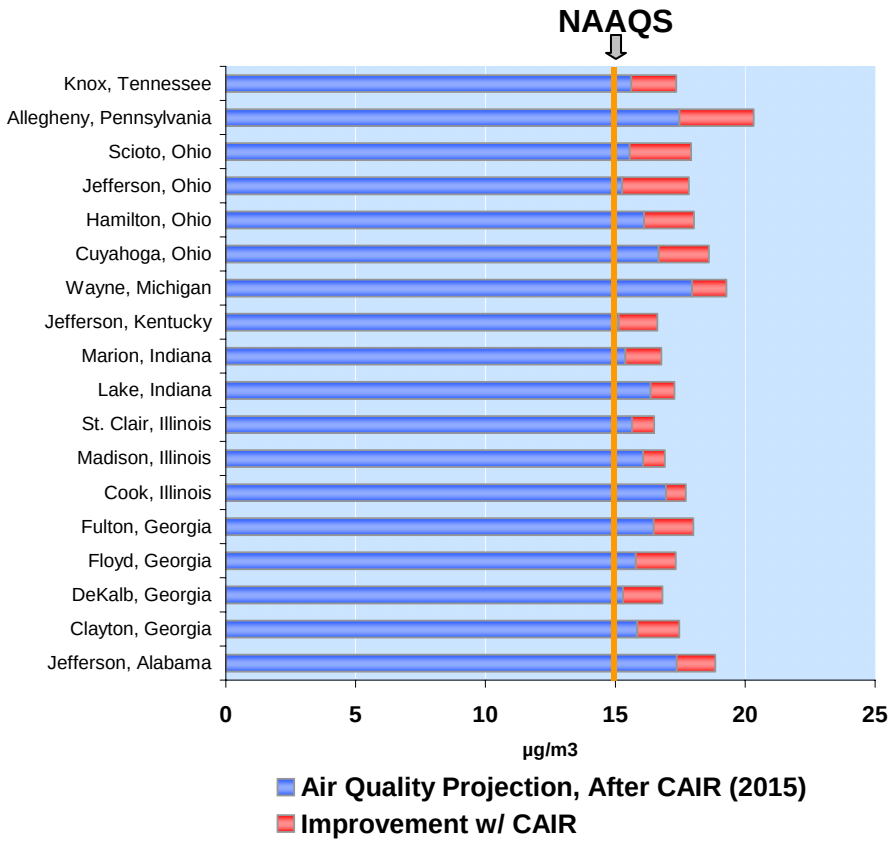
*Although tallies include all nonattainment areas in the eastern U.S., maps show only those areas in States covered by CAIR. Four current O^3 nonattainment areas in New England are not pictured.

Projections concerning future levels of air pollution in specific geographic locations were estimated using the best scientific models available. They are estimations, however, and should be characterized as such in any description. Actual results may vary significantly if any of the factors that influence air quality differ from the assumed values used in the projections shown here.

