

**U.S. HOUSE OF REPRESENTATIVES
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY**

HEARING CHARTER

Out of Thin Air: EPA's Cross-State Air Pollution Rule

**Thursday, September 15, 2011
9:30 a.m. to 12:00 p.m.
2318 Rayburn House Office Building**

PURPOSE

On Thursday, September 15, 2011, the House Committee on Science, Space, and technology will hold a hearing to review the scientific, procedural, and technical basis of the Environmental Protection Agency's Cross-State Air Pollution Rule, including a discussion of economic, employment and reliability impacts.

WITNESSES

Panel One

- Dr. Bryan W. Shaw, Chairman, Texas Commission on Environmental Quality
- Mr. Gregory Stella, Senior Scientist, Alpine Geophysics, LLC
- Mr. Barry T. Smitherman, Commissioner, Texas Railroad Commission
- Mr. Wayne E. Penrod, Executive Manager, Environmental Policy, Sunflower Electric Power Corporation
- Mr. Chip Merriam, Chief Legislative & Regulatory Compliance Officer, Orlando Utilities Commission

Panel Two

- The Honorable Gina McCarthy, Assistant Administrator, Office of Air and Radiation, U.S. Environmental Protection Agency

BACKGROUND

The Clean Air Act (CAA) requires the Environmental Protection Agency (EPA) to promulgate National Ambient Air Quality Standards (NAAQS) for PM_{2.5} and ozone¹, and requires States to develop State Implementation Plans (SIP) that outline how each State will meet such standards.

¹ NAAQS pollutants (also called criteria pollutants) are pollutants that “may reasonably be anticipated to endanger public health or welfare...” CAA Section 108(a)(1). EPA has identified six pollutants subject to NAAQS: ozone, particulate matter (PM_{2.5} and PM₁₀), carbon monoxide, sulfur dioxide, nitrogen oxide, and lead.

When EPA finalized new NAAQS for both PM_{2.5} and ozone in 1997, some states found that despite their best efforts, their SIPs were inadequate for compliance. The problem resulted in part due to the contribution of pollution from upwind states. Under Section 110(a)(2)(D) of the CAA, states must include provisions in their SIPs to prevent sources within their state from significantly contributing to the ability of downwind states to attain the standards. Finding that interstate transport of sulfur dioxide (SO₂) and nitrogen oxides (NO_x) constituted a “significant contribution”² to downwind states’ inability to attain compliance with those NAAQS, EPA issued the Clean Air Interstate Rule (CAIR) in 2005.

Clean Air Interstate Rule (CAIR)

CAIR established a regional cap-and-trade program for SO₂ and NO_x emissions from electric generating units (EGUs) in 28 eastern states and the District of Columbia. The program was comprised of three emission caps: two were annual regional emission caps that address the interstate contribution of SO₂ and NO_x to PM_{2.5} nonattainment; the third cap was a seasonal cap to address interstate contribution of NO_x to ozone nonattainment. See attachment A for States affected by these regional caps.

Clean Air Interstate Rule (CAIR) Caps³

	Phase I (2010)	Reduction from 2005 levels	Phase II (2015)	Reduction from 2005 levels
SO ₂ Annual Caps	3.6 million tons	50%	2.5 million tons	65%
NO _x Annual Caps	1.5 million tons	53%	1.3 million tons	61%
NO _x Ozone season caps	580,000 tons		480,000 tons	

Based on a methodology centered on reductions from EGUs and adjusted for type of fossil fuel burned, each affected state was assigned a portion of the regional cap in the form of a statewide “emissions budget” or cap. Each covered state was then required to submit a revised SIP identifying measures it intended to implement to achieve its emissions budget. In its final rule, EPA encouraged States to adopt the most cost-effective measures to achieve their emissions budget, specifically through a cap-and-trade program. This type of program had been successful in the past, specifically with regard to the Acid Rain Program established under Title IV of the CAA, and the NO_x SIP Call, a seasonal NO_x cap-and-trade program that includes electric utility and other major stationary sources. The interstate trading allowed by the CAIR rule was intended to promote the reduction of emissions in the most cost-effective manner, and then selling emission allowances to those EGUs that decided the most cost-effective method of compliance was for them was buying allowances on the market.

² Significant contribution was defined by CAIR as the product of three factors: (1) the actual amount of transported pollution from upwind states that contributes to nonattainment in downwind states; (2) how often contributions over specific thresholds occur; and (3) the comparative amount of the upwind transported contribution to the total nonattainment situation to the downwind area.

