STATEMENT OF REGINA A. MCCARTHY
ASSISTANT ADMINISTRATOR
OFFICE OF AIR AND RADIATION
U.S. ENVIRONMENTAL PROTECTION AGENCY
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U.S. SENATE
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Chairman Boxer, Subcommittee Chairman Carper, Ranking Member Inhofe, Subcommittee Ranking Member Vitter, and members of the Committee, thank you for inviting me to testify today to update you on EPA's efforts to mitigate the impacts of emissions from power plants. As you will recall, I last appeared before this committee to discuss these issues in July 2009, and since that time I am pleased to report that EPA has made significant progress on our regulatory efforts to address the public health and environmental effects of air pollutants from power plants. In my testimony I will discuss the status of our work on these efforts, and will provide the committee with some information on S. 2995, the Clean Air Act Amendments of 2010.

From the outset of this administration, beginning with the American Recovery and Reinvestment Act, President Obama has made providing clean energy for Americans a top priority. Not only is this enterprise essential to protecting public health and the environment, but it also serves as the cornerstone of revitalizing the economy, spurring innovation and creating new 21st century jobs. That is why your leadership on this issue, Senator Carper, and that of the cosponsors of S. 2995 and of this committee is especially important.

As EPA continues the air pollution rulemakings that reflect our commitment to protecting public health and the environment and to heeding our legal obligations and as you, Senator Carper, and your colleagues work to advance your legislation, I believe that our respective efforts can be mutually reinforcing. They not only ensure the pollution reductions needed, but support the President's efforts to clean up our energy supply in a way that is consistent with economic growth.

Need to Protect Public Health and the Environment

Every day, the emissions of sulfur dioxide (SO_2), oxides of nitrogen (NO_x), and mercury from power plants threaten the health and the quality of life for millions of Americans. Power plant emissions account for over half of total U.S. SO_2 emissions, about 20% of NO_x emissions, and just under half the airborne mercury emissions.

Emissions of SO_2 and NO_x contribute to levels of fine particles ($PM_{2.5}$) in the atmosphere; NO_x also contributes to the formation of ground-level ozone. The health effects of exposure to elevated levels of fine particles and ozone include premature death, more asthma symptoms in those already suffering from that disease, and respiratory and cardiovascular diseases that are often serious enough to require hospitalization. Emissions of mercury also undergo transformation in the environment, forming methylmercury which builds up in fish, and, in turn, in people and animals who eat mercury-contaminated fish. Methylmercury exposure in the womb can affect children's cognitive thinking, memory, attention, language, and fine motor and visual-spatial skills.

Although current emissions levels of these pollutants continue to pose a danger for public health and the environment, the past 30 years have seen substantial progress in lowering emissions from power plants. In 1980 U.S. power plants emitted 17.3 million tons of SO_2. In 1990, the year Congress passed the Clean Air Act Amendments that included the Acid Rain Program, power plants still emitted 15.7 million tons of SO_2 and 6.7 million tons of NO_x. By 2000 power plant emissions had dropped to 11.2 million tons of SO_2 and 5.1 million tons of NO_x. By 2009, preliminary data show that power plants emitted just 5.75 million tons of SO_2 and 2 million tons of NO_x. The Acid Rain Program was – and is – not just protecting our lakes and streams from acid rain, but also protecting millions of Americans and Canadians from the harmful effects of fine particles. One peer-reviewed study found that the benefits of the power plan reductions from acid rain program outweigh the costs by more than 40-to-1.[1]

[1] Chestnut and Mills, 2005, A fresh look at the costs and benefits of the U.S. Acid Rain Program, Journal of Environmental Management, vol. 77(3):252-266

This kind of progress makes me confident that renewed efforts to bring these pollutants down to the levels needed to protect against premature deaths, childhood asthma attacks, and acid rain can succeed. There is work yet to be done: although all coal-fired power plants in the U.S. now control particulate matter, and many do control mercury, SO_2 and/or NO_x, many are still operating without advanced controls for SO_2, NO_x, or air toxics. EPA and the Harvard School of Public Health have estimated that a coal-fired power plant operating without these controls results in premature deaths and illnesses.

As you heard from EPA Administrator Jackson at last week's hearing before this committee on EPA's proposed 2011 budget, we have not yet completed our review of S. 2995. Fortunately, last summer my office conducted an analysis for Senator Carper of several different emission reduction scenarios, some of which were very similar to emission limits in S. 2995. In that analysis, which is available on EPA's website[2], we analyzed emissions, electricity prices, and costs, and estimated likely health benefits. Based on that analysis, and our experience modeling similar emission reduction scenarios, it appears that S. 2995 would likely result in tens of thousands of lives saved and as much as hundreds of billions in monetized benefits each year, especially when compared to a base case without major new regulation. These benefits are significantly greater than the estimated costs of implementing the reductions required by the scenarios.

Clean Air and the Economy

History clearly demonstrates that the economy can grow while we clean up the air. Since 1980, overall pollution emissions have been reduced by 54%. Meanwhile, VMT, energy use, and population growth have grown steeply and U.S. GDP, adjusted for inflation, has increased 126 percent. The benefits of reducing air pollution are not academic; they have a real effect on how we live and what we spend our money on. Less air pollution from power plants means we can spend less on health care for things like asthma attacks, or hospitalizations and emergency room visits for cardiac or respiratory illnesses. It can mean more days at work and fewer employee sick days. Reducing air pollution from power plants can mean we will be able to enjoy more

[2] www.epa.gov/airmarkets/progsregs/cair/docs/CABriefing.ppt

sweeping vistas at national parks like Great Smoky Mountains National Park, or to eat freshwater fish from a New England lake with less concern for possible mercury contamination.