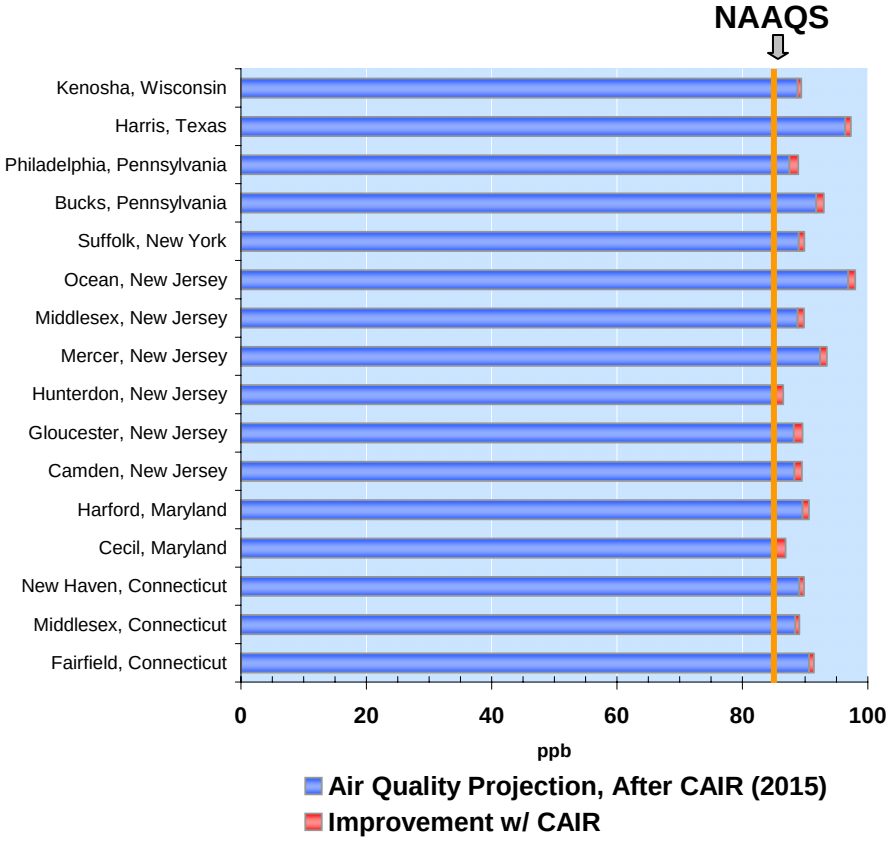

Projected Retrofits at Coal Fired Units After CAIR in 2015
SCR Only
<300 MW
300 MW to 600 MW
>=600 MW
SCR/Scrubber
<300 MW
300 MW to 600 MW
>=600 MW
SNCR Only
<300 MW
300 MW to 600 MW
>=600 MW
SNCR/Scrubber
<300 MW
300 MW to 600 MW
>=600 MW
Scrubber Only
<300 MW
300 MW to 600 MW
>=600 MW
IGCC
<300 MW
300 MW to 600 MW
>=600 MW
Low NOx Burner
<300 MW
300 MW to 600 MW
>=600 MW
Not Operating
<300 MW
300 MW to 600 MW
>=600 MW

CAIR: Counties Closer to Attainment w/ NAAQS

Remaining Fine Particle Nonattainment (Annual Fine Particle Standard)

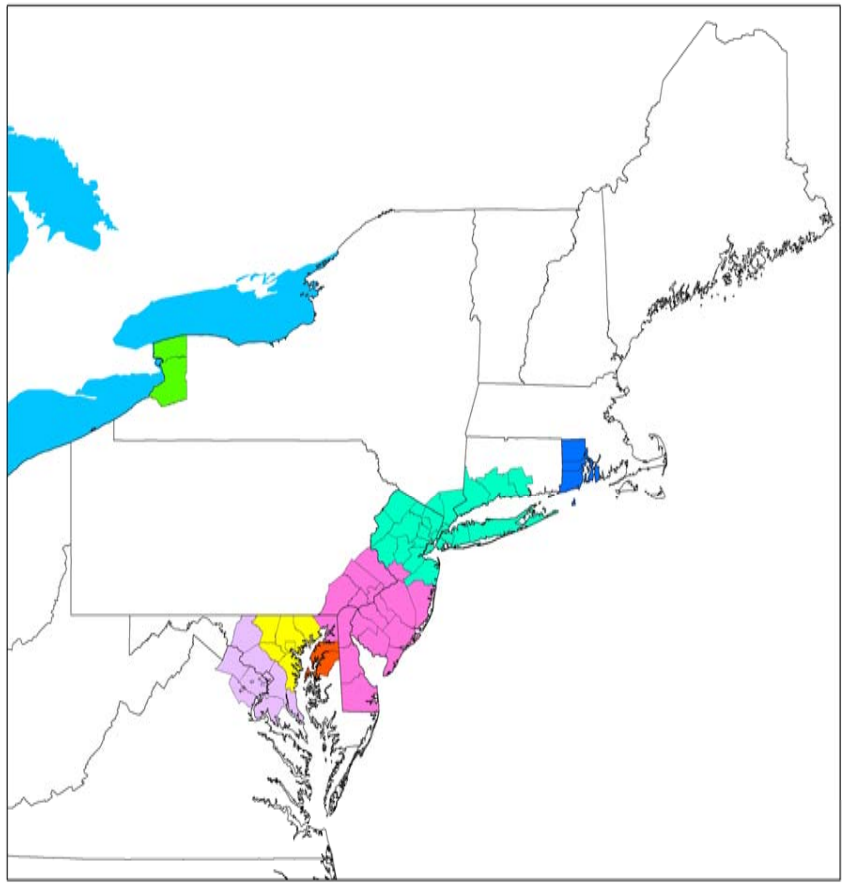


Remaining Ozone Nonattainment (8-Hour Ozone Standard)

