How to be a Good Neighbor: The Failure of CAIR and CSAPR, Uncertainty, and the Way Forward

Brandon Dittman*

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I. INTRODUCTION

On August 21, 2012, the Environmental Protection Agency’s (“EPA”) Cross-State Air Pollution Rule (“CSAPR”) was struck down by the D.C. Court of Appeals in EME Homer City Generation, L.P. v. EPA.\(^1\) The rule was the EPA’s most recent attempt to regulate nitrogen oxide (“NO\(_x\)”) and sulfur dioxide (“SO\(_2\)”) emissions under the Clean Air Act (“CAA”). The rule was intended to serve as a replacement for the embattled Bush-era Clean Air Interstate Rule (“CAIR”), which the D.C. Circuit had ordered the EPA to replace in 2008.\(^2\) The decision in EME Homer was the latest event in a string of interstate air pollution policy failures since the once separate and successful NO\(_x\) and SO\(_2\) programs were combined into CAIR in 2005. On June 24, 2013, the U.S. Supreme Court granted certiorari to hear an appeal of EME Homer, thereby creating a new sense of uncertainty about the future of U.S. interstate air pollution policy.\(^3\)

As the EPA and the electric utility sector brace for the impact of the impending decision in the Supreme Court appeal of EME Homer and struggle to make sense of the fallout from the decision of the D.C. Court of Appeals, this Note seeks to answer questions that are now being asked of CSAPR: how will the Supreme Court decide, what went wrong in promulgating CSAPR in the first place, and what is the appropriate way forward following the decision by the Supreme Court? To do so, this Note first dissects the political and legal evolution of interstate air pollution policy and the “good neighbor provision” that is central to SO\(_2\) and NO\(_x\) abatement policy. Second, this Note predicts that the EPA’s appeal to the Supreme Court will be unsuccessful in saving CSAPR, and that the Supreme Court’s decision will have a constraining effect on the EPA’s options to address interstate air pollution under the CAA. Third, this Note argues that the real reasons for the failure of CAIR, CSAPR, and EPA air transport policy generally are the complex mixture of an increasing politicization of air pollution policy, the EPA’s failure to effectively engage stakeholders, and the CAA’s inadequacy as a tool to address interstate air transport and persistent ozone nonattainment. Finally, this Note recommends that the EPA dramatically change its approach with regard to the regulation of NO\(_x\) and SO\(_2\) emissions. Instead of attempting to fix CSAPR or promulgate another air trading rule, the EPA should issue a “SIP Call” under Section 110(k)(5) of the

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CAA. As explained below, such a measure is a less than ideal policy solution; the severity and bluntness of such an instrument, however, should incentivize stakeholders to engage Congress to develop a more permanent and satisfactory legislative solution.

II. THE PROBLEM OF INTERSTATE AIR TRANSPORT AND THE EVOLUTION OF THE CAA’S ATTEMPT TO ADDRESS THE PROBLEM THROUGH THE GOOD NEIGHBOR PROVISION

To fully understand the failures of CAIR and CSAPR, it is important to understand why these programs were developed. The answer to this question can only be understood by examining the unique nature of interstate air transport as a regulatory problem, Congress’s struggle to design regulatory tools to address air transport through the various iterations of the CAA, and the EPA’s even larger struggle to use the tools it was given to promulgate rules that adequately and efficiently address the problem.

A. The Problem of Interstate Air Transport

U.S. electricity consumption in 2011 totaled nearly 3,586 billion kilowatt hours. In 2011, forty-two percent of national electricity generation came from coal and twenty-five percent came from natural gas. Two of the major by-products of coal and natural gas combustion are NOx and SO2. Roughly two-thirds of all SO2 and one-fourth of all NOx come from electric power generation that relies on coal or natural gas.

As air pollutants, NOx and SO2 have been linked to the degradation of human health and the environment. Perhaps the most well-known effect of NOx is its role in the creation of ground level (tropospheric) ozone or “smog.” Smog is created when NOx particles interact with

sunlight and volatile organic compounds. The health effects of smog include: “reduction in lung function and increased respiratory symptoms as well as respiratory-related emergency department visits, hospital admissions, and possibly premature deaths.” NO\textsubscript{x} has also been linked to the creation of fine particulates known to induce a wide variety of respiratory diseases and is a precursor to acid rain.

