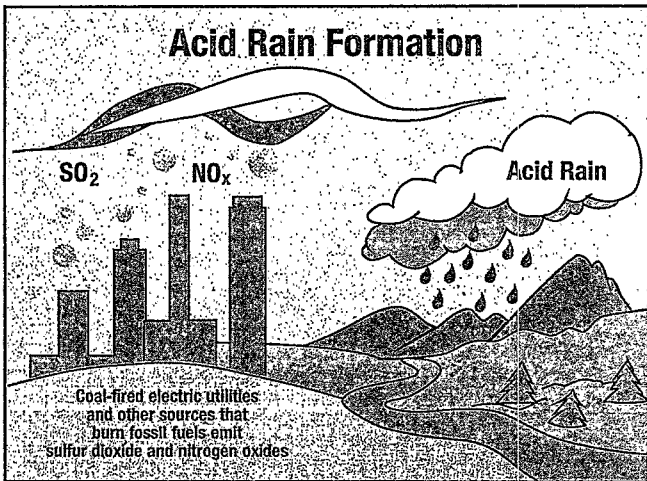




The Acid Rain Program— It's Working



Acid rain is caused when pollutants released from the burning of coal and other fossil fuels chemically react with other substances in the atmosphere to form acids. When these acids are carried down from the atmosphere in rain, fog, or snow, they can harm fish, damage high-altitude forests, and contribute to the deterioration of buildings and historical monuments. The pollutants that cause acid rain also have been known to impair visibility in many regions of the nation, including the scenic vistas of our national parks.

ACID  RAIN

P R O G R A M

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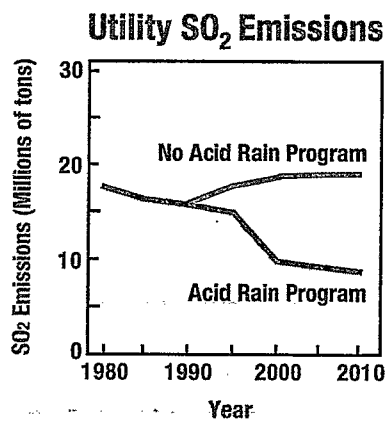
The Clean Air Act Amendments of 1990 call for major reductions in the pollutants that cause acid rain. The Amendments also establish a new approach to environmental management. This brochure answers some of the most commonly asked questions about the Acid Rain Program.



How Do the Clean Air Act Amendments Reduce Acid Rain?

The Clean Air Act Amendments require electric utilities to substantially reduce emissions of sulfur dioxide and nitrogen oxides, the primary pollutants that contribute to acid rain. Coal-burning electric power plants are the main source of sulfur dioxide emissions and a major source of nitrogen oxides emissions in the United States.

Over the next 15 years, utilities nationwide must cut their sulfur dioxide emissions in half from 1980 levels. The Clean Air Act Amendments also set a permanent ceiling on the total amount of sulfur dioxide that may be emitted nationwide. So even as our population grows and the demand for electric power increases, emissions will not increase. The law also requires most coal-burning utilities to install new burner technology to reduce nitrogen oxides emissions by about 30 to 50 percent.



The Acid Rain Program will result in a 10-million-ton reduction in SO₂ emissions from 1980 levels by the year 2010.

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Does EPA Mandate How Sulfur Dioxide Reductions Must Be Achieved?

No. Utilities have considerable flexibility in deciding how to reduce these emissions. To provide this flexibility, Congress set up an "allowance trading system." Starting in 1995, EPA will allocate a limited number of "allowances" to power plants. Each allowance permits a utility to emit 1 ton of sulfur dioxide during a specified year. By law, utilities may not emit more tons of sulfur dioxide than the allowances they hold. Because an average utility will be allocated half the number of allowances that it emitted in 1980, it will need to reduce sulfur dioxide emissions substantially.

