Opening Statement of Regina McCarthy
Assistant Administrator for Air and Radiation
U.S. Environmental Protection Agency

Committee on Science. Space, and Technology
U.S. House of Representatives

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Written Statement

Chairman Hall, Ranking Member Johnson, and members of the committee, I appreciate the opportunity to appear before you today to testify on the Cross-State Air Pollution Rule.

## THE CROSS-STATE AIR POLLUTION RULE

On July 6, 2011, Administrator Jackson signed the final Cross-State Air Pollution Rule (previously known as the Transport Rule). This rule cuts power plant pollution from states in the eastern half of the country that contribute to harmful smog and soot-forming pollution.

In a single year (2014), the Cross-State Air Pollution Rule is projected to produce net benefits valued at $120 billion to $280 billion and to avoid:[1]

- Up to 34,000 premature deaths
- 15,000 heart attacks
- 400,000 cases of aggravated asthma
- 19,000 cases of acute bronchitis
- 19,000 hospital and emergency room visits.
- Over 1.8 million days when people miss work or school due to respiratory illness and other diseases caused or exacerbated by air pollution

The Cross-State Air Pollution Rule will save lives, prevent illness, and protect American communities by cutting power plant pollution that hurts air quality in downwind states. By 2014, the rule and other state and EPA actions will reduce sulfur dioxide (SO2) emissions by 73 percent and nitrogen oxides emissions by 54 percent from 2005 levels.[2] The rule will is based on the need to meet the 1997 ozone and 2006 fine particle air quality standards and implements the Clean Air Act's "good neighbor" provision to cut pollution. By reducing air pollution regionally, the rule makes it easier for communities to meet Clean Air Act goals.

[1] EPA final Cross-State Air Pollution Rule Table VIII.C-1 Estimated Annual Reductions in Incidences of Health Effects Based on 2014 Modeling. http://www.epa.gov/crossstaterule/actions.html
[2] Id.

The Cross-State Air Pollution Rule is achievable, cost-effective and flexible because it uses proven market-based compliance mechanisms to keep costs low, encourages technological innovation, and allows the power sector to transition to cleaner electricity generation. The rule's market-based approach, gives companies flexibility in developing compliance strategies; it does not dictate a specific technology for any particular company or power plant.

Many U.S. power plants have already invested in proven, readily available pollution technologies. This rule will provide badly needed regulatory certainty that will enable investments Just last week, a spokesperson for Exelon, one of the largest utilities in the United States, noted that "Electricity generators have known the rule was coming for years, and many have already made plans to comply with it, so timely implementation will level the playing field for power plants that are already controlling these emissions by requiring others to do so."[3]

The Cross-State Air Pollution Rule will improve air quality in thousands of counties throughout the eastern, central, and southern U.S. – counties that are home to over 75% of the U.S. population including 57 million children under the age of 18. This rule will help states achieve the health-based ambient air quality standards for ozone and fine particles, more commonly called smog and soot. After full implementation of this rule, the Houston-Galveston metropolitan area is the only area affected by this rule that we project will need additional local measures to meet the 1997 ozone standards.

The Cross-State Air Pollution Rule is affordable, technologically achievable, and will dramatically improve public health.

## BACKGROUND

Effective technologies for controlling SO2 and NOx emissions from power plants have been available for years. Many power plants have installed modern pollution control equipment to limit NOx and SO2 emissions. Yet, a substantial portion of the aging coal fleet has not.[4] Although SO2 scrubbers have been available for more than 35 years, well over a third of the coal-fired electrical utility capacity has yet to apply them .[5] Many of those units were built before the Clean Air Act was enacted in 1970.

We are not the first Administration to recognize the need to clean up power plants and to issue rules to address that need. In fact, since 1989, when President

[3] Exelon spokesman Paul Elsberg, Argus Air Daily, Volume 18, 173, September 2011

[4] NEEDS v.4.10 PTox Database
http://www.epa.gov/airmarkets/progsregs/epa-ipm/docs/NEEDSv410_PTox.xlsx

[5] Id.

George H.W. Bush proposed the Clean Air Act Amendments of 1990, power plant clean up has been the continuous policy of the U.S. government.