Like NO\textsubscript{x}, SO\textsubscript{2} is also a precursor to acid rain. Acid rain is a broad term referring to deposition from the atmosphere containing “higher than normal amounts of nitric and sulfuric acids.” Acid rain deposition can occur in two different forms: wet or dry. Wet deposition can take the form of acidic rain, sleet, snow, or fog. Dry deposition can take the form of dust or smoke. Both wet and dry forms of acid rain cause the acidification of lakes and streams and contribute to the damage of trees at high elevations and sensitive soils. Additionally, wet forms of acid rain can accelerate the decay of paints and building materials such as automotive finishes, buildings, statues, and sculptures.

SO\textsubscript{2} and NO\textsubscript{x} are extremely problematic forms of pollution, because once emitted into the atmosphere they can be blown thousands of miles downwind, crossing from one state to another. This phenomenon is known as “air transport.” Air transport is a particularly vexing regulatory problem, because while pollution is generated in one state, its effects are wholly or partially felt in another state. A state that produces pollution susceptible to air transport, therefore, has no incentive to reduce emissions, because it does not feel the negative effects of that pollution. In economics, this kind of problem is known as a “negative externality,” a cost that is inherent in the production process but is not borne by the producer. When negative externalities are not “internalized,” or incorporated into the market decisions of a producer, that producer will always produce a socially inefficient quantity of the good being produced (in this case air pollution). Because states producing NO\textsubscript{x} and SO\textsubscript{2} can

12. Id.
13. Id.
14. Id.
15. Id.
16. Id.
17. See Roy S. Belden, Clean Air Act 115 (2nd ed. 2011).
export the negative effects of smog, acid rain, and fine particulates into “downwind” states, they will always produce more SO$_2$ and NO$_x$ than is socially desirable.

From a legal perspective, the problem of combating air transport is just as troublesome as the economics of it. A state that is impacted by harmful emissions is incapable of compelling out-of-state producers of the pollution to reduce their emissions because emissions produced in the upwind states lay beyond the impacted state’s enforcement jurisdiction. The inability of downwind states to compel out-of-state polluters to control emissions thus requires federal intervention to resolve interstate air pollution disputes.

B. The Evolution of the Air Quality Policy and the Good Neighbor Provision

The problem of air transport was first realized in the seminal Supreme Court case Georgia v. Tennessee Copper Co. In Tennessee Copper, the state of Georgia alleged that “noxious gases,” now known to be SO$_2$, that came from the Tennessee Copper Company’s copper works had caused “wholesale destruction of forests, orchards, and crops” in five counties in the state of Georgia. Georgia, in its capacity as a “quasi-sovereign,” sought an injunction against the Tennessee Copper Company from producing SO$_2$. Employing a common law theory of nuisance, the case was decided in favor of Georgia. Justice Oliver Wendell Holmes, writing for the majority, recognized the state of Georgia’s right to be free from the effects of interstate air pollution:

It is a fair and reasonable demand on the part of a sovereign that the air over its territory should not be polluted on a great scale by sulphurous acid gas, that the forests on its mountains, be they better or worse, and whatever domestic destruction they have suffered, should not be further destroyed or threatened by the act of persons beyond its control, that the crops and orchards on its hills should not be endangered from the same source.

Although Justice Holmes recognized the problem posed by air transport in 1907, it would take Congress another forty-eight years to take any action concerning air pollution. In July of 1955, President

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19. Id. at 236.
20. Id.
21. See id. at 239.
22. Id. at 238.
Eisenhower signed the Air Pollution Control Act into law.\textsuperscript{23} The bill, merely two pages long, provided federal technical and financial support\textsuperscript{24} to state and local governments.\textsuperscript{25} This bill, however, was not enough to dampen the public’s concern over air pollution, which was reeling from well-publicized “killer smog” events\textsuperscript{26} in Pittsburgh, New York, and London.\textsuperscript{27}

The CAA of 1963 was the first statute to grant the federal government authority to abate air pollution. The Act directed the Department of Health, Education, and Welfare (“HEW”) to take actions to abate interstate air pollution. Unfortunately, in practice, HEW’s efforts had limited effectiveness at best.\textsuperscript{28} Under the Act, HEW could not engage in preventative enforcement measures, only remedial.\textsuperscript{29} Furthermore, the abatement procedures available to HEW were cumbersome and unwieldy, which led to implementation processes that would span several years and be subject to numerous lawsuits.\textsuperscript{30}