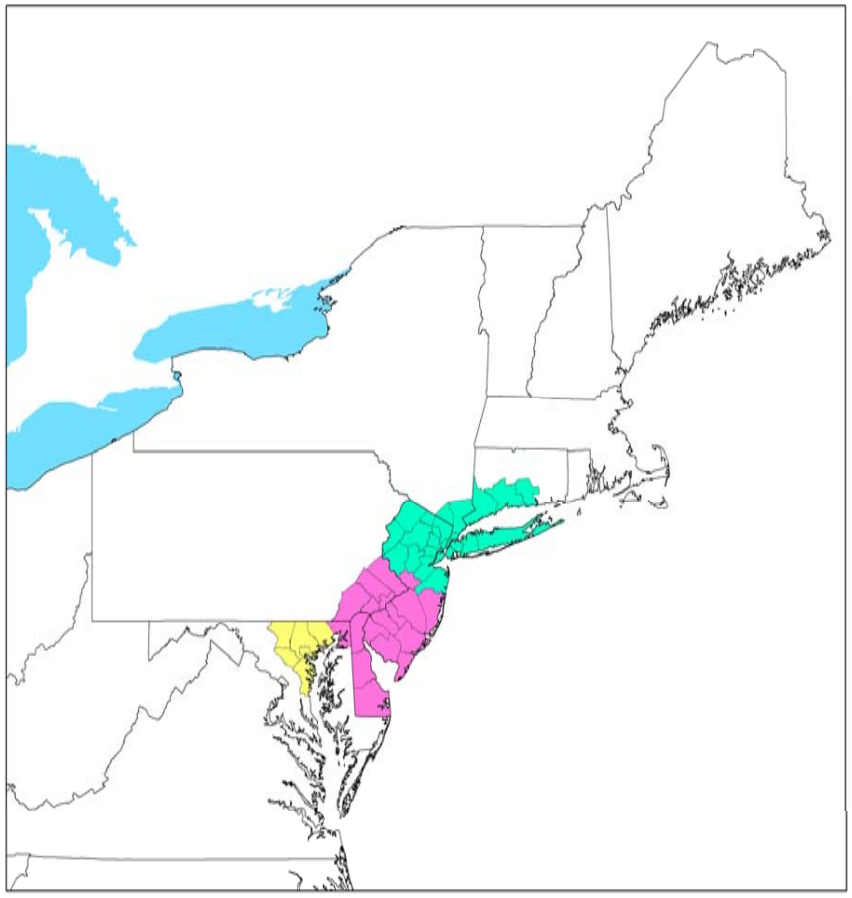


Projected Residual OTR Ozone Nonattainment Areas After CAIR

2010- 7 areas

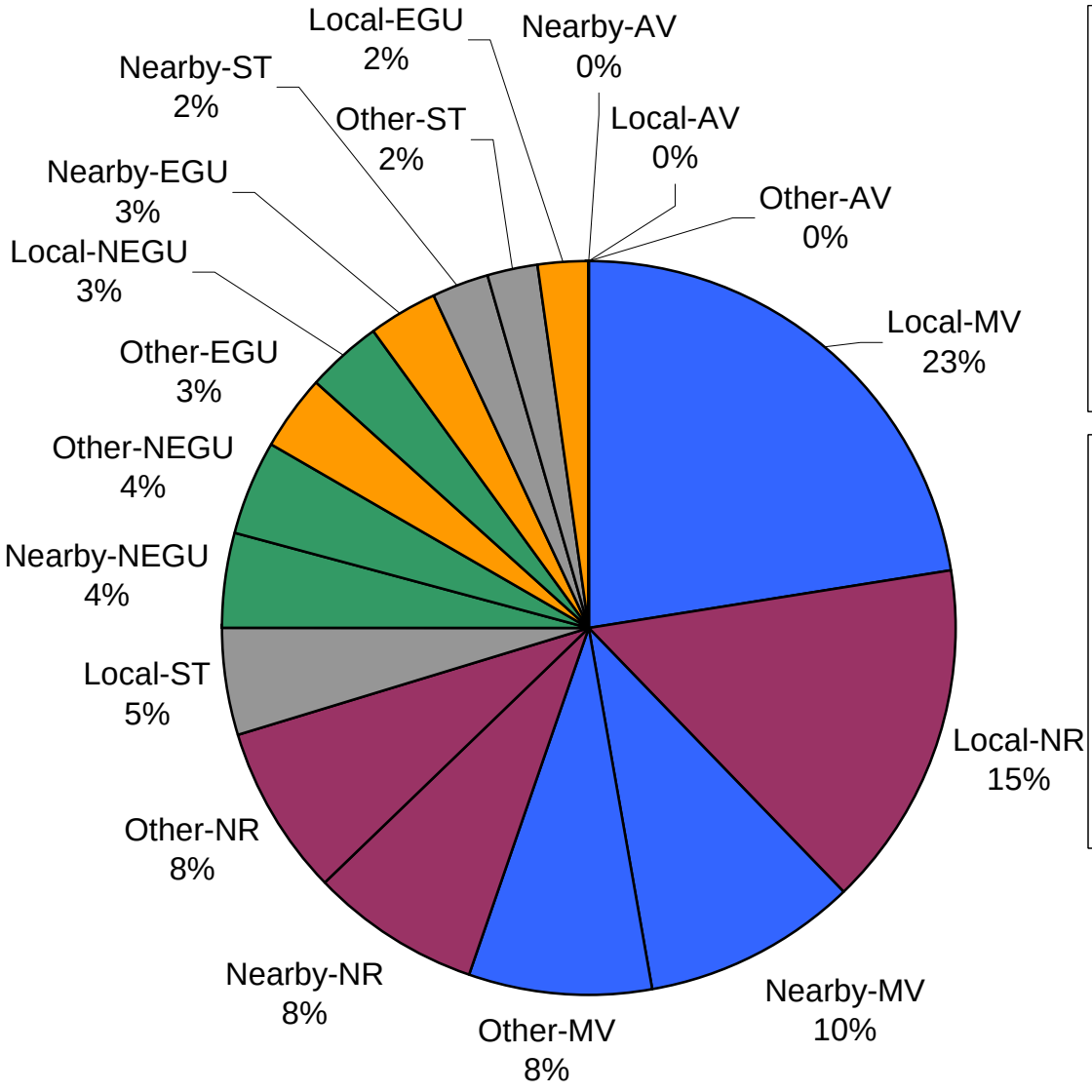


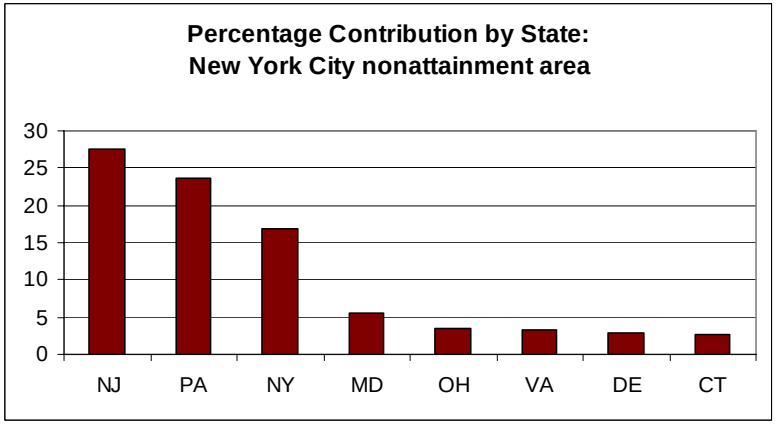
2015- 3 areas

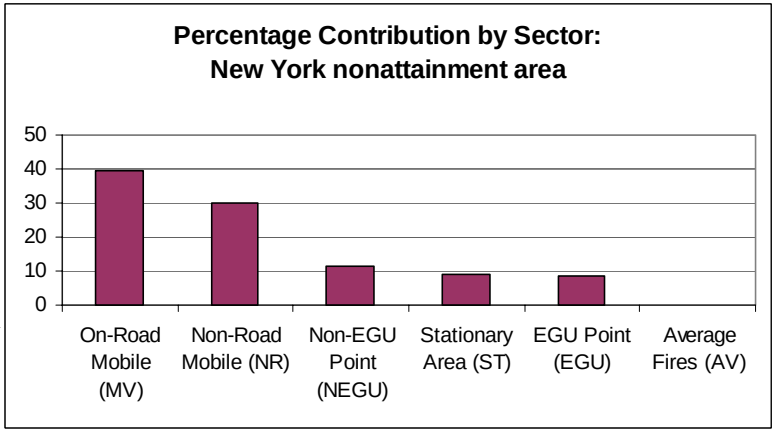


2010 CAIR Source Apportionment - Ozone: New York City

