

Written Testimony

**Eric Svenson, Vice President
Environment, Health & Safety
Public Service Enterprise Group**

**Before the United States Senate
Committee on Environment and Public Works
Clean Air and Nuclear Safety Subcommittee
July 29, 2008**

EPA's Clean Air Interstate Rule: Recent Court Decision and Its Implications

Good morning Chairman Carper, Senator Voinovich and Members of the Subcommittee, I am pleased and honored to appear before you today on behalf of Public Service Enterprise Group Incorporated (PSEG). My name is Eric Svenson, and I am the Vice President of Environment, Health & Safety. Mr. Chairman, I am particularly honored given your leadership for many years on the issue of reducing the four major power plant pollutants, including nitrogen oxides (NO_x), sulfur dioxide (SO₂), mercury and carbon dioxide (CO₂).

Mr. Chairman, you have asked me to provide PSEG's perspective of the impacts of the vacature of the Clean Air Interstate Rule ("CAIR") by the United States Court of Appeals of the District of Columbia Circuit. PSEG is most concerned about the immediate negative environmental and public health impacts from the loss of SO₂ and NO_x reductions to have been realized from CAIR. These losses will affect the quality of life of our families, our employees and our customers, all of whom have been living with the negative health effects caused by these pollutants. In addition, PSEG is very

concerned that the environmental vacuum created by the ruling has seriously undermined the emissions trading markets and creates significant business uncertainty for the electric generating industry. We are particularly concerned that the result of the vacature will be a myriad of uncoordinated regulatory compliance mandates that will lead to higher costs to consumers and to power companies such as PSEG. This is a particular concern for us given the investment that the company has made in installing extensive pollution control technologies.

PSEG believes that quick congressional action is necessary to ensure the public health benefits that the CAIR rule had promised are realized, and to provide the needed certainty to the electric power sector to make investments that achieve the needed emission reductions in the most cost effective manner.

PSEG

To provide some context for our views, PSEG (NYSE:PEG) is a publicly traded diversified energy company with annual revenues of more than \$12 billion, and three principal subsidiaries: PSEG Power LLC, PSEG Energy Holdings LLC, and Public Service Electric and Gas Company (PSE&G). PSEG, through its affiliates, owns and operates approximately 16,000 megawatts of electric generating capacity in New Jersey, New York, Connecticut, Texas, Pennsylvania, New Hampshire, California and Hawaii. We own a diverse fleet in terms of fuel source, including 2,400 megawatts of coal-fired capacity, and 3,500 megawatts of nuclear capacity. PSEG is best known as the parent of PSE&G, which was founded in 1903, and has, over the past 100 years, become one of the

nation's largest combined electric and gas utilities, meeting the needs of approximately 2.1 million electric customers, and 1.7 million gas customers in communities across New Jersey.

But, beyond the growth and success of our core business, one of the most noteworthy features of my company is our demonstrated commitment to our customers and to public policy. "Public Service" is part of our formal name, but it also reflects what our customers expect from us. I can proudly state that one of our greatest contributions in the name of "Public Service" is our environmental advocacy and stewardship. PSEG has been a long-time supporter of an integrated, multi-pronged strategy to reduce the most harmful of major power plant emissions, and has used its advocacy to advance the public policy objectives of our state and federal partners. For example, in Connecticut, PSEG was at the forefront of supporting the nation's first legislation regulating mercury emissions and reducing actual emissions from coal-fired power plants. PSEG has also advocated for similar stringent national standards on mercury emissions.

PSEG has also been a leader in environmental action, and has invested heavily in new, clean generation. Since 1990, PSEG has invested more than \$3 billion to replace inefficient, older generating units and upgrade existing facilities in New Jersey, New York, Connecticut and other states. These changes have dramatically lowered emissions of NO_x, SO₂ and fine particulate emissions fleet-wide. Today, PSEG's domestic electric generation fleet is among the cleanest in the country and will be even cleaner when we

complete the emission control upgrades at our Hudson and Mercer plants by the end of 2010.

To further reduce emissions of SO₂, NO_x, particulates and mercury, PSEG has agreed to install a variety of advanced emissions controls at the company's coal-fired plants in New Jersey and Connecticut. Through a consent decree entered into in 2002 with the United States Environmental Protection Agency ("EPA") and the New Jersey Department of Environmental Protection, and amended in 2006, PSEG is installing a variety of advanced emissions control technologies, including SCRs, scrubbers and baghouses, at the company's New Jersey coal plants, all at an estimated cost of \$1.1 billion. Separately, PSEG has installed mercury controls at its Connecticut coal plant consistent with the legislation for which the company was a prime advocate.