The first serious legislative attempt to address interstate air pollution was the Air Quality Act of 1967. In response to the failures of the CAA of 1963, the Air Quality Act of 1967 was the first air quality statute to feature air pollution abatement authority supplemented with air quality management authority, which allowed for preventative measures.\textsuperscript{31} The Act also introduced a feature central to the modern CAA: ambient air quality standards.\textsuperscript{32} The Air Quality Act of 1967 was significantly different from the modern CAA, however, in that it had a much more regional focus. A regional planning framework was specifically designed to deal with the problem of interstate air transport whereby regional units would adopt air quality standards and develop

\textsuperscript{24} See id. § 2(a) (supervised by the U.S. Surgeon General).
\textsuperscript{26} The Pittsburgh event, known as the Donora Smog, killed 20 people and sickened over 6,000 in 1948, and the London event, known as the Great Smog of ‘52, killed over 12,000 people and sickened over 100,000 in 1952. New York suffered a series of smog events in 1953, 1962, and 1966 that each killed around 200 people.
\textsuperscript{27} Linda Fuoco, Donora to Remember Killer Smog this Week, PITTSGURGH POST-GAZETTE (Oct. 19, 2008), www.post-gazette.com/stories/local/washington/donora-to-remember-killer-smog-this-week-617237/; BELDEN, supra note 17, at 5.
\textsuperscript{28} See BELDEN, supra note 17.
\textsuperscript{29} Patton, supra note 25, at 10,157.
\textsuperscript{30} Id.; see also Bishop Processing Co. v. Gardner, 275 F. Supp. 780 (D. Md. 1967).
\textsuperscript{31} Patton, supra note 25, at 10,159.
\textsuperscript{32} Id.
their own strategies to meet those standards. When the Act was passed, Congress had envisioned that it would spur regional planning efforts by states to confront the issue of interstate air pollution. Despite the lofty goals set by the Act, its implementation failed to make significant progress on the reduction of air pollution and the improvement of air quality. Chief among the problematic issues was the lack of effective enforcement mechanisms available to HEW.

In 1970, Congress once again attempted to reform U.S. air quality policy in the Clean Air Act Amendments. This time, however, Congress’s efforts were met with widespread success and the era of the modern CAA began. Congress believed the failure of the Air Quality Act of 1967 was in large part due to its decentralized, regional approach. To remedy this perceived deficiency, Congress introduced two new features into U.S. air policy: National Ambient Air Quality Standards (“NAAQS”) and federal implementation planning. The NAAQS added to the 1970 CAA nationwide, as opposed to regional, limits on air pollutants. The 1970 CAA also enabled the federal government, in the form of the newly created EPA, to impose federal implementation plans (“FIPs”) in states that failed to develop a state implementation plan (“SIP”) sufficient to meet the NAAQs.

Despite these improvements, the 1970 CAA did have one major flaw: it incentivized states to rely on interstate air transport to meet their NAAQS. Because compliance under the Act was solely measured by whether a state could meet the NAAQS within the confines of its own borders, states could generally meet their NAAQS by letting air currents transport their air pollution into downwind states. To facilitate air transport, states encouraged electric utilities and other sources of pollution to build massive smokestacks that would inject the pollution high into the atmosphere. During the period that the 1970 CAA was in force, 429 tall stacks, many over 500 feet tall, were constructed on coal-

33. Id.
34. Id. at 10,160.
35. Belden, supra note 17, at 6.
37. Belden, supra note 17, at 6–7.
38. Id. at 6.
39. Id. at 7.
40. Patton, supra note 25, at 10,161.
41. Id.
fired boilers in the electricity industry. As a result of this policy, many states were able to meet their NAAQS for SO\textsubscript{2} until the early 1980s. While this solved the problem of local SO\textsubscript{2} and NO\textsubscript{x} pollution, it only reinforced the regional, interstate nature of the issue.

During the development of the 1970 CAA, Congress recognized the incentive it had created for states to disperse their pollution downwind to comply with the NAAQS. In response to this realization, Congress included what has come to be known as the “good neighbor provision” to combat deliberate interstate air transport. This provision of the Act required SIPs to take “measures necessary to ensure that emissions of air pollutants” from intrastate sources would not “interfere with the attainment or maintenance” of the NAAQS in another state. In practice, however, the EPA minimized this planning requirement in SIPs. Furthermore, early judicial challenges to enforce the good neighbor provision proved unsuccessful.

In addition to many other clarifications and supplements, the 1977 Clean Air Act Amendments sought to rectify the failure of the 1970 version of the good neighbor provision. The new version required SIPs to prohibit any stationary source within a state from emitting air pollution that would prevent attainment or maintenance of the NAAQS in another state. Additionally, the Amendments added a mechanism for states to petition the EPA for a determination that an existing or proposed source in an upwind state violated the good neighbor provision. Although the Clean Air Act Amendments of 1977 substantially enhanced the EPA’s authority to regulate interstate air pollution, in practice the EPA refused to act on its authority.