Average contribution by State/Sector to exceedance level ozone





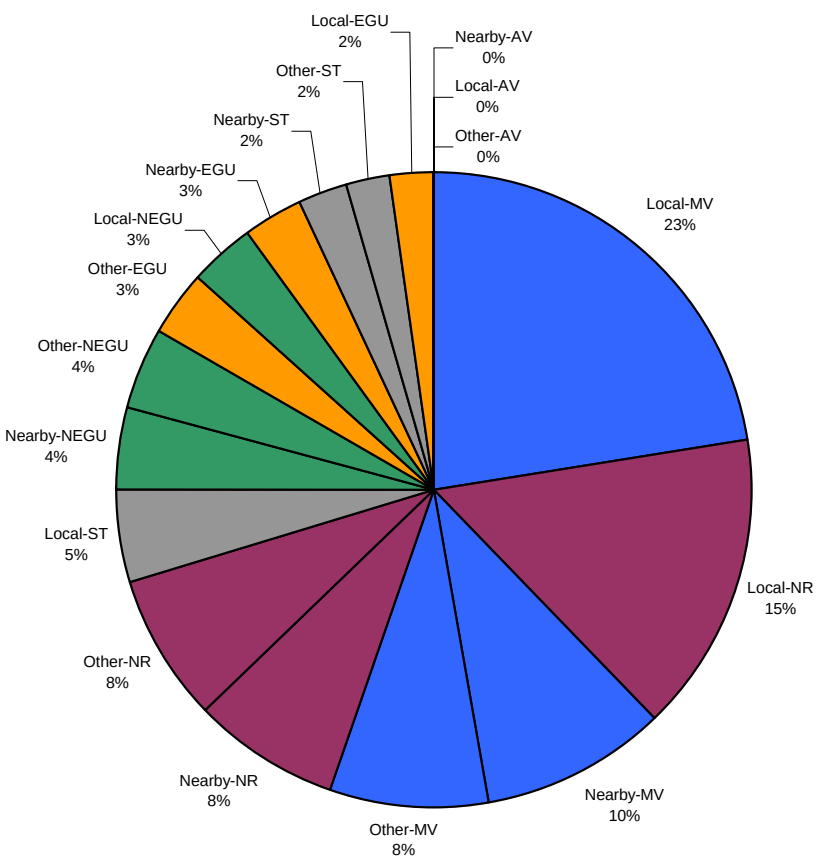


Local= NY, NJ, CT

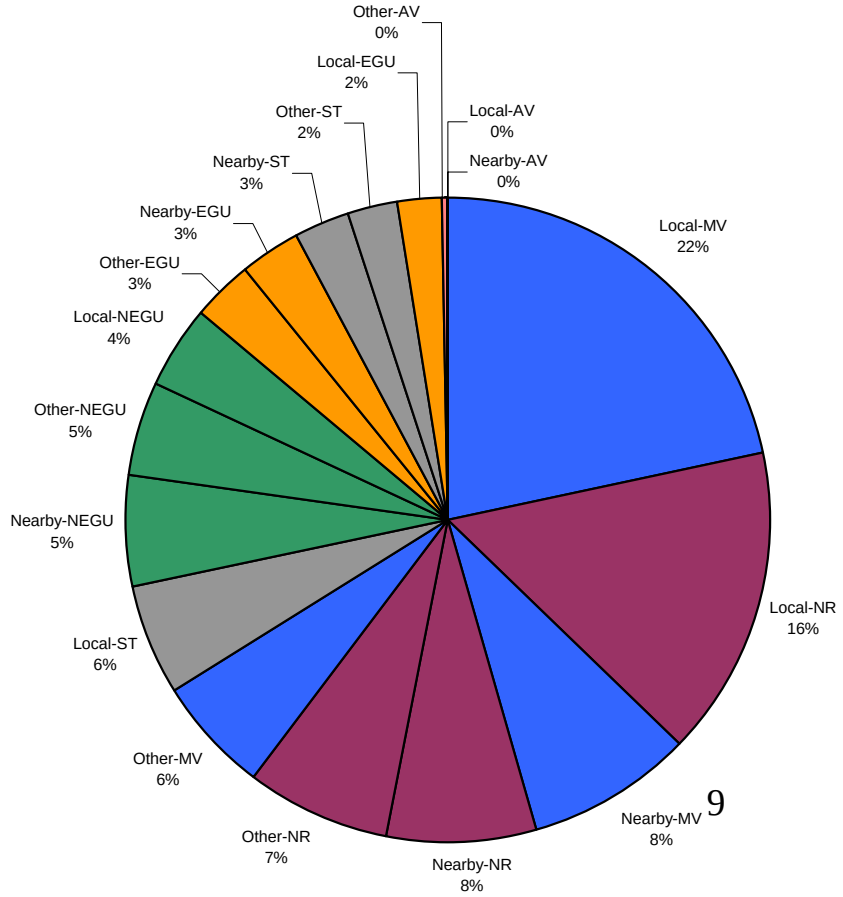
Nearby= PA, DE, MA

2015 CAIR Source Apportionment - Ozone: New York City

2010 CAIR: Source Apportionment: New York City
Average Contribution by State/Sector to Exceedance-level Ozone



