PROTECTING HUMAN HEALTH
from the Nation’s Largest Source of Carbon Pollution

Building from Long-Standing U.S. Clean Air Act Programs

Our nation’s production and use of energy has an array of impacts on human health and the environment. The combustion of fossil fuels by U.S. power plants, alone, results in the largest volume of U.S. sulfur dioxide, mercury, and carbon dioxide from any source. These emissions, in turn, contribute to serious public health threats, including deadly particulates, neurotoxic exposures in children, and the climate crisis. Progress in addressing these adverse impacts has required the establishment of far-reaching emission limits on sulfur dioxide and mercury. Protecting public health and the environment warrants taking similar action to address the massive volume of carbon pollution from power plants, which are currently subject to no national limits on the amount of carbon dioxide they emit.
The U.S. Congress has long recognized that the suite of air pollutants from fossil fuel power plants imposes a heavy burden on public health and requires corrective action. The U.S. Clean Air Act explicitly calls for advances in solutions “with priority on those pollutants which pose a significant risk to human health and the environment” and that prevent or reduce “the multiple air pollutants, including sulfur oxides, nitrogen oxides, heavy metals, PM₁₀ (particulate matter), carbon monoxide, and carbon dioxide, from stationary sources, including fossil fuel power plants.” Several Clean Air Act programs have been designed and carried out to address the multiple air pollutant impacts from fossil fuel power plants. The U.S. Environmental Protection Agency (EPA), through its Clean Power Plan, is currently developing the first protections to address power plants’ carbon dioxide emissions.

While Congress fully understood that the emissions discharges from fossil fuel power plants have serious impacts on air quality, it also recognized that the regulation of their emissions under the Clean Air Act affects energy. The term “energy” appears dozens of times in the Clean Air Act authorities addressing the establishment of emission standards, as Congress repeatedly instructed EPA to consider energy impacts in carrying out its overarching responsibilities to protect public health and the environment from air pollution.

The Clean Power Plan specifically relies on long-standing authorities under Section 111 of the Clean Air Act to address the carbon dioxide emissions from existing fossil fuel power plants and, as interwoven into similar provisions throughout the fabric of the statute, Section 111 calls for EPA to consider “energy requirements.” The Clean Air Act does not, as some have claimed, preclude clean air protections that have energy consequences—a proposition that, if true, would have foreclosed significant advances in public health that have saved hundreds of thousands of lives and avoided millions of serious illnesses. Rather, the statute directs EPA to consider the energy implications of its clean air programs.

More broadly, Section 111 delegates to EPA the authority to establish “standards of performance” for new and existing power plants, which reflect: “the degree of emission limitation achievable through the application of the best system of emission reduction…taking into account the cost of achieving such reduction and any non-air quality health and environmental impact and energy requirements…the Administrator determines has been adequately demonstrated.” The Clean Power Plan relies on this expansive and long-standing grant of authority to address carbon pollution from fossil fuel power plants in the same way that the Clean Air Act has addressed other major pollutants from the power sector. That approach
is, in short, forging cost- and energy-conscious policies that achieve rigorous emission reductions.

**EPA’s Clean Power Plan**

The Clean Power Plan establishes a statewide emissions performance standard that is calculated from available, cost-effective measures already widely in use. The standard is derived from four building blocks: heat rate improvements, shifts in utilization from coal to gas, deployment of renewable energy, and demand-side energy efficiency. EPA’s foundational approach has parallels in many other Clean Air Act programs for the power sector that have been implemented by Republican and Democratic administrations alike and that have been upheld by the courts.

Flexibility is fundamentally integrated in the framework of the Clean Power Plan. Like other major Clean Air Act programs for the power sector, EPA provides broad latitude for the states to achieve the performance-based emissions standards. The performance-based targets enable states and power companies to deploy a wide array of solutions in meeting the standards. Further, the statewide standards afford broad latitude in crafting emissions reduction systems that efficiently and equitably allocate pollution reductions.