As a result of these investments, PSEG was well positioned to meet its NO_x and SO₂ reduction obligations under the CAIR rule well in advance of the Phase II compliance period. At the same time, the company is also working to achieve high rates of mercury control (>90%) at its Connecticut and New Jersey coal-fired power plants. An unfortunate reality of the CAIR rule vacature if left to stand is that it rewards those who adopted the strategy of delay as opposed to early action.

CAIR Background

As you are aware, in May 2005, the EPA published CAIR identifying 28 Eastern states and the District of Columbia as contributing significantly to the levels of fine

particulates and/or eight-hour ozone air quality in downwind states. CAIR was the primary mechanism developed by EPA for the 28 states to make reasonable further progress toward the National Ambient Air Quality Standards (“NAAQS”) for both fine particulates and 8-hour ozone. Both NAAQS are required to be met by 2010 and the revised NAAQS in the 2015 timeframe. The standards were set given the significant impact of these major pollutants on public health in the United States, and in particular, the Eastern portion of the United States. Fine particulates contribute significantly to respiratory problems such as asthma and chronic bronchitis, significant health problems such as heart attacks, and even premature death. Similarly, ground level ozone also contributes to respiratory problems, and can lead to premature death. NO_x is a precursor to both fine particulates and ground level ozone, while SO₂ is also a significant precursor to fine particulate matter.

While not a perfect rule, the public health benefits of CAIR would have been among the most significant in EPA’s history. Currently, there are 126 ozone nonattainment areas and 39 fine particulate nonattainment areas in the 28 Eastern states subject to CAIR. EPA estimated that by 2015, CAIR would have brought at least 115 of the 8-hour ozone nonattainment areas and 22 fine particulate nonattainment areas into attainment with the NAAQS. Reducing the number of nonattainment areas would have had a dramatic effect of eliminating smog, curbing asthma and other chronic and acute respiratory effects, and even preventing premature death caused by chronic exposure to these pollutants. EPA estimated that by 2015, CAIR would have resulted in \$85-\$100

billion in health benefits and avoided health related costs. The following is an estimate from EPA of the annual real benefits that would have been realized by CAIR:

17,000 reduction in premature deaths
22,000 reduction in non-fatal heart attacks
12,300 reduction in hospital admissions
1.7 million reduction in lost work days; and
500,000 reduction in lost school days.

CAIR also would have resulted in significant benefits to our natural resources. Visibility in our national parks, such as the Great Smoky Mountains and the Shenandoah Mountains, would have significantly improved. EPA estimated that visibility benefits would have been approximately \$2 billion, to the extent that one can put a price tag on something as priceless as a view of our natural landscape. The acidification of our lakes, such as the chronic problems that have occurred in the Adirondack Mountains, and the nitrification and eutrication of our water bodies would have been significantly curtailed under CAIR.

CAIR was projected to stimulate one of the most extensive pollution control retrofits in the history of the Clean Air Act. Those retrofits primarily would have consisted of the installation of scrubbers, which remove SO₂, and selective catalytic reduction (SCR) technology, which removes NO_x. Scrubbers and SCRs also help remove mercury from flue gases. EPA estimated significant reductions in mercury as a result of CAIR and actually designed Phase I of the Clean Air Mercury Rule contemplating these

co-benefits. EPA estimated that close to 20% of national mercury reductions would have occurred by the installation of scrubbers and SCRs alone resulting from implementation of CAIR. In reviewing the analysis, and focusing on some key states upwind of New Jersey, implementation of CAIR would have reduced mercury emissions in these states by 34% in 2010.

All of these benefits, which would have come at a relatively low cost of about \$3.6 billion a year in 2015, are lost, unless action is taken. In fact, CAIR's estimated reduction of SO₂ would have dwarfed newly enacted clean air requirements related to diesel and other vehicle and large-engine requirements, and would have provided significant additional NO_x benefits.