2015 CAIR: Source Apportionment: New York City
Average Contribution by State/Sector to Exceedance-level Ozone

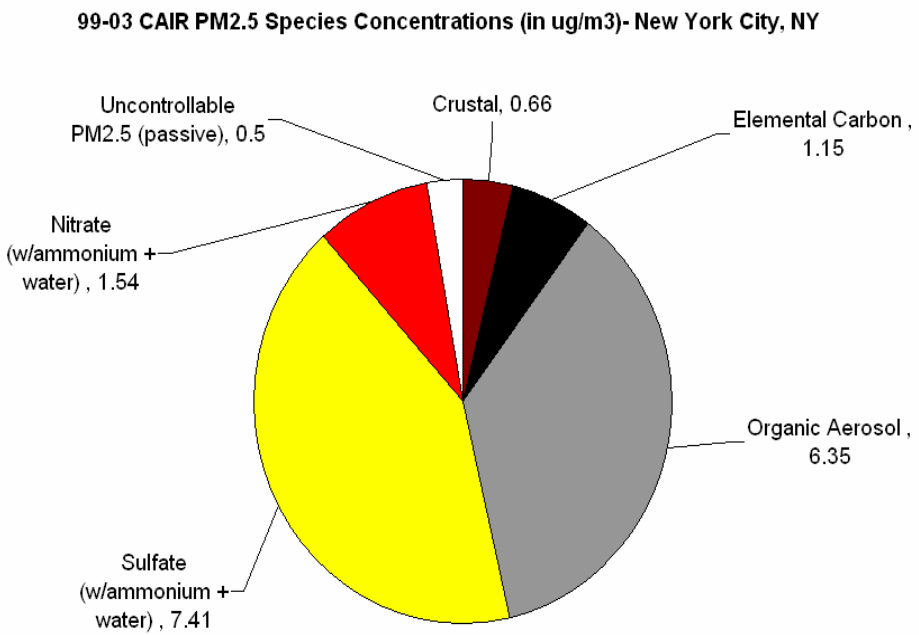


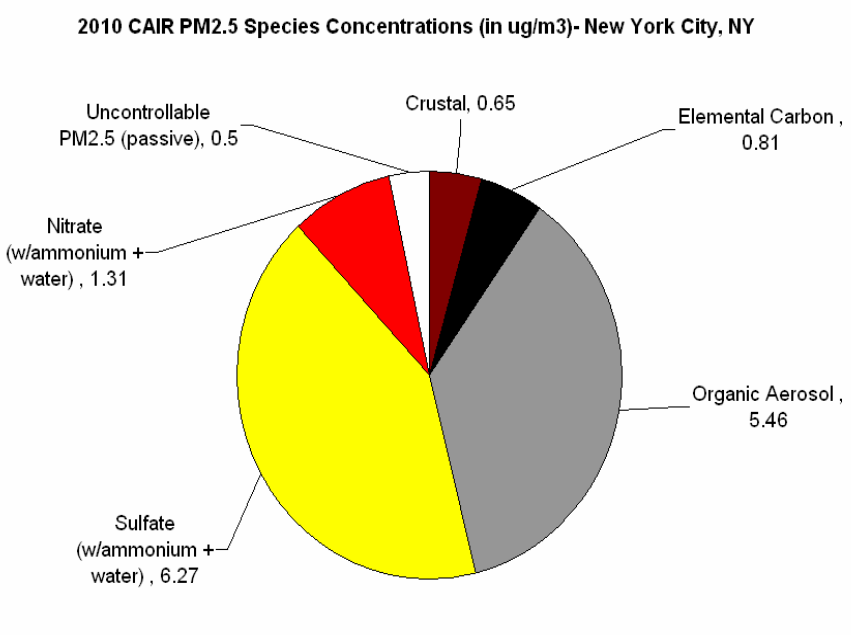
Forecast PM2.5 in the Northeast

City	99-03 Average PM2.5 Concentration (ug/m3)	2010 PM2.5 Concentration (after CAIR) (ug/m3)	2015 PM2.5 Concentration (after CAIR) (ug/m3)