President George W. Bush recognized the need to further clean up the power sector, championing legislation such as the Clear Skies Act, and rules such as the Clean Air Interstate Rule (CAIR), to address these public health issues. Explaining the need to reduce power plant emissions, my predecessor testified to Congress that the Bush Administration plan would "dramatically reduc[e] fine particle pollution caused by SO2 and NOx emissions," and noted that "Of the many air pollutants regulated by EPA, fine particle pollution is perhaps the greatest threat to public health."[6]

In 2005, the Bush Administration promulgated CAIR to limit SO2 and NOx emissions from power plants in the eastern half of the country to help areas attain the ozone and fine particle standards. The U.S. Court of Appeals for the District of Columbia Circuit held that CAIR did not meet Clean Air Act requirements and remanded the rule to EPA for revision. CAIR has been in effect for almost 7 years, including the last few years while EPA was developing the Cross-State Air Pollution Rule to replace it, in compliance with the Court's decision. EPA's replacement rule ends power plants' CAIR emission reduction obligations when CSAPR's reduction obligations start.

## TEXAS AND THE CROSS-STATE AIR POLLUTION RULE

The Committee has asked me to discuss concerns raised by Texas and Texas stakeholders regarding CSAPR. Texas is affected by CSAPR in two ways: It benefits from reduced air pollution emissions from plants in Texas and other states, and its power plants must limit emissions of SO2 and NOx.

Pollution reductions by power plants in Texas and other states will provide significant benefit to Texans – preventing an estimated 670-1700 premature deaths per year starting in 2014, and will assist Houston-Galveston in its effort to bring its air quality to attainment of the ozone standard. Reductions from power plants outside Texas will help reduce the emission reduction obligations that might otherwise need to be placed on Texas businesses.

Under CSAPR, Texas power plants are required to limit summertime NOx emissions to reduce ozone, and to limit annual NOx and SO2 emissions to reduce fine particle pollution. The requirements for annual emission reductions are similar to the ones that Texas power plants have faced since the 2005 promulgation of the Clean Air Interstate Rule, which will be replaced by CSAPR in 2012. Without CSAPR, and in the absence of CAIR, EPA projected that Texas power plants would contribute significantly to air pollution in downwind states, tribes and local communities, in some cases forcing

[6] Testimony of Jeffrey Holmstead, Assistant Administrator, U.S. Environmental Protection Agency, Before the Energy and Air Quality Subcommittee, Energy and Commerce Committee, U.S. House of Representatives (May 26, 2005).

more costly local reductions, and in all cases unfairly imposing tremendous health costs on thousands of American families..

The claim that the inclusion of Texas in the Cross-State Air Pollution Rule is "out of thin air" is false. In July of 2010, EPA proposed to include Texas in the summertime NOx program and requested comment on whether to include Texas in the annual NOx and SO2 program. Texas and its utilities provided comments during the rulemaking process. In particular, the Texas Council on Environmental Quality (TCEQ) provided information on high sulfur coal usage by the Texas power industry that was different than what EPA had relied on in the proposed rule. Based on this new information, EPA estimated that Texas would have higher SO2 emissions in 2012 than what EPA had projected as part of the analysis supporting the proposed rule. With respect to including Texas in both the summertime and annual programs, we have fully met our notice-and-comment obligations under the Clean Air Act and the Administrative Procedure Act.

EPA used a two-step process to set limits on upwind states' emissions. First, EPA determined whether a state's power plant emissions were projected to contribute significantly to air quality problems in a downwind area (making it hard for a downwind area to attain or stay in attainment with ambient air quality standards). Second, EPA determined the amount of emission reductions that power plants in upwind states could make without exceeding a cost threshold. We followed both steps with Texas. The record demonstrated that Texas power plants contributed to air quality problems in downwind states, and that they could reduce their pollution at a reasonable cost. Based on the factual record, Texas power plants have a legal responsibility under the Clean Air Act to take action to address the air quality problems they create downwind.

Relying on similar analysis, the Bush administration included Texas in the CAIR annual SO2 and NOx control programs promulgated in 2005. It should thus come as no surprise that EPA reached the same conclusion after updating its analysis in 2010 and 2011. In fact, EPA's modeling projects that Texas power plants would actually increase the amount of pollution they send to their downwind neighbors if the Cross State Air Pollution Rule excluded Texas**.**

EPA's analysis also demonstrated that Texas power plants have more than one cost-effective option to meet their obligations. EPA and the Office of Management and Budget had several meetings or calls with Texas stakeholders during the development of CSAPR. Based on their concerns, we ran an additional sensitivity analysis regarding options for Texas power plants to meet their obligations starting in 2012. EPA modeling shows that Texas can comply with the requirements of this rule without threatening electricity reliability or the continued operation of coal-burning units, including those power plants that burn lignite coal from local mining operations (mine mouth coal plants). That analysis shows that, if the state and its utilities so choose, Texas power plants can meet this rule without jeopardizing electricity system reliability or altering current use of lignite. Like other states covered by this rule, Texas has the opportunity (and is encouraged by EPA) to replace EPA's allowance allocation approach with its

own preferred approach as soon as 2013, the second year of the program, by submitting its own State Implementation Plan (SIP). Texas took advantage of this opportunity under CAIR, and EPA has developed a streamlined process to expedite the application and approval of these SIPs under CSAPR.