EPA proposed through CAIR a two-phased emissions reduction program for NO_x and SO₂, with Phase I beginning in 2009 (NO_x) and 2010 (SO₂) and Phase II beginning in 2015. EPA recommended in CAIR that the program be implemented through a cap-and-trade program, although states were not required to proceed in this manner. Most major stakeholders in the effort to reduce SO₂ and NO_x agree that cap-and-trade programs have been the most economically efficient mechanisms for reducing these pollutants. The Acid Rain program, which was enacted by Congress as part of the 1990 amendments to the Clean Air Act, has provided significant reductions to the emissions of SO₂. The Acid Rain program statutorily established an SO₂ emissions limit and goals for almost 2,000 designated electric generating units in the United States. The Ozone Transport Commission (OTC) NO_x Budget and the succeeding NO_x SIP Call also

produced significant reductions in NO_x, particularly in the Eastern half of the United States. The NO_x SIP Call was in answer to eight Northeastern states' petition to the EPA to make findings and require decreases in NO_x emissions from certain stationary sources in upwind states that may significantly contribute to ozone nonattainment problems in the petitioning states. Phase I of the SIP call was realized in 2003/04 through a cap-and-trade program and Phase II required further reductions starting in May 2007.

These programs created caps on the total amount of emissions that could be emitted from regulated sources and created a market for trading allowances. An allowance equaled a ton of emissions. All sources had to have allowances equal to the amount of emissions during a calendar year (SO₂) or ozone season (NO_x), but were allowed to be traded among units within each program. Trading permitted sources to use the most economically efficient methods to reduce emissions or meet their requirement by obtaining allowances. Electric generating units with existing technologies had the incentive to run technologies because it allowed them to both operate with a reduced need for allowances and, consequently, made them a net seller of allowances that the owner or operator already owned, either through prior allocations or trading.

Most importantly, the Acid Rain and NO_x SIP Call programs provided incentives to certain power plants to either retire old and inefficient units and replace them with cleaner technologies, or to begin construction of pollution control technologies at existing generating units. The incentives became much more dramatic as the total cap was reduced over time; as the cap on emissions became more stringent, there were less

allowances available for facilities to use instead of controlling emissions through technology. Although PSEG had advocated for a rule that was fuel neutral, and that would have been integrated with mercury and CO₂, PSEG ultimately supported the Administration's efforts to promulgate CAIR, in large part because it extended the concepts of cap-and-trade, and CAIR was positioned to be enacted much more quickly than a multi-pollutant legislative effort.

Of the states in which PSEG generates electricity, New Jersey, New York, Pennsylvania, Texas and Connecticut are among the states EPA listed in CAIR. All of the states within which PSEG operates had adopted CAIR prior to the vacature.

The Decision

On July 11, 2008, the D.C. Circuit vacated CAIR in its entirety. While the D.C. Circuit addresses a variety of issues underlying the court's vacature, throughout the opinion, the court emphasizes the failure of CAIR to comport with the Clean Air Act's "good neighbor" provision (specifically, in Section 110(a)(2)(D)(i)(I)), which the Agency sought to fulfill through CAIR, requires "[e]ach state [to] eliminate its own significant contribution to downwind pollution." The D.C. Circuit, in formulating its judicial remedy, did not surgically remand portions of the rule; rather, the court stated that CAIR as a single, regional program must fall due to its deficiencies and that "very little will survive remand in anything approaching recognizable form." As the D.C. Circuit stated, "EPA's approach – region wide caps with no state-specific quantitative contribution

determinations or emissions requirements – is fundamentally flawed. Moreover, EPA must redo its analysis from the ground up.”

The D.C. Circuit’s decision hints at what may be the fundamental legal problem with CAIR; namely, whether existing provisions of the Clean Air Act can be utilized in any meaningful way to support regulations to implement a multi-pollutant strategy. The court found “more than several fatal flaws.” Most telling, the court strongly hinted that a cap-and-trade program, as envisioned by EPA under Section 110 of the Clean Air Act, would be very difficult to implement: “CAIR’s flaws are deep. No amount of tinkering will transform CAIR, as written, into an acceptable rule.” Let me be clear, the Court did not state definitively that cap-and-trade programs are impermissible under the Clean Air Act. However, the D.C. Circuit created, at best, an extremely high hurdle for the agency without a lot of clear direction.

I have already outlined the lost benefits to public health and the environment as a result of the Court’s action. Let me also describe some of the other areas of impact for the electric sector.