Baltimore	17.18	14.88	14.51
Philadelphia	16.55	14.98	14.53
New York	17.56	14.95	14.33

- Some of the larger metropolitan areas in the Northeast are predicted to have PM2.5 levels in 2010 that are just below the standard, but appear to have moved to much lower levels by 2015.

New York City PM2.5 – Current and 2010 (after CAIR)





Total PM2.5= 17.56 ug/m3

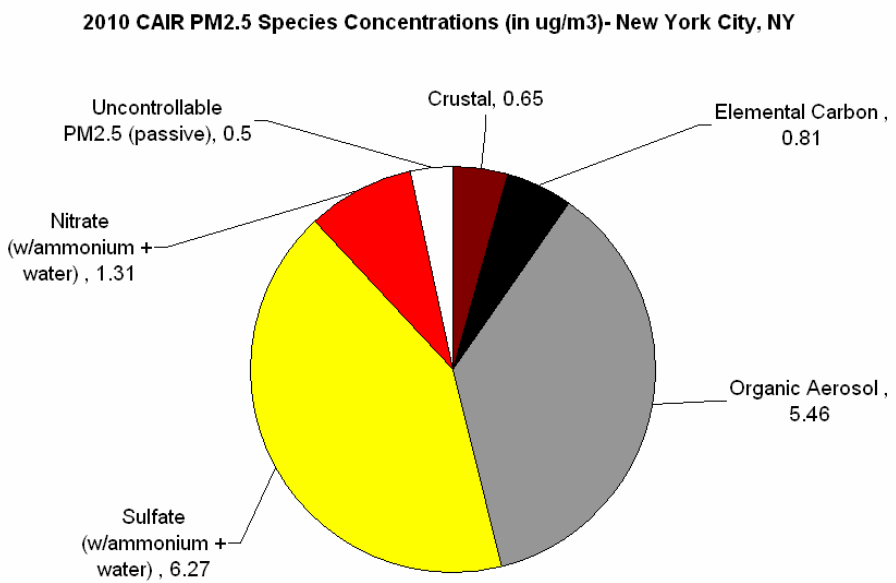
Total PM2.5= 14.96 ug/m3

CAIR 2001 and Projected 2010 and 2015 SO2 Emissions Inventory

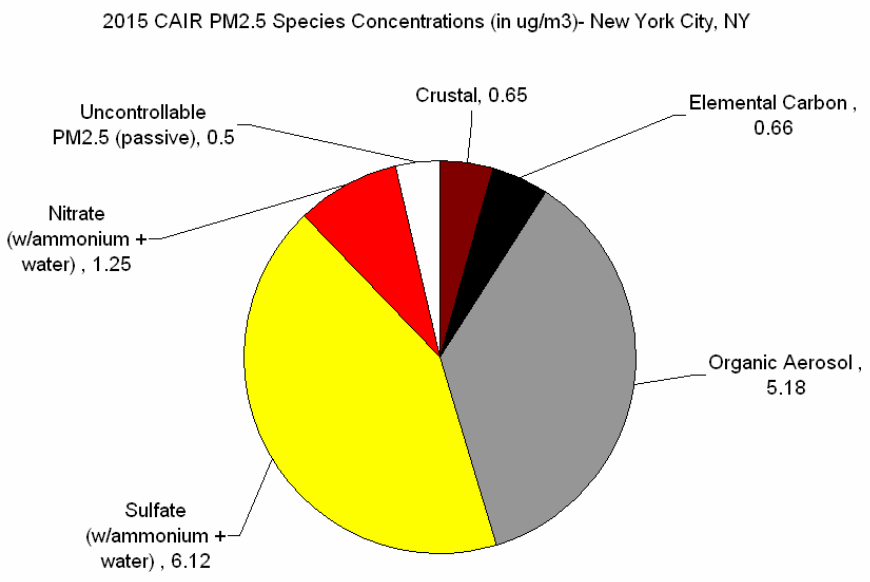
OTC includes Connecticut, Delaware, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Washington DC.