CSAPR's emission reductions come in two phases, one starting in 2012 and deeper reduction starting in 2014 for some states.[7] In part, this was to ensure adequate time for cost-effective compliance. The 2012 requirements were designed to take advantage of existing pollution control technologies and strategies and not to require the installation of additional SO2 control technology. The 2014 requirements, however, are expected to lead to installation of additional control technologies. For all power plants in affected states, not just Texas, the rule allows adequate time for compliance; especially since the industry has known for years that additional requirements were coming. Industry has moved rapidly to comply with past requirements. For example, they installed an average of 20 gigawatts (GW) of scrubbers each year between 2008 and 2010. They also added 150 GW of new generating capacity between 2001 and 2003.[8]

After CSAPR was finalized, a number of Texas stakeholders raised a variety of concerns related to the rule. We are taking these claims very seriously. We do not want the lights, or the air conditioning, to go out in Texas (or anywhere else) as a result of our rules. We are investigating these claims, meeting with interested stakeholders as necessary to obtain further information, and will decide whether additional action is necessary and appropriate to address reliability or other issues in Texas. Based on technical information companies have recently provided, we are initiating a process to increase the emissions "budget" for Texas by tens of thousands of additional tons, reducing the amount of emissions that the state is required to cut.. The Administrator has also made clear that EPA has not ruled out any potential solution to the concerns being raised, should the flexibility and choice of compliance strategies built into the rule not prove adequate to meeting those concerns.

## THE CLEAN AIR ACT

The Cross-State Air Pollution Rule is a continuation of the 40-year Clean Air Act success story. For 40 years, the nation's Clean Air Act has made steady progress in reducing the threats posed by pollution and allowing us all to breathe easier. In the last year alone, programs implemented pursuant to the Clean Air Act Amendments of 1990 are estimated to have reduced premature mortality risks equivalent to saving over 160,000 lives; spared Americans more than 100,000 hospital visits; and prevented

[7] Texas is a group 2 state and not subject to the lowered SO2 budget in 2014. Their 2012/2014 budgets are the same.

[8] NEEDS v.4.10 PTox Database
http://www.epa.gov/airmarkets/progsregs/epa-ipm/docs/NEEDSv410_PTox.xlsx

millions of cases of respiratory problems, including bronchitis and asthma.[9] They also enhanced productivity by preventing 13 million lost workdays; and kept kids healthy and in school, avoiding 3.2 million lost school days due to respiratory illness and other diseases caused or exacerbated by air pollution.[10]

However, few of the emission control standards that gave us these huge gains in public health were uncontroversial at the time they were developed and promulgated. Most major rules have been adopted amidst claims that that they would be bad for the economy and bad for employment.

Some may find it surprising that the Clean Air Act also has been a good economic investment for our country. In contrast to doomsday predictions, history has shown, again and again, that we can clean up pollution, create jobs, and grow our economy all at the same time. Over that same 40 years since the Act was passed, the Gross Domestic Product of the United States grew by more than 200 percent.[11] In fact, some economic analysis suggests that the economy is billions of dollars larger today than it would have been without the Clean Air Act.[12]

Some would have us believe that "job-killing" describes EPA's regulations. It is misleading to say that enforcement of the Clean Air Act is bad for the economy and employment. It isn't. Families should never have to choose between a job and healthy air. They are entitled to both.

Studies led by Harvard economist Dale Jorgenson in 2001 to 2002 found that implementing the Clean Air Act actually increased the size of the US economy because of lower demand for health care and a healthier, more productive workforce.[13] By 2030 the Clean Air Act will have prevented 3.3 million work days lost and avoided the cost of 20,000 hospitalizations every year, based on recent EPA estimates.[14] A study that examined four regulated industries (pulp and paper, refining, iron and steel, and plastic) concluded that, "We find that increased environmental spending generally does not cause a significant change in employment."[15]

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[9] USEPA (2011). *The Benefits and Costs of the Clean Air Act from 1990 to 2020*. Final Report. Prepared by the USEPA Office of Air and Radiation. February 2011. Table 5-6. This study is the third in a series of studies originally mandated by Congress in the Clean Air Act Amendments of 1990. It received extensive peer review and input from the Advisory Council on Clean Air Compliance Analysis, an independent panel of distinguished economists, scientists and public health experts.