Compliance Concerns

The vacature of CAIR does not change the fundamental requirement that states must attain the NAAQS for fine particulates and ozone. The 28 Eastern states that have nonattainment areas must demonstrate mechanisms for progress to meet the NAAQS by submission of State Implementation Plans (SIPs) to EPA for approval. With the

vacature of CAIR, states must now work quickly to develop alternatives in their already-submitted SIPs to meet these critical NAAQS. You will be hearing from the State of New York today as to its concerns about meeting these NAAQS. From PSEG's perspective, it is unclear what the states can, or will do, to meet the requirements of the NAAQS. Without CAIR as a regulatory mechanism, states like those in which we operate have limited options other than to engage in protracted litigation like what led to the NOx SIP Call, ratchet down on existing sources within those states, or both.

States will also have to quickly evaluate their ability to re-start programs that may have been supplemented by CAIR. While we have not performed a legal analysis, several states transitioned into CAIR by abolishing existing state rules, particularly rules implementing the NOx SIP Call. With the vacature of CAIR, each state will have to quickly review the status of its regulatory programs and determine whether immediate regulatory or, in extreme cases, statutory action is required to continue NOx and SO₂ programs existing prior to implementation of CAIR.

In addition to the regulatory uncertainty imposed upon states, power producing companies are also put into a state of confusion. Several companies, like PSEG, made significant early capital investment in pollution control technologies to reduce major power plant emissions based, in part, on anticipating that a national multipollutant program would be enacted either by Congress or by the EPA. EPA's promulgation of CAIR provided regulatory certainty, at least with respect to SO₂ and NOx. The vacature

removes that certainty and now calls into question the economic justification for some of those investments.

Continued improvement and development of technologies, particularly scrubbers to reduce SO₂, may suffer a set back. While the current Title IV Acid Rain program continues to function, the loss of CAIR has created significant uncertainty and devalued SO₂ allowances. CAIR relied upon the existing SO₂ allowance market, but unlike the Acid Rain program, required the retirement of two allowances for every ton of SO₂ emissions, ramping up even higher in 2015. Up until the D.C. Circuit's decision, there had been active trading of SO₂ allowances in anticipation of compliance with CAIR; SO₂ allowances were trading at approximately \$500.00/ton at the beginning of the year. After the decision, SO₂ allowance prices fell precipitously to a record-low of \$85/ton as of Wednesday, July 16th. While the Acid Rain Program remains in place, and trading of SO₂ allowances continues, the supply of such allowances now greatly outweighs demand given the removal of CAIR. Given the glut of allowances today, the ruling encourages existing scrubbers to be shut down, unless a company has a legal obligation to install a scrubber, or to run an existing scrubber, the economics resulting from this decision tend to favor purchasing allowances to meet emissions obligations.

With respect to NO_x allowances, the market appears to be somewhat in flux pending EPA's decision on how to proceed. Several types of NO_x allowances were traded: existing NO_x SIP Call allowances, NO_x allowances required during the ozone season under CAIR, and separate NO_x allowances required annually under CAIR. As of

this date, NOx SIP Call allowances have not dropped in value after the decision, most likely because it is generally anticipated that the NOx SIP Call program will come back into effect as a stop-gap measure. However, with the vacature of CAIR, there is no regulatory need for annual or ozone-season NOx allowances.

“Easy” reductions in NOx resulting from Phase I of CAIR are also now lost. Under the NOx SIP Call, existing SCRs operate during the summer ozone season. CAIR envisioned those SCR units operating a full year, thus allowing immediate reductions of NOx without undertaking significant technology development in the short term. Those additional reductions are now lost.

In addition to the ruling’s impact on existing plants, this decision also may delay or cancel projects, such as the development of needed, cleaner peaking units, in those states which desperately need them. Multipollutant programs provide incentives for the development of cleaner technologies because new units would have to be built in light of a reducing cap of allowances, in this case, SO₂ and NOx. The vacature of CAIR takes away that incentive.

In sum, the vacature of CAIR has left regulation of power plant SO₂ and NOx in shambles. Actions taken by the Eastern states in anticipation of CAIR are all now in question. This regulatory uncertainty must be addressed quickly, ideally in our view by a multipollutant statutory program.

Energy Market Impact

The vacature of CAIR also aggravates an issue that has plagued the energy markets for years; namely, the uneven playing field of environmental regulation and its impact on competitive markets. Since the early 1990s, the energy industry as a whole has been moving towards a competitive wholesale market. One of the key obstacles in developing a competitive energy market was making sure that competitive energy companies played by the same set of rules in each state. Nowhere was that competitive imbalance more apparent than in the regulation of power plant pollutants. Each state had its own command and control mechanism to deal with pollutant reduction. In the case of downwind states, such as New Jersey, New York and Connecticut, those states faced the choice of imposing even tougher requirements on their own electric generation -- even though air quality was impacted, in large part, by ozone transport from upwind states.

