



Acid Rain Program Update No. 1



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Purpose of this Update

The U.S. Environmental Protection Agency (EPA) intends to publish a periodic report on the progress of Acid Rain Program implementation. This is the first report of the series and it focuses on activities since the 1993 publication of the Acid Rain Program Final Core Rules.

Update Highlights

Permitting

To date, utilities have met all permitting deadlines under the Acid Rain Program.

All 182 Phase I SO₂ permits have been issued.

Emissions Monitoring and Tracking

Initial monitor certification tests indicate that the Continuous Emissions Monitoring Systems (CEMS) required by the Acid Rain Program are the most accurate systems used for national environmental compliance.

247 of 292 utility units on a Phase I schedule have a complete set of certified CEMS.

The Emissions Tracking System (ETS) has received the first three quarterly emissions reports from utilities.

Allowance Market Activity

Over 1 million allowances have already been traded, signalling the development of a healthy allowance market. Allowance trading activity increased dramatically from 1992 to 1993.

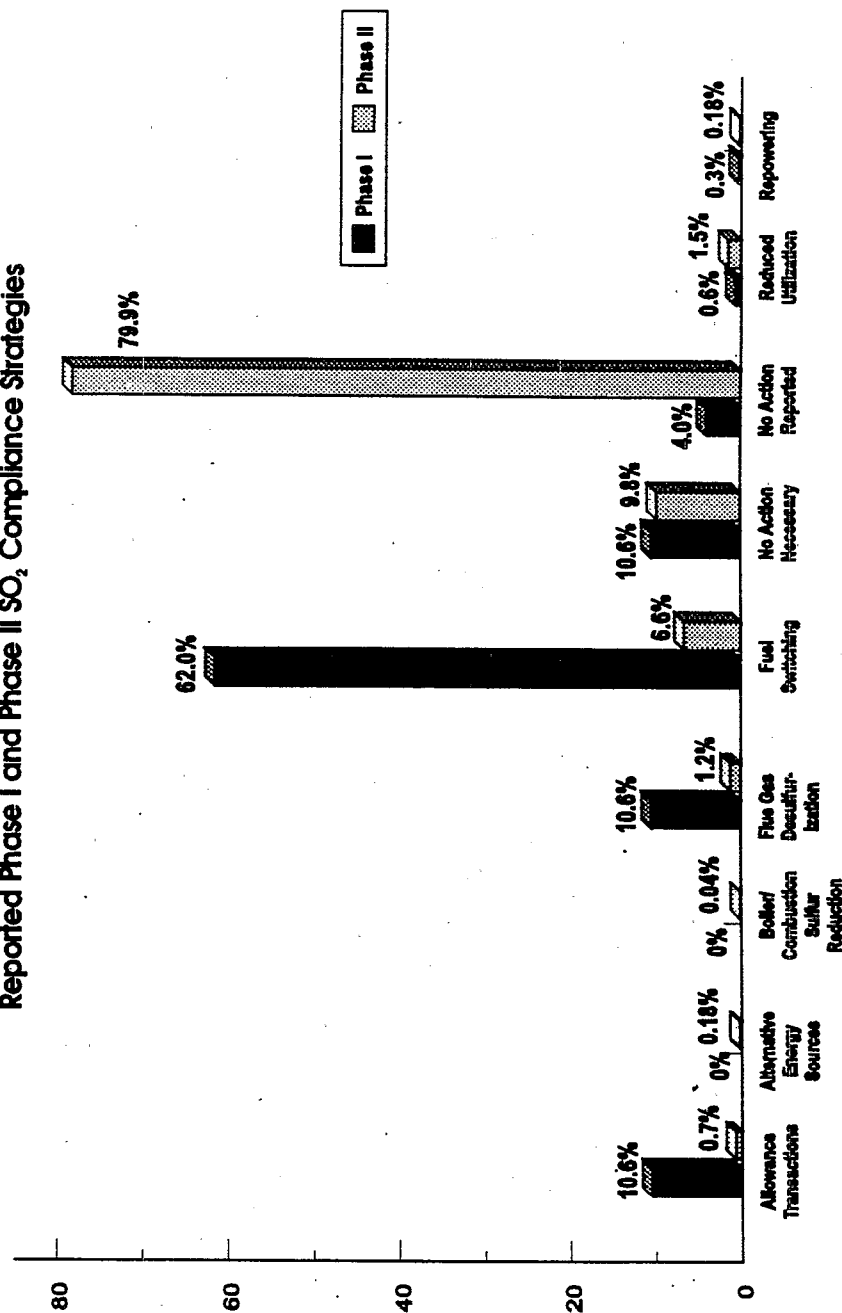
EPA announced the opening of the Allowance Tracking System (ATS) on March 14, 1994.

