



ENVIRONMENTAL DEFENSE FUND

finding the ways that work

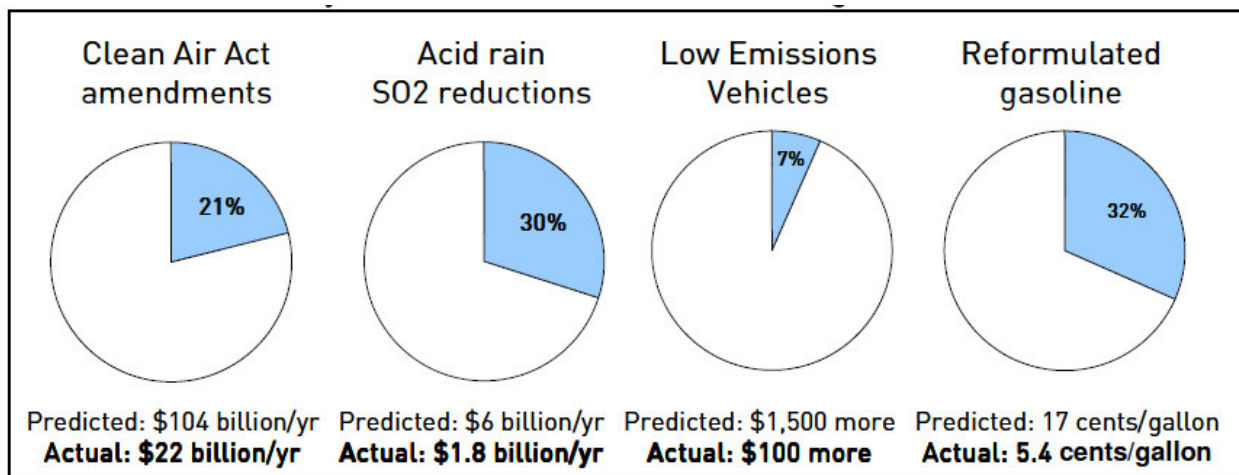
Air quality measures consistently cost less than predicted

In December 1970, the Clean Air Act became law. A triumph of bipartisanship, the statute has delivered cleaner, healthier air to millions of Americans. It has also proved to be one of the most cost-effective regulatory programs in American history. The U.S. Environmental Protection Agency (EPA) valued the total health benefits through 1990 at \$22.2 trillion and the total compliance costs over the same years at \$0.5 trillion, resulting in net monetary benefits of \$21.7 trillion. The Clean Air Act continues to deliver these benefits, supplemented by the considerable health and environmental gains from the Clean Air Act Amendments of 1990.

Dire predictions and cost-effective results

Each time EPA has considered new clean air standards, it has been challenged with claims that meeting the new standards would not be feasible, practical or affordable. Yet time after time, the reverse has proved true. Benefits have overwhelmed the costs, which have been consistently lower than predicted. (See the figure below and the table on the reverse side).

Actual vs. Projected Costs of Air Pollution Regulation in the U.S.



The cost of cleaning America's air has been consistently lower than projected. This figure shows the actual cost of air pollution regulation as a percentage of initial predicted costs.

Cap-and-trade is the best approach to reducing emissions

One of the most innovative aspects of the Clean Air Act is its cap-and-trade approach to reducing emissions of sulfur dioxide, a precursor to acid rain. Initial analyses of the program warned of high costs, but these fears were not realized. In fact, the program demonstrates that properly designed market-based approaches can reduce emissions ahead of schedule and at far lower cost than conventional command-and-control regulation. The cap-and-trade approach provides incentives to reduce emissions, leads to low-cost environmental results and turns pollution reductions into marketable assets. Since its inception, the program has achieved 100%

compliance in Phase I, reduced emissions at least 35% below 1990 levels and cost far less than projected.

Comparison of predicted costs of clean air programs with actual costs

Program	Predicted costs	Actual costs
Clean Air Act (CAA) amendments	1990: "The study we are releasing today estimates that the cost of the various proposed amendments . . . could be as high as \$104 billion per year." ^a	1995: Five years after implementation, EPA estimated that the CAA amendments cost \$22 billion per year. ^b
Acid rain	1990: The EPA estimated that Phase II costs would be \$6 billion per year. ^c 1990: The Edison Electric Institute estimated that SO ₂ reductions would cost the electric utility industry \$3.6-4.5 billion per year. ^e	2005: The Office of Management and Budget estimated that the annual cost of reducing SO ₂ is \$1.1-1.8 billion . ^d
Low emissions vehicles	1994: Automobile manufacturers estimated that low emission vehicles would cost \$1,500 more than comparable car models. ^f 1990: The California Air Resources Board estimated the average incremental cost of a low emissions vehicle to be \$170 . Industry estimates in California were \$788 . ^h	1995: One year after this estimate, Honda placed a Civic subcompact model on the market that emitted less than half of what was permitted under California law. This vehicle cost only \$100 more than comparable models. ^g 1998: The actual incremental cost of low emission vehicle technology was \$83 . ⁱ
Reformulated gasoline in California	1991: The California Air Resources Board predicted that reformulated gas would lead to a price increase of 12-17 cents per gallon. ^j	1998: The actual price differential was 5.4 cents per gallon. ^k

a Business Roundtable. "Clean Air Act Legislation Cost Evaluation." January 18, 1990.

b E.H. Pechan & Associates, Inc., contracted by EPA. "Clean Air Act Section 812 Prospective Assessment. Cost Analysis Draft Report." September, 1995.

c National Acid Precipitation Assessment Program. "Report to Congress: An Integrated Assessment." 2005. Available at: <http://www.al.noaa.gov/AQRS/reports/napareport05.pdf>.

d Ibid.

e Materials sent to editors and writers by the Edison Electric Institute describing the impact of the Clean Air Act Amendments on the electric utility industry. December 17, 1990.

f Sierra Research, Inc., "The Cost Effectiveness of Further Regulating Mobile Source Emissions." February 28, 1994.

g *The New York Times*, "Honda Meets a Strict Emission Rule." August 30, 1995.

h W. Harrington, R. Morgenstern, P. Nelson (Resources for the Future), "On the Accuracy of Regulatory Cost Estimates." January 1999. Citing Cackett, "The Cost of Emission Controls on Motor Vehicles and Fuels: Two Case Studies," presented at the 1998 Summer Symposium of the EPA Center on Airborne Organics, MIT Endicott House, Dedham, Mass. July 9-10, 1998.

i Ibid.

j Ibid.

k Ibid.