

Summary of PM2.5 Redesignation Request/Maintenance Plans of a Few States

PM2.5 redesignation request & maintenance plans for the 1997 PM2.5 NAAQS submitted to EPA by the following four states were studied and a summary of these plans are being provided below. In addition, Alabama is the only state, which also submitted in March 2011 a similar plan for the 2006 24-hour PM2.5 NAAQS (not available online as of now).

1. North Carolina
2. Indiana
3. Ohio
4. Kentucky

Components common to PM2.5 redesignation request & maintenance plan for all four states are provided below.

- a. An analysis of the current PM2.5 design values showing an attainment of the 1997 PM2.5 NAAQS.
- b. An analysis of the emissions inventories for PM2.5, NOx, and SO2 demonstrating maintenance of the 1997 PM2.5 NAAQS beyond 10 years after the plan approval by EPA.
- c. Mobile vehicle emissions (conformity) budgets using MOVES
- d. Discussion of current and future emissions control measures and regulations
- e. List of contingency measures for a potential future failure to maintain the 1997 PM2.5 NAAQS.
- f. One of the reasons for selecting the PM2.5 NAAQS attainment year 2008 by all four states was the availability of emissions data from NEI.

State	Base Year	Attainment Year	Interim Year(s)	Final Year	CAIR included in emissions projections?	How CAIR was handled?
North Carolina (Hickory and Triad PM2.5 Redesignation Demonstration and Maintenance Plan, Dec 2009; a supplement for revised mobile emissions using MOVES submitted in Nov 2010)	PM2.5 SIP BY 2002 not included in analysis, but has details regarding controls leading to emission reduction	2008 (Reason for selection - Attainment year for annual 1997 NAAQS & some EI data availability)	2011, 2014, 2017	2021	Not clearly specified, but seems excluded, relies on NC's Clean Smokestacks rule	1
Indiana (Indiana Portion of the Cincinnati – Hamilton, OH-KY-IN Nonattainment Area for Fine Particles, January 2011)	2005	2008 (Reason for selection – PM2.5 DV based on 2007-09 data shows attainment for 1997 NAAQS)	2015	2021	NOx & SO2 – with CAIR, PM2.5 – without CAIR (due to non-reporting of PM2.5 condensables in 2005 & 2008)	2
Ohio (Ohio Portion of the Huntington-Ashland, OH-KY-WV Annual PM2.5 Nonattainment Area, May 2011)	2005 (Reason for selection - Base year for PM2.5 SIP)	2008	2015	2022	Emissions projected with & without CAIR	3
Kentucky (Kentucky Portion of the Cincinnati – Hamilton, OH-KY-IN Nonattainment Area for Fine Particles, January 2011)	2005	2008 (Reason for selection – PM2.5 DV based on 2007-09 data shows attainment for 1997 NAAQS)	2015	2021	Not included	4

1. North Carolina

CAIR

Text from letter (Nov 2010)

“In 2009, the NO_x SIP Call program was replaced with the CAIR, a cap-and-trade program that will achieve reductions of emissions of SO₂ and NO_x in the eastern United States. NO_x sources that were regulated under the NO_x SIP Call are now regulated under the CAIR program. North Carolina adopted the CAIR rules in 2006 (amended in 2008). North Carolina’s CAIR rules set annual SO₂ allowances as well as both ozone season and annual NO_x allowances for coal-fired electric generating units and other large combustion sources. These regulations are due to a Federal program and thus are both State and Federally enforceable.”

“Due to the Court challenges of CAIR in 2008, the USEPA will be making changes to this program soon. However, the existing CAIR rules will remain in place until the USEPA promulgates changes to the program.”

Text from letter (Dec 2009)

Discussion of a 2004 Section 126 (CAA) petition from NC DAQ showing PM_{2.5} contribution from out of state sources.

“If EPA thinks it currently has insufficient information as to the impact of transport from adjacent states during the maintenance period to approve NC’s PM_{2.5} MP, and then it should grant the above petition, else it should approve the redesignation request. “

Text from original narrative (Dec 2009)

Although the federal Clean Air Interstate Rule (CAIR) has been remanded back to the USEPA, a replacement rule is expected to be promulgated in 2011. This new rule is expected to be as stringent as CAIR.