The NO_x SIP Call and Acid Rain programs partially solved those problems, but only took us to a certain point. CAIR would have provided a mechanism to meet the NAAQS and at the same time, provided the level playing field for energy markets. As stated previously, the vacature of CAIR does not obviate the need for the 28 Eastern states to meet the NAAQS. Without further action to implement a multi-state cap-and-trade program to meet the new NAAQS, even if states can meet their NAAQS, they will do so in a very uneven way, and downwind states will once again have to deal with the issue of transport affecting attainment. While litigation may provide a solution to the transport problem at a future date, not only is this inefficient, as I have stated above, but

during the pendency of that litigation, markets continue to operate on an uneven playing field. This is exactly the type of scenario that the federal government should be trying to avoid.

The Costs of Meeting the NAAQS without a Multipollutant Strategy Could Be Significant

Ultimately, the consumer will bear the costs of the loss of this program. As stated previously, states will have to begin quickly to act to amend their SIPs to account for the loss of CAIR as a compliance mechanism to meet the 8-hour ozone and fine particulate NAAQS. CAIR would have implemented a proven economically efficient system that would have provided significant reductions from upwind sources that are demonstrably accountable for downwind poor air quality. We now are faced with potential command and control systems, without the benefit of cap-and-trade, which have been proven to be inefficient and, in the long run, add costs. Further, states may decide, or be forced to decide, to impose reductions on other industry sectors. As with any environmental program, those costs will be borne by the customers of those industry sector's products. The implementation of such a system, or lack thereof, will all take time, and could be expensive for the consumer. In other words, we may have an inefficient, more expensive system producing less environmental benefit, and at a significant cost to public health, as I have outlined above.

Multipollutant Legislation

As stated above, there is general agreement that cap-and-trade programs are a faster, more economic solution to achieve significant emissions reductions, particularly with respect to SO₂ and NO_x. The Acid Rain program and the NO_x SIP Call have been incredibly successful in achieving meaningful reductions in emissions. From the beginning of the policy and legislative debate on major power plant emissions, PSEG has always supported a national cap-and-trade program for the reduction of major power plant pollutants. PSEG believes that national multi-pollutant legislation is imperative in ensuring business certainty as well as a level playing field for the electric generating sector. This is of particular interest to PSEG given its significant early investments in emission reduction technologies.

Mr. Chairman, PSEG was an early proponent of your Clean Air Planning Act, which, if enacted, would have established a national, multi-pollutant cap-and-trade program for all four major power plant pollutants, including SO₂, NO_x, mercury and carbon dioxide. In light of the significant legislative debate at the time CAPA was being discussed, PSEG did support CAIR as an attempt to use the existing regulatory authority under the Clean Air Act to put in place such a multipollutant program that was regional in nature. While not a perfect program, it went a long way toward improving air quality in the eastern part of the United States while, at the same time, reducing uncertainty in the electric generating sector. Without further immediate action, the improvements in air quality are lost.

While PSEG hopes that EPA will address the regulatory uncertainty quickly, it is readily apparent that creating a cap-and-trade program under the existing Clean Air Act will be an extremely difficult hurdle to overcome. The EPA could go back to the drawing board and attempt to address the Court's concerns, this will take time and, I suspect, be subject to additional legal challenge. The EPA could also appeal the D.C. Circuit's ruling. PSEG anxiously awaits the agency's decision. However, we suspect that further appeals will also take time, assuming they are pursued. In the meantime, and maybe most importantly, public health and the environment continue to suffer.

Mr. Chairman, with the vacature of CAIR, the previous rulings striking the Clean Air Mercury Rule, and the continued implementation of a patchwork of state and regional programs governing carbon dioxide, the regulation of the four major power plant pollutants is now in an extreme state of flux. PSEG strongly believes that this uncertainty is unacceptable from both a public health standpoint and from a business standpoint. PSEG urges Congress to re-start the legislative discussion and pass multi-pollutant legislation quickly. If there is a consensus to add other economic sectors to the regulation of CO₂, we would support that solution as well, although we warn that time is of the essence.

Mr. Chairman, thank you for your consideration.