EPA, in partnership with the Chicago Board of Trade, has held two annual allowance auctions and direct sales events. The proceeds from these events total almost \$50 million.

Energy Efficiency and Renewable Energy

A total of 930 bonus allowances has been awarded to utilities for energy efficiency and renewable energy measures. It is estimated that, through these measures, the awarded utilities have avoided approximately 1,800 tons of SO₂ and 1,300 tons of NO_x emissions.

Figure I
Reported Phase I and Phase II SO₂ Compliance Strategies



Emissions Monitoring and Tracking

The integrity of the allowance market depends on state-of-the-art continuous emissions monitoring systems (CEMS) and an emissions tracking system (ETS). The CEMS record all emissions from each utility affected by the program. This emissions data is electronically reported to ETS on a quarterly basis. This update reports on the installation and operation of the CEMS and the ETS.

Continuous Emissions Monitoring Systems

- As required under the Clean Air Act, CEMS for SO₂, NO_x, opacity, and volumetric flow were installed and put into operation at 256 utility units by November 15, 1993. At 95% of the utility units carbon dioxide (CO₂) monitors, which are optional under the Act, were also installed.
- As of August 1, 1994, emission monitors for SO₂, NO_x, flow, opacity and CO₂ were tested and certified for accuracy by the utilities and approved by EPA at 247 units. At 13 units CEMS were rejected or deemed incomplete. Those units will revise their applications and resubmit them to EPA.
- The results of the monitoring tests revealed unprecedented performance results. Specifically, SO₂ monitors on average were accurate to within 3.60 percent of EPA's reference measurements and NO_x monitors within 3.77 percent.

"The results of the monitoring tests revealed unprecedented performance results."

Prior to the Acid Rain Program, SO₂ and NO_x monitors were only required to be within 20 percent of the EPA reference standard. The dramatic improvement in monitor accuracy is attributable to a combination of tight performance standards, innovative incentives for testing, and conscientious quality assurance and control by industry.

Allowance Market Activity

The SO₂ allowance trading system harnesses the incentives of the free market to reduce pollution at the lowest possible cost. In order to stimulate the allowance trading market, EPA holds annual auctions and direct sales of allowances. The Allowance Tracking System (ATS) ensures that utilities do not emit more SO₂ than the number of allowances they hold. The ATS does not, however, record the price of allowances; such information is collected and reported by the private sector. This report provides records of allowance transactions and allowance prices as reported in the trade press, along with 1994 EPA auctions results and an update on allowance transactions recorded in ATS.

Allowance Transactions Prior to the Allowance Tracking System

- Allowance transactions have been reported by the trade press, utilities, and other sources since 1992.
- Observations:
 - Over 1 million allowances have already been traded, if allowance options are included.
 - Most allowances have traded in the \$150-250 range. This price is well below projections made in 1990 of \$400-1000 per allowance, an indication that the Acid Rain Program may be costing much less than expected.

"Most allowances have traded in the \$150-250 range...an indication that the Acid Rain Program may be costing much less than expected."

Allowance Tracking System

- On March 14, 1994, EPA's Allowance Tracking System opened for business. The ATS provides an efficient, automated means of tracking allowance holdings essential to determining compliance with the Acid Rain Program.