[10] Ibid.

[11] Bureau of Economic Analysis, National Economic Accounts, "Table 1.1.5. Gross Domestic Product," http://bea.gov/national/index.htm#gdp

[12] Dale W. Jorgenson Associates (2002a). *An Economic Analysis of the Benefits and Costs of the Clean Air Act 1970-1990. Revised Report of Results and Findings*. Prepared for EPA. http://yosemite.epa.gov/ee/eerm.nsf/vwAN/EE-0565-01.pdf/$file/EE-0565-01.pdf.

[13] Jorgenson (2002a)

[14] Jorgenson (2002a)

[15] Morgenstern, R. D., W. A. Pizer, and J. S. Shih. 2002. "Jobs versus the Environment: An Industry-Level Perspective." *Journal of Environmental Economics and Management* 43(3):412-436.

The EPA's updated public health safeguards under the Clean Air Act will encourage investments in labor-intensive upgrades that can put current unemployed or under-employed Americans back to work. Environmental spending creates jobs in engineering, manufacturing, construction, materials, operation and maintenance. For example, EPA vehicle emissions standards directly sparked the development and application of a huge range of automotive technologies that are now found throughout the global automobile market. The vehicle emissions control industry employs approximately 65,000 Americans with domestic annual sales of $26 billion.[16] Likewise, in 2008, the United States' environmental technologies and services industry employed 1.7 million workers generated approximately $300 billion in revenues and led to exports of $44 billion of goods and services[17], larger than exports of sectors such as plastics and rubber products.[18] The size of the world market for environmental goods and services is comparable to the aerospace and pharmaceutical industries and presents important opportunities for U.S. industry.[19]

Jobs also come from building and installing pollution control equipment. For example, the U.S. boilermaker work force grew by approximately 35 percent, or 6,700 boilermakers, between 1999 and 2001 during the installation of controls to comply with EPA's regional nitrogen oxide reduction program.[20] Over the past seven years, the Institute for Clean Air Companies (ICAC) estimates that implementation of just one rule – the Clean Air Interstate Rule Phase 1 – resulted in 200,000 jobs in the air pollution control industry.[21] Similar effects have been recognized by the electric power industry as well. In a letter to the editor in the Wall Street Journal, eight major utilities that will be affected by our power plant air pollution standards said, "Contrary to claims that EPA's agenda will have negative economic consequences, our companies' experience complying with air quality regulations demonstrates that regulations can yield important economic benefits, including job creation, while maintaining reliability."[22]

The Cross-State Air Pollution Rule at issue today continues the Clean Air Act's 40-year success story. Thank you for the opportunity to testify today. I look forward to your questions.

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[16] Manufacturers of Emissions Control Technology (http://www.meca.org/cs/root/organization_info/who_we_are)

[17] DOC International Trade Administration. "Environmental Technologies Industries: FY2010 Industry Assessment. http://web.ita.doc.gov/ete/eteinfo.nsf/068f3801d047f26e85256883006ffa54/4878b7e2fc08ac6d85256883006c452c/$FILE/Full%20Environmental%20Industries%20Assessment%202010.pdf (accessed February 8, 2011)

[18] U.S. Census Bureau, Censtats Database, International Trade Data--NAICS, http://censtats.census.gov/naic3_6/naics3_6.shtml (accessed September 6, 2011)

[19] Network of Heads of the European Environment Protection Agencies, 2005. "The Contribution of Good Environmental Regulation to Competitiveness." http://www.eea.europa.eu/about-us/documents/prague_statement/prague_statement-en.pdf (accessed February 8, 2011).

[20] International Brotherhood of Boilermakers, *Boilermaker Labor Analysis and Installation Timing,* March 2005, EPA Docket OAR-2003-0053 (docket of the Clean Air Interstate Rule).

[21] November 3, 2010 letter from David C. Foerter, Executive Director of the Institute of Clean Air Companies, to Senator Thomas R. Carper (http://www.icac.com/files/public/ICAC_Carper_Response_110310.pdf (accessed February 8, 2011).

[22] December 8, 2010 WSJ "We're OK With the EPA's New Air Quality Regulations"