There are prominent antecedents to this approach in addressing power plant emissions under the Clean Air Act. For example, the Cross State Air Pollution Rule, upheld by the U.S. Supreme Court in April, similarly applied flexible statewide performance goals for the power sector based on available, cost-effective mitigation, including installation of pollution control devices, fuel switching, and “increased dispatch of lower-emitting generation.” A predecessor to that clean air program, a rule known as the “NOx SIP Call” that limited ozone-forming pollution during the summer season, likewise established statewide budgets that
were based on power sector modeling of a flexible emissions trading program.

EPA, states, and power companies have also long relied on renewable energy and energy efficiency to restore healthy air, protect scenic vistas in national parks, and meet statewide emissions performance standards under Clean Air Act programs. The Western Governors’ Association recommended that EPA allow western states to include renewable energy and energy efficiency as part of their plans to protect the scenic vistas in national parks from power plant emissions. EPA formally incorporated this pathway into the Regional Haze Program under the Clean Air Act. EPA likewise charted a path for states to use renewable energy and energy efficiency to help achieve reductions in the ozone-forming oxides of nitrogen from eastern power plants.

Under the administration of President George W. Bush, EPA provided a roadmap to foster expansive state reliance on renewable energy and demand-side energy efficiency in state implementation plans to achieve the national health-based air quality standards. Texas incorporated residential building codes in its state air quality plan developed under the Clean Air Act to cut the nitrogen oxides contributing to unhealthy ozone. Maryland similarly incorporated a wind power mandate into its state implementation plan to mitigate nitrogen oxides emissions from the power sector. And the City of Shreveport, LA, installed energy-saving equipment in municipal buildings to mitigate nitrogen oxides and reduce ozone pollution to comply with Clean Air Act requirements to achieve healthy air.

In short, virtually every major federal emissions reduction program for the power sector adopted over the past decade, across Republican and Democratic administrations alike, has recognized renewable energy and energy efficiency as an emission reduction strategy. This includes the eastern program to reduce summertime nitrogen oxides under the Clinton Administration, year-round cuts in sulfur dioxide and nitrogen oxides from eastern power plants under George W. Bush’s Clean Air Interstate Rule, and the Cross State Air Pollution Rule recently affirmed by the Supreme Court.

Like these well-known Clean Air Act emissions control programs for the power sector under the Clinton, Bush, and Obama administrations, the Clean Power Plan can be carried out directly by the states through flexible source specific emissions requirements. States can assign mass-based carbon limits or carbon intensity standards to the power plants subject to regulation under the proposed Clean Power Plan, and then allow emissions averaging across sources to achieve the targets. In a recent white paper, Carbon Reduction Credit Program, Western Resource Advocates (www.westernresourceadvocates.org) describes the architecture of a state-administered source-based compliance program under the Clean Power Plan based on flexible carbon intensity standards. EPA provided for a similar source-based emissions averaging program in its state standards for large municipal waste combustors adopted in 1995 under Section 111 of the Clean Air Act.

Race against Time
We are in a race against time to reduce carbon pollution. EPA has a duty to protect human health and the environment from the extensive carbon emissions discharged by fossil fuel power plants, the largest source of carbon pollution in our nation and one of the largest in the world. Under the Clean Air Act, EPA has a broad delegation of authority, and a clear obligation to carry out this responsibility deploying the “best system of emission reduction.” EPA is moving forward consistent with other proven clean air protections, while carefully considering “energy requirements” and costs. By utilizing statewide emissions performance standards for power plants similar to other major power sector Clean Air Act programs, states have broad flexibility in achieving the emissions reductions. And states, in turn, can carry out their responsibilities through source-based emissions standards, such as the source-based emissions averaging program established under Section 111 for municipal waste combustors. It is through these time-tested solutions that our nation can establish limitations on the massive carbon emissions from the nation’s power plants and, finally, address one of the most serious adverse impacts that the production and use of energy has on human health and the environment.