Allowances may be bought, sold, or traded among utilities, industrial plants, or anyone else interested in purchasing them. As the following hypothetical example illustrates, the tradability of allowances offers utilities considerable flexibility in choosing the most cost-effective method to reduce sulfur dioxide emissions, thus offering potential for customer savings. The options listed in the box below are just a sampling of the many ways utilities can cut emissions under the law.

In 1995, Utility A receives 12,000 allowances from EPA, permitting it to emit only 12,000 tons of sulfur dioxide that year. Utility A, however, is currently emitting 20,000 tons of sulfur dioxide annually. To ensure compliance with the law, Utility A has several options it could pursue, including:

- Purchase 8,000 more allowances on the free market to allow the emissions not covered by its original allowance allocation. This would generally require another utility to reduce its emissions by 8,000 tons below its allocation.
- Install pollution control equipment to reduce emissions to 2,000 tons of sulfur dioxide; the extra 10,000 allowances Utility A holds could then be sold to help pay for the equipment.
- Use low-sulfur coal to reduce sulfur dioxide emissions to 12,000 tons or below.
- Implement conservation programs, such as energy efficient lighting and refrigeration, to cut back on electricity use among its customers. When utilities generate less electricity for their customers, their emissions decline.



Could Some Areas of the Country Experience an Increase in Pollution?

Given the substantial sulfur dioxide reductions required under the Clean Air Act Amendments, it is unlikely that emissions will increase in any locality. Even if a utility were to purchase many allowances, the Amendments require states to enforce strict emissions limits to protect public health, and these limits cannot be exceeded no matter how many allowances are held.



How Does EPA Know That the Reductions Are Really Taking Place?

Boilers in every power plant will have a "continuous emission monitoring system," much like a water meter, that will measure and record every ton of sulfur dioxide emitted. Utilities must keep very detailed records of these measurements and report them to EPA. In addition, EPA requires the plant to perform a series of tests of the monitoring system to ensure its accuracy prior to allowing utilities to operate the equipment. EPA also requires the plant to check the monitors daily and conduct accuracy tests at least once a year.



Does the Allowance Trading System Really "Sell" Pollution?

No. The new law calls for substantial reductions of pollutants currently released into our nation's air. The purpose of the allowance program is to enable utilities to reduce emissions where it is most cost-effective to do so. Utilities that are able to reduce their emissions below the limits set by EPA can sell or trade their "unused allowances" to utilities where other controls could be too costly. Such a sale would not increase pollution, but simply shift control requirements from one plant to another. Furthermore, since new plants built after 1995 will not be allocated any allowances by EPA, they will have to buy allowances in order to operate, further reducing pollution from existing plants. This also gives utilities a strong incentive to develop new methods for efficiently reducing emissions.



What Happens if a Utility Emits More Sulfur Dioxide Than It Is Allowed?

A utility is fined \$2,000 for each ton of sulfur dioxide it emits over its allowance allocation. So if Utility A emits 15,000 tons of sulfur dioxide while having only 12,000 allowances, it will pay a \$6 million fine for exceeding its allowance allocation. Moreover, the utility must reduce emissions the following year by the amount it exceeded its limit in the year of violation. In this case, Utility A would be allowed to emit only 9,000 tons of sulfur dioxide the year following the violation.



What Will Controlling Acid Rain Cost the Consumer?

Utility rates are expected to increase by only 0.5 to 1.2 percent on average. For consumers served by today's heavy emitters of sulfur dioxide, electricity rates could increase by as much as 10 to 15 percent. The market-based allowance trading system should save the American people about 25 to 50 percent over the same level of emission reduction without trading. This savings totals more than \$1 billion annually.



How Will Reducing Acid Rain Affect the Environment?

Americans will benefit from the Acid Rain Program in a number of ways. Lakes and streams affected by acid rain will be able to recover, restoring fish and other life. Visibility will improve, in the East by more than 30 percent, allowing for increased enjoyment of scenic vistas. The vitality of forests, particularly the red spruce forests that populate mountain ridges from Maine to Georgia, will be restored, and the Acid Rain Program will preserve our cultural heritage by protecting historical buildings and monuments.

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