³ 70 Federal Register 25162 (May 12, 2005)

Despite general support from stakeholders, CAIR was challenged in court by petitioners that argued the rule was not strong enough to address pollution from upwind sources. On July 11, 2008, a unanimous court decision found that EPA lacked the authority to promulgate a regional cap-and-trade rule under Section 110 of the CAA unless it could show a link between the pollution emitted in specific states and nonattainment standards or failure to maintain standards in downwind states. The court found that EPA had established a significant contribution made by power plants to pollution levels in other states as required under Section 110, but that its methodology for establishing emission budgets was unrelated to that link. Because the trading program established under CAIR assumed that the entire upwind *region* contributed significantly, and not that *each State's sources* contributed significantly to downwind States' nonattainment as defined in Section 110(a), the interstate trading aspect of the rule was considered unlawful.

Without CAIR, states would have a difficult time demonstrating that their SIPs could meet NAAQS. Therefore, the court subsequently modified its decision on December 23, 2008, stating that the CAIR rule could remain in effect until a new rule was promulgated by EPA. Although the Court did not impose a specific deadline on EPA's development of a replacement rule for CAIR, it did say that it was not granting an indefinite stay, and that petitioners may sue again if EPA did not promulgate a new rule.

Cross-State Air Pollution Rule (CSAPR)

On July 6, 2010, EPA proposed a replacement for CAIR, the Clean Air Transport Rule. The proposed transport rule left the CAIR Phase I limits in place and set new limits replacing CAIR's Phase II limits in 2012, three years earlier than the original CAIR rule. The proposed rule included the States in CAIR and added three new states – Oklahoma, Kansas, and Nebraska. The rule allowed unlimited trading of allowances within individual states, but severely limited interstate trading in order to address one of the Court's reasons for vacating the CAIR rule. In order to ensure expedited implementation of the rule, EPA proposed a Federal Implementation Plan (FIP) for each of the States, focusing solely on EGUs. States may develop their own SIPs and choose to control other types of sources in addition to EGUs if they wish, but the Federal plan will take effect until the State acts to replace it.

Exactly one year later, in July 2011, EPA finalized the transport rule, now called the Cross-State Air Pollution Rule (CSAPR). The final rule includes requirements for 28 states (see attachment B) to reduce SO₂ and NO_x emissions that may contribute to nonattainment of the ozone or fine particulate PM_{2.5} NAAQS for downwind states. Since the proposed rule came out in July 2010, EPA issued three Notices of Data Availability (NODAs) to address fuel cost assumptions, emission inventories, and allowance allocation methods. As a result, the final rule contains a variety of significant changes when compared to the July 2010 proposal or CAIR.

There were several significant changes between the proposed rule and the finalized CSAPR. The final rule requires States to comply with the cap established in their emission budgets by January 1, 2012, instead of the January 1, 2014 date in the proposed rule. The final rule also included a new allowance allocation approach that bases allocations on heat input, discounting the type of coal used or the efficiency of the plant. As a result of updated modeling and analysis tools, EPA

decided to change the mix of states included in the final rule. Texas was added to the annual SO₂ and NO_x programs, while Connecticut, Delaware, the District of Columbia, Florida, Louisiana, and Massachusetts were removed. Iowa, Missouri, and Wisconsin were added to the ozone-season NO_x program; Connecticut, Delaware, and the District of Columbia were removed.

Cross-State Air Pollution Rule (CSAPR) Caps⁴

	Phase I (2010) From CAIR	Reduction from 2005 levels	Phase II (2012)	Phase III (2014)
SO ₂ Annual Caps	3.6 million tons	50%	3.4 million tons	2.1 million tons
NO _x Annual Caps	1.5 million tons	53%	1.2 million tons	1.1 million tons

Like the proposed rule, the final CSAPR left in place the CAIR Phase I limits and replaced the CAIR Phase II limits with new limits to take effect in 2012, 3 years earlier than CAIR, and also included a third Phase to take effect in 2014. The reductions envisioned under CAIR are already under way. On August 11, 2010, EPA reported that emissions of SO₂ had declined sharply in both 2008 and 2009. In 2009, SO₂ emissions from fossil-fuel power plants were 44% below 2005 levels and NO_x emissions were 45% below 2005 levels.⁵

Key Issues - The following issues identified by experts and stakeholders continue to be the subject of ongoing debate regarding the justifications for, and impact of, the final CSAPR rule:

- **Modeling vs. Measurement.** EPA modeling does not reflect the significant emissions reductions made since implementation of the 2005 CAIR rule, resulting in modeling data inconsistent with real-world conditions and the potential for overestimation of States' downwind impacts. Additionally, the most recent air quality data indicate fewer nonattainment and maintenance areas than projected by EPA, thereby lessening the benefits that would be obtained under the CSAPR.
- **Implementation Timeline.** The CSAPR rule was finalized on July 6, 2011, and Phase II compliance is required by January 1, 2012, leaving less than six months for companies and States to act to reduce emissions. This issue was acknowledged by the Administration during interagency comment on the rule, specifically noting that "such a substantial change occurring six months prior to the effectiveness of the assurance provision leaves sources with few options to respond in a cost-effective manner, increasing the likelihood of disrupting system reliability if it becomes necessary to achieve compliance through derates and/or idling."⁶

⁴ 70 Federal Register 25162 (May 12, 2005) and 76 Federal Register 48208 (August 8, 2011)

⁵ EPA "2009 Acid Rain Program Emission and Compliance Data Report," August 11, 2010.