A Congressionally-mandated 1999 EPA study, which went through extensive peer review, found that for all Clean Air Act programs combined, the benefits from 1990 to 2010 would outweigh the costs by 4-to-1. According to OMB's 2009 "Thompson Report" summarizing the annual costs and benefits of federal regulations, the benefit/cost ratio for EPA air rules between 1998 and 2008 was better than for any other government programs.

Like you, I know that air pollution is not the only thing affecting American families. Jobs are hard to come by, businesses large and small are struggling to get the credit they need, and for many people the economic future looks dimmer than the past. In fact, some people are concerned that the U.S. cannot afford to make the investments we need to clean up our air, or that now is the wrong time to make these investments, or that making these investments will hurt our ability to compete in the global economy.

President Obama, Administrator Lisa Jackson and I disagree with that thinking. Making investments in our existing energy sources, updating them to create a clean and efficient energy infrastructure, and making investments that create jobs here in America, all while reducing the number of people who get sick and the resulting costs to our economy, are, in fact, essential to competing in the global economy.

EPA's Plans

As you know, both the Clean Air Act and recent rulings by the District of Columbia Circuit Court of Appeals require EPA to complete a series of rulemakings to reduce air pollution from power plants. My testimony here last summer made it clear that EPA plans to take smart and effective actions to do this.

EPA will soon propose a rule to replace the Clean Air Interstate Rule (CAIR). This rule will reduce interstate transport of SO_2 and NO_x emissions in the eastern half of the U.S. to help states meet the current health-based air quality standards for fine particles and ozone. This keeps us on

target to meet the two-year schedule we informed the court we would be following to replace CAIR following the D.C. Circuit's remand. Working within the framework of the 2008 court decision, we are developing a new approach to reduce regional interstate transport of these long-distance pollutants while guaranteeing that each downwind non-attainment and maintenance area is getting the reductions it is entitled to under the law. Past analyses show that benefits of reducing SO_2 and NO_x emissions from power plants in the eastern United States far exceed the costs. In addition to these benefits, we anticipate that many of the emission control technologies installed will also help sources meet their maximum achievable control technology (MACT) air toxics requirements.

Similarly, following action by the same court on the Clean Air Mercury Rule (CAMR) as well as our legal obligations, EPA is developing a rule establishing §112(d) MACT standards for toxic air emissions from power plants, including mercury and acid gases. As you know, the MACT program requires us to set our standards for existing sources at a stringency level reflecting the reductions achieved by the top performing 12% of sources.

When I testified in front of you last summer, I was joined on the panel by John Stephenson, Director of Natural Resources and the Environment at GAO, who testified about their analysis of mercury control technology in the power sector. That GAO report, now final, states that "commercial deployments and 50 DOE and industry tests of sorbent injection systems have achieved, on average, 90 percent reductions in mercury emissions."[3] We are still gathering the information we need to determine what the level of our MACT standard will be; we believe that some coal-fired power plant boilers have already reduced their mercury emissions by 90%. Some have been able to make even larger reductions.

I have committed to you that I will follow the data EPA is now collecting when setting the utility MACT standard; that, after all, is what the law requires. Once the rule is finalized, the Clean Air Act requires MACT controls be installed on existing sources within three years, with the possibility of a one-year extension for specific sources under some limited circumstances. New

[3] GAO, 2009. Mercury Control Technologies at Coal-Fired Power Plants Have Achieved Substantial Emissions Reductions GAO 10-47

sources must meet the standards when they begin operations. EPA intends to propose these standards for both new and existing coal- and oil-fired power plants by March 2011.

Since I testified before this subcommittee last year, we have revised the national ambient air quality standards (NAAQS) for nitrogen oxides, proposed to revise our SO_2 NAAQS, and proposed to strengthen the ozone NAAQS. As the law requires, EPA's NAAQS decisions are based on sound science and our obligation to protect public health. We anticipate promulgating a final SO_2 NAAQS by June and a final ozone NAAQS by August. The States are required through their state implementation plans or SIPs to meet the new NAAQS, and address interstate transport of pollution that contributes to downwind nonattainment or maintenance areas for these standards. On top of any federal requirements, these SIPs could well require additional emissions reductions from power plants over the next decade.

Closing

I am confident that whether it is through legislation like S. 2995 or the Clean Air Act regulations that EPA is developing, reductions in power plant pollution will drive smart investments in pollution control and energy efficiency, as well as in innovative generation technologies, all of which will pay back the American people in jobs, economic growth, better health, and environmental protection for years to come.

One of my top priorities at EPA is to work with you, with the power industry, with the states, with community groups and environmental groups, and with the full range of experts from government, business, and universities to find the right path forward in crafting the laws and regulations needed to protect human health and the environment. In closing, I would like to thank Senator Carper and other members of the committee for your strong leadership on these issues over the years. I am confident that we can make great strides to meet our shared environmental and economic goals.

Thank you. I look forward to answering your questions.