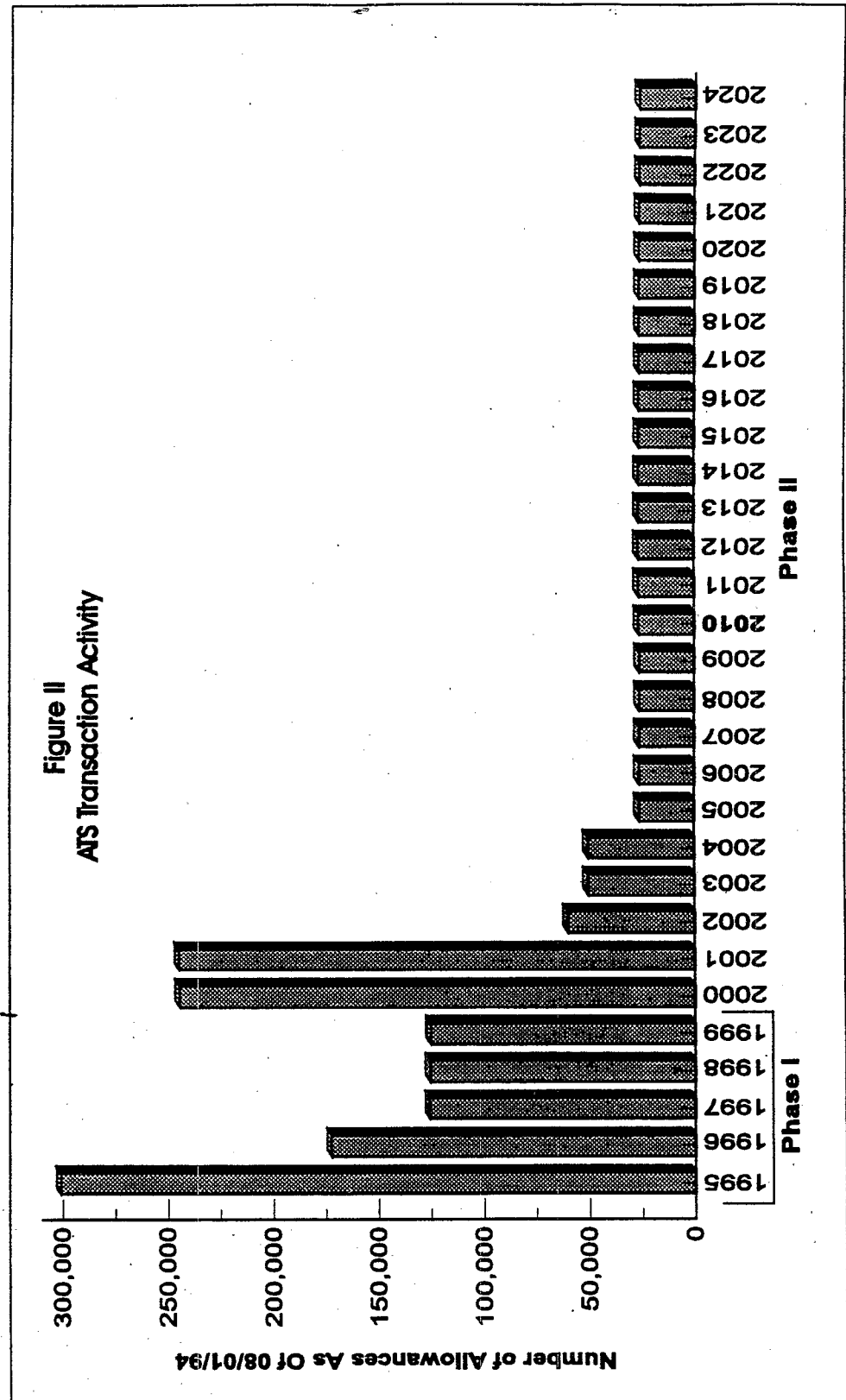


Figure III

	1993 Auctions		1994 Auctions		
	Spot ¹	7-Year ² Advance	Spot ¹	7-Year ² Advance	6-Year ³ Advance
Total allowances offered ⁴	145,010	130,500	108,001	147,000	75,000
Allowances sold	50,010	100,000	50,000	100,800	25,400
Bid quantities	321,354	283,406	294,354	489,399	110,489
Winning bidders	36	30	17	11	6
Average winning bid	\$156	\$136	\$159	\$149	\$148
Total proceeds	\$7.8 M	\$13.6 M	\$7.9 M	\$15.0 M	\$3.7 M

