



Protecting Public Health and Growing the Economy

25 Years of the 1990 Clean Air Act Amendments

By Center for American Progress Energy and Environment Team November 16, 2015

Proposed by President George H.W. Bush in 1989, the Clean Air Act Amendments of 1990 substantially strengthened the Clean Air Act, or CAA—first passed in 1970—in order to address the toughest air pollution challenges of the day.¹ In the years since, the U.S. Environmental Protection Agency, or EPA, has worked systematically to implement the amendments by issuing rules and taking action to cut toxic air pollution, curb acid rain, reduce smog and soot, and phase out chemicals that threaten the planet's stratospheric ozone layer. Today, the Clean Air Act and its amendments stand as proof that smart environmental policy can protect public health and the environment while allowing industry the space to innovate and expand.

Public health and environmental successes

The CAA and subsequent amendments have been remarkably successful at achieving a range of environmental and public health improvements. Limits on pollutants have prevented respiratory illness, saved lives, and protected vital ecosystems. These benefits are ongoing and demonstrate the long-term positive impacts of smart pollution standards.

- The CAA's standards for fuels and engines have been tremendously successful in cleaning up the toxic emissions from onroad and nonroad vehicles and engines. Between 1990 and 2005, particulate matter emissions—the harmful dust and soot that can trigger respiratory problems and cause premature mortality—decreased from these mobile sources by approximately 27 percent.² Cars today are 90 percent cleaner than those from 1970 as a result of the 1970 act and the 1990 amendments.³
- Acid rain-causing pollutants such as sulfur dioxide, or SO_x, and nitrogen dioxide, or NO_x, have also dropped significantly as a result of the CAA amendments: According to the EPA, SO_x and NO_x emissions have decreased by 76 percent and 45 percent respectively since 1990.⁴

- The Clean Air Act has prevented 1.5 million tons of toxic air pollution from stationary sources per year since 1990, yielding tremendous benefits for communities and the environment.⁵ Mercury emissions, which endanger children’s development, dropped by about 75 percent between 1990 and 2008 due to CAA standards for significant sources of mercury emissions.⁶
- By acting upon commitments under the Montreal Protocol, the 1990 amendments helped prevent irreversible damage to the ozone layer. A stronger ozone layer has prevented and will continue to prevent millions of deaths from skin cancer between 1990 and 2165.⁷
- Even while population, vehicle miles, and gross domestic product, or GDP, have all increased, emissions of harmful pollutants have decreased significantly over the same period. Emissions from lead, NOx, and SOx have fallen by 80 percent, 51 percent, and 79 percent respectively.⁸

The original CAA and its amendments continue to produce a range of both environmental and public health benefits. Notably, they have substantially reduced mortality: A 2011 EPA study found that by 2020, the 1990 Amendments’ pollution reductions will prevent 230,000 early deaths annually.⁹

Economic benefits

The environmental, business, health, and economic enhancements that are produced by the CAA have yielded more than \$57 trillion in benefits since 1970.¹⁰ A 1999 analysis by the EPA found that the 1990 amendments’ benefits outweighed the costs by a four-to-one margin.¹¹ Since 1990, the CAA has reduced emissions of the most common air pollutants by 41 percent at the same time that the U.S. GDP increased by 64 percent.¹²

Since the CAA was implemented, a number of organizations and institutions have researched the impact that environmental regulations have on jobs. A 1998 analysis by Resources for the Future that examined the effects of environmental regulations on employment in heavily-polluting sectors found that increased expenditures for compliance with these standards “generally [do] *not* cause a significant change in industry-level employment.”¹³ A peer-reviewed study published in 2008 offered the following conclusions on environmental protection, or EP, measures:

Our major finding is that, contrary to conventional wisdom, EP, economic growth, and jobs creation are complementary and compatible: Investments in EP create jobs and displace jobs, but the net effect on employment is positive. Second, environment protection has grown rapidly to become a major sales-generating, job-creating industry—\$300 billion/year and 5 million jobs in 2003.¹⁴

In fact, there have been measured job increases as a result of the implementation of air quality standards. The CAA's standards for vehicle emissions, for example, spurred research and development within the automobile industry. The mobile source emissions control manufacturing industry, which currently employs about 65,000 people in the United States, is projected to grow to \$36 billion by 2020.¹⁵ Additionally, the regional NOx program spurred growth within the boilermaker workforce, which gained 6,700 jobs—or growth of 35 percent—due to pollution control installations between 1999 and 2001.¹⁶

By limiting harmful pollution, the 1990 Amendments have kept more Americans healthier, allowing for greater workforce productivity and yielding tremendous benefits for the American economy. A 2011 EPA study found that the costs of pollution control pale in comparison to the health and economic benefits of cleaner air; the benefits are 30 times greater than the costs.¹⁷

The United States has also become a leader in developing and manufacturing pollution control technologies. 2010 analysis by the International Trade Association found that air pollution control equipment generated \$18 billion in revenue in 2008.¹⁸ The EPA's Tier 3 standards are a component of the EPA's suite of vehicle emissions standards and will be implemented in 2017.¹⁹ They are designed to reduce sulfur pollution from gasoline, which will not only improve public health, but also create jobs, according to economic analysis from Navigant, a consulting firm.

The Navigant study estimates that the standards will create nearly 30,000 jobs in equipment installation, operation, and maintenance at refineries across the nation. Additionally, the health benefits of the Tier 3 rule are estimated to be between \$5.2 and \$5.9 billion per year by 2020. By 2030, these benefits will increase to over \$10 billion per year, far more than the estimated costs of \$1.5 billion per year.²⁰

The Clean Power Plan

Finalized in August, the EPA's Clean Power Plan, or CPP, established the first-ever carbon pollution standards for power plants. This landmark rule, authorized by the CAA, will reduce greenhouse gas emissions from the power sector and move the United States toward greater use of renewable energy.²¹

Some industry groups, utility companies, and politicians, however, are dredging up claims that carbon dioxide standards will cause outside burdens and harm Americans.²² The American Petroleum Institute, for example, argues that the CPP “imposes unnecessary costs on states and U.S. consumers.”²³ Murray Energy Corporation, the American Public Power Association, the National Association of Manufacturers, and several other fossil fuel interest groups are suing the EPA over the CPP.²⁴

Most states, however, have already begun planning for compliance with the CPP, and 74 percent of Americans support regulating carbon dioxide, or CO₂, as a pollutant.²⁵ The EPA estimates that the CPP will yield public health and climate benefits ranging from \$34 billion to \$54 billion per year by 2030—outweighing the costs between four and six times.²⁶

The CAA has shown time and again that economic growth is compatible with pollution reductions; there is no evidence to suggest that will not be the case with the Clean Power Plan.

Endnotes

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