2. Indiana

CAIR

“The state cap for the NO_x SIP Call remained in place through 2008, at which time the CAIR program superseded it. CAIR, issued in March 2005, adopted by the Indiana Air Pollution Control Board on November 1, 2006, and implemented beginning in 2010, will continue to reduce regional EGU NO_x emissions statewide by approximately another 17% by 2015 and 57% for EGU SO₂ emissions by 2015. The D.C.Circuit court’s vacatur of CAIR in July of 2008 and subsequent remand without vacatur in December of 2008 directs U.S. EPA to revise the CAIR rule in the future. The proposed Clean Air Transport Rule (Transport Rule) (CAIR’s replacement rule) will result in similar or greater emission reductions than assumed within the current emission inventories once it is implemented.”

3. Ohio

CAIR

Ohio EPA developed emissions projections for 2015 and 2022 for EGUs with and without CAIR. Though U.S. EPA has raised concerns regarding the CAIR program and its remand, with the Transport Rule, the proposed CAIR replacement rule, Ohio EPA believes emissions projections with CAIR included will be appropriate.

Following three paragraphs provided below in the document support emissions reduction achieved during early phase of CAIR (2009-first two quarters of 2010)

EPA's Clean Markets Division quote:

“Based on emissions monitoring data, EPA has observed substantial reductions in SO₂ emissions from 2005 to 2009 and in the first two quarters of 2010 as companies installed more controls, electric demand declined, and low natural gas prices made combined-cycle gas-fired units more competitive in several parts of the country. Thus, even after CAIR's vacatur and subsequent remand in late 2008, the controls in place generally have continued to operate, helping to drive continued progress in reducing emissions.”¹

¹ <http://www.epa.gov/airmarkets/background.htm>

On July 6, 2010, U.S. EPA proposed a replacement to the CAIR program, the Transport Rule. [75 FR 45210] U.S. EPA intends to finalize the Transport Rule in time for reductions to begin in 2012. As proposed, the Transport Rule will preserve those initial reductions achieved under CAIR and provide more reductions in NO_x and SO₂ emissions in 2012 and 2014, ahead of the 2015 CAIR Phase 2.

It is also Ohio EPA's belief that the Transport Rule, when finalized, will continue to provide the necessary reductions, and likely even greater reductions, that will be necessary for maintenance of the annual PM_{2.5} standard to occur. As stated by U.S. EPA regarding the proposed Transport Rule, “the results of the air quality modeling indicate that all but one site¹⁷ is projected to be in attainment and only one site¹⁸ is projected to have a maintenance problem for annual PM_{2.5} in 2014 with the emissions reductions expected from this proposal.” [75 FR 45345] Therefore, it is Ohio EPA's belief it is most appropriate to evaluate Ohio EPA's demonstration that the projected level of emissions is sufficient to maintain the annual PM_{2.5} standard by assessing future year emissions that include the CAIR program. Furthermore, modeling conducted as part of the Transport Rule projects the Counties within this area will not have maintenance issues in 2014 even without the Transport Rule (or CAIR). Maintenance is demonstrated when the future-year (2022) projected emission totals are below the 2008 attainment year totals.

4. Kentucky

CAIR

“As noted previously, Kentucky developed regulations 401 KAR 51:210, 401 KAR 51:220, and 401 KAR 51:230 (effective February 2, 2007) in response to CAIR; those regulations are still in

place. However, reductions due to this regulation and CAIR were not included in the inventory and its projections for the Kentucky portion of the nonattainment area.”

“As mentioned previously (page 8), Kentucky has not incorporated these expected CAIR reductions into the redesignation request inventories and projections. It should also be noted that Kentucky’s SIP-approved NO_x SIP Call program and regulations, and the CAIR program and regulations, are still in place and providing reductions. All controls noted thus far for redesignation are expected to continue into the future. Those control measures will continue providing reduction for particulate precursors and emissions throughout the maintenance period.”