1. In the Spot Auction, EPA will sell allowances first useable for compliance in 1995.
2. In the 7-Year Advance Auction, EPA will sell allowances first useable for compliance in 2001.
3. In the 6-Year Advance Auction, EPA will sell allowances first useable for compliance in 2000 (these allowances were the unsold allowances from the 1993 direct sale).
4. These quantities contain allowances that EPA has reserved for the annual auctions plus additional allowances offered by affected utilities. Offerors may set a minimum purchase price for their allowances (i.e., if bids are below that price, EPA will not sell those offered allowances).

Energy Efficiency and Renewable Energy

One of the goals of the Acid Rain Program is to promote pollution prevention through energy efficiency and renewable energy. The Conservation and Renewable Energy Reserve is a pool of 300,000 allowances set aside to award utilities that invest in efficiency and renewable energy. This report provides a list of the utilities that have been awarded bonus allowances from the Reserve, and the pollution they have avoided through their efficiency and renewable energy projects.

The Conservation and Renewable Energy Reserve

- EPA began accepting applications to the Reserve on July 1, 1993.
- On November 17, 1993, EPA announced the first six utilities to be awarded allowances from the Reserve, and on April 29, 1994, EPA announced the second group of awardees. The third group of allowance awardees will be announced in the fall of 1994.
- The following applicants have received bonus allowances from the Reserve.

Awardees	No. of Allowances
City of Austin	18
Centerior Energy (Cleveland Electric and Toledo Edison)	6
Connecticut Light & Power	173
Dayton Power & Light	4
ESI Energy (Florida Power and Light)	109
Minnesota Power	8

Current Publications

General

- *Do The Acid Rain SO₂ Regulations Apply to You?*
(EPA 430/R/94/002, February 1994)
- *The Acid Rain Program - It's Working*
(EPA 430/F/92/027, June 1993)
- *The Environmental Benefits of Reducing Acid Rain*
(EPA 430/F/92/026, June 1993)

Continuous Emissions Monitoring

- *Emissions Monitoring and Tracking: Assuring Reductions in Acid Rain*
(EPA 430/F/94/004, May 1994)
- *The Acid Rain Program CEM Certification Handbook: A Step by Step Guide*
(Ongoing)
- *The Acid Rain Program CEM Policy Guidance*
(Ongoing)

Allowance Trading System

- *The Allowance Tracking System: Accounting for SO₂ Allowances Under the Acid Rain Program*
(EPA 430/F/94/002, February 1994)
- *The Allowance Tracking System: An Introduction for Authorized Account Representatives*
(EPA 430/F/94/001, February 1994)



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Acid Rain Regulations

FR Pub. Date	Regulation
05/23/91	<i>Auctions, Direct Sales & IPPs Written Guarantees</i> 40 CFR Part 73
01/11/93	<i>General Provisions and Permits</i> 40 CFR Part 72
01/11/93	<i>Allowance System</i> 40 CFR Part 73
01/11/93	<i>Continuous Emissions Monitoring</i> 40 CFR Part 75
01/11/93	<i>Excess Emissions</i> 40 CFR Part 77
01/11/93	<i>Administrative Appeals</i> 40 CFR Part 78
03/23/93	<i>Allowance Allocations & Reserves</i> 40 CFR Part 73
09/24/93	<i>Opt-In Program for Combustion Sources (Proposed Rule)</i> 40 CFR Part 74
11/18/93	<i>Permits and Allowance System (Proposed Revisions)</i> 40 CFR Parts 72 & 73
03/22/94	<i>Nitrogen Oxides Emission Reduction Program</i> 40 CFR Part 76