⁶ *OMB Summary of Interagency Working Comments*, Doc. EPA-HQ-OAR-2009-0491-4133 (posted to the docket on July 11, 2011).

- Allowance Banking. The CSAPR drastically limits the use of banked allowances saved under the Acid Rain program and the NO_x SIP Call, increasing implementation costs and compliance challenges.
- Costs and Benefits. EPA's cost-benefit analysis does not consider costs of control equipment installed for CAIR compliance, but nonetheless takes credit for emission reductions already achieved by these controls.
- Implementation Flexibility. In order to facilitate implementation of the rule, EPA has issued a FIP in place of allowing States to generate their own SIPs, contrary to the cooperative federalism outlined in the CAA.
- Reliability. EPA asserts that CSAPR will not compromise electric reliability. Others have questioned this assumption. For example, the Electric Reliability Council of Texas (ERCOT) concluded that rolling brownouts would have been necessary if the rule had been in place in 2011: "ERCOT would have experienced rotating outages during days in August. Off-peak capacity reductions in the three scenarios evaluated as part of this study, when coupled with the annual maintenance outages that must be taken on other generating units and typical weather variability during these periods, also place ERCOT at increasing risk of emergency events, including rotating outages of customer load."⁷
- Impact on Electricity Rates, Jobs, and the Economy. According to an analysis conducted by NERA Economic Consulting, the combined impacts of EPA's CSAPR and proposed utility MACT rules would increase retail electricity prices by 12 percent in 2016 and reduce net employment significantly over the next eight years (with losses outweighing gains by more than 4 to 1). This finding has been reinforced by some of the largest electric generators and unions in the U.S., which indicate that CSAPR and related EPA rules will cause the retirement of numerous power plants and mining operations, as well as significant job losses.

⁷ http://www.ercot.com/content/news/presentations/2011/ERCOT_CSAPR_Study.pdf

Attachment A – States Included in the 2005 Clean Air Interstate Rule

States Contributing to Downwind Nonattainment of the PM2.5 NAAQS	States Contributing to Downwind Nonattainment of the 8-hour ozone NAAQS
Alabama	Alabama
	Arkansas
	Connecticut
Delaware (proposed)	Delaware
District of Columbia	District of Columbia
Florida	Florida
Georgia	
Illinois	Illinois
Indiana	Indiana
Iowa	Iowa
Kentucky	Kentucky
Louisiana	Louisiana
Maryland	Maryland
	Massachusetts
Michigan	Michigan
Minnesota	
Mississippi	Mississippi
Missouri	Missouri
New Jersey (proposed)	New Jersey
New York	New York
North Carolina	North Carolina
Ohio	Ohio
Pennsylvania	Pennsylvania
South Carolina	South Carolina
Tennessee	Tennessee
Texas	
Virginia	Virginia
West Virginia	West Virginia
Wisconsin	Wisconsin

Attachment B – States Included in the 2011 Cross-State Air Pollution Rule

States with Requirements for Annual SO₂ Emissions	States with Requirements for Annual NO_x Emissions	States with Requirements for Seasonal ozone NO_x Emissions
Alabama	Alabama	Alabama
		Arkansas
		Florida
Georgia	Georgia	Georgia
Illinois	Illinois	Illinois
Indiana	Indiana	Indiana
Iowa	Iowa	Iowa (proposed)
Kansas	Kansas	Kansas
Kentucky	Kentucky	Kentucky
		Louisiana
Maryland	Maryland	Maryland
Michigan	Michigan	Michigan (proposed)
Minnesota	Minnesota	
		Mississippi
Missouri	Missouri	Missouri (proposed)
Nebraska	Nebraska	
New Jersey	New Jersey	New Jersey
New York	New York	New York
North Carolina	North Carolina	North Carolina
Ohio	Ohio	Ohio
		Oklahoma (proposed)
Pennsylvania	Pennsylvania	Pennsylvania
South Carolina	South Carolina	South Carolina
Tennessee	Tennessee	Tennessee
Texas	Texas	Texas
Virginia	Virginia	Virginia
West Virginia	West Virginia	West Virginia
Wisconsin	Wisconsin	Wisconsin (proposed)