CAIR includes Alabama, Arkansas, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New Jersey, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Texas, Virginia, West Virginia, Wisconsin, and Washington DC.

New York City PM2.5 – 2010 vs. 2015 (after CAIR)

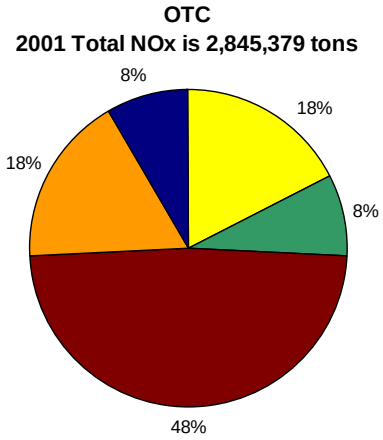


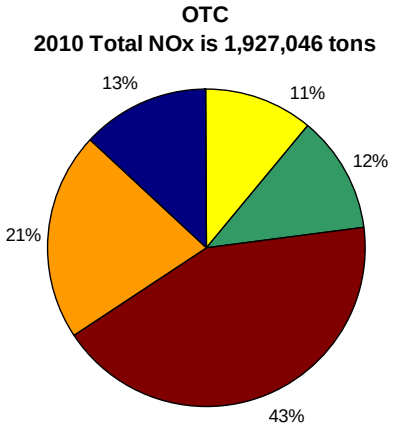
Total PM2.5= 14.95 ug/m3

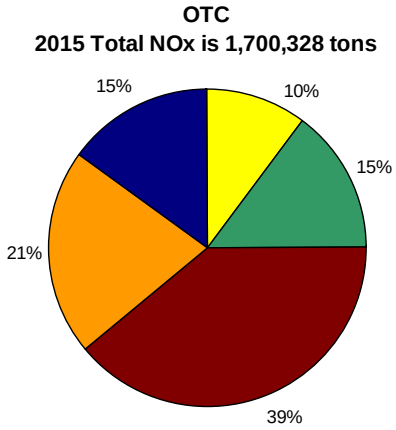


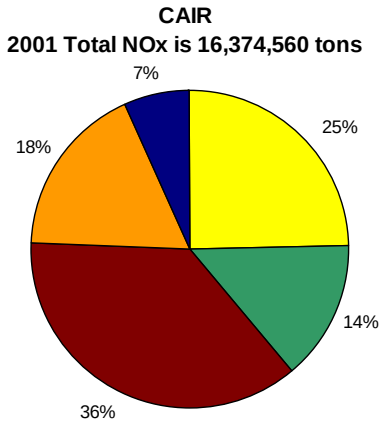
Total PM2.5= 14.33 ug/m3

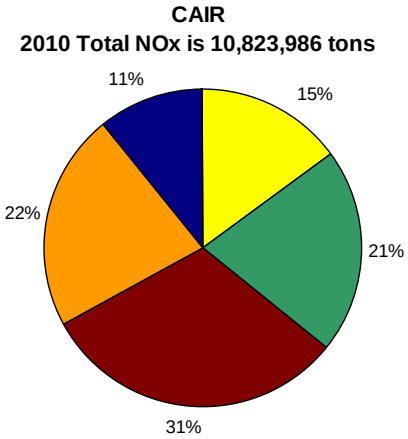
CAIR 2001 and Projected 2010 and 2015 NOx Emissions Inventory

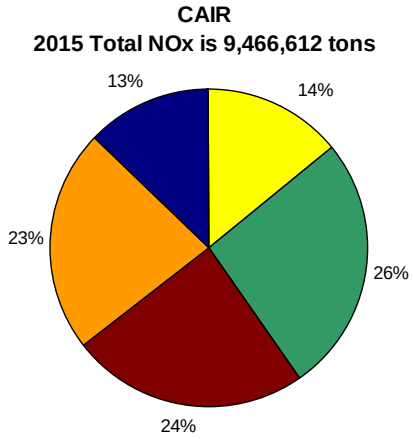


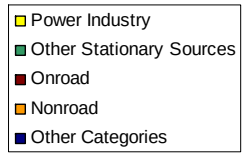


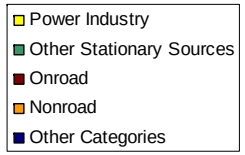












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