The next iteration of the CAA, the Clean Air Act Amendments of 1990 (“CAA”), clearly reflected congressional doubt in the EPA’s willingness to address interstate air pollution issues. The law had the

43. Id.
44. Id.
46. Patton, supra note 25 at 10,162.
47. See NRDC v. EPA, 483 F.2d 690, 692–93 (8th Cir. 1973) (challenging an Iowa SIP approval); NRDC v. EPA, 494 F.2d 519, 526 (2nd Cir. 1974) (challenging a New York SIP approval).
50. Patton, supra note 25, at 10,166.
51. Id. at 10,176.
clearest regional focus of any clean air act legislation since the Air Quality Act of 1967. The Amendments targeted three interstate pollution problems: acid deposition, eastern ozone pollution, and western regional haze.\(^52\) In addition, Congress once again revised the good neighbor provision.\(^53\)

The 1977 Act’s version of the good neighbor provision barred transport that would “prevent attainment or maintenance” of NAAQS.\(^54\) In comparison, the CAAA prohibits transport that “contribute[s] significantly to nonattainment,” essentially codifying early case law concerning the provision,\(^55\) and transport that “interfere[s] with maintenance” of the NAAQS.\(^56\) This linguistic change significantly increased the EPA’s enforcement ability of the good neighbor provision. While the 1977 Act allowed the EPA to act only when an upwind state’s pollution affirmatively “prevented” a downwind state from attaining its NAAQS, the CAAA required only a showing of “interference,” a much easier trigger for an EPA abatement action. Furthermore, the prohibition on interstate air transport in the CAAA was expanded from encompassing only “stationary source[s]” under the 1970 and 1977 Acts to “any source or other type of emissions activity.”\(^57\) The latter change expanded the EPA’s enforcement capability by making upwind states responsible for mobile and area sources in addition to stationary sources of interstate air pollution. Additionally, it allowed the EPA to simultaneously investigate multiple sources of interstate pollution interfering with attainment, rather than the approach of one source at a time employed in the 1977 Act.\(^58\)

### III. THE EVOLUTION OF THE NO\(_X\) AND SO\(_2\) CONTROL PROGRAMS

Recognizing the serious impacts of NO\(_x\) and SO\(_2\) emissions, Congress has taken a multitiered approach to regulating NO\(_x\) and SO\(_2\) emissions from both stationary and nonstationary sources. NO\(_x\) and SO\(_2\)

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52. Id.
53. Id.
54. Id. at 10,179.
55. See Air Pollution Control Dist. of Jefferson Cnty. v. EPA, 739 F.2d 1071 (6th Cir. 1984).
58. Patton, supra note 25, at 10,179.
were first listed as criteria pollutants in 1971.\footnote{Sulfur Dioxide, EPA, http://www.epa.gov/airquality/sulfurdioxide/ (last updated June 28, 2013); Nitrogen Dioxide, EPA, http://www.epa.gov/airquality/nitrogenoxides/ (last updated April 4, 2013).} While this subjected $\text{SO}_2$ and $\text{NO}_x$ to regulation in the form of NAAQS since 1971, the two centerpiece efforts of $\text{NO}_x$ and $\text{SO}_2$ reduction came in 1990 with the CAAA. These centerpiece efforts are the Acid Rain Program (“ARP”) and the various iterations of $\text{NO}_x$ trading programs. The separate ARP and $\text{NO}_x$ programs would later be combined into CAIR and CAIR’s proposed successor, CSAPR. Understanding the evolution of the ARP and $\text{NO}_x$ trading programs is important, because it helps explain why CAIR and CSAPR are considered impermissible under the CAA by the D.C. Circuit, and what potential regulatory responses may be permissible to address interstate air transport if the EPA loses the appeal of \textit{EME Homer}.

\subsection*{A. The Acid Rain Program}

The CAAA added Title IV to the CAA to specifically address the problem of acid rain. Title IV was enacted to achieve two goals. First, it aimed to reduce $\text{SO}_2$ emissions by 10 million tons from 1980 levels and $\text{NO}_x$ emissions by 2 million tons from the projected 2000 levels.\footnote{Belden, supra note 17, at 116.} Second, it aimed to encourage energy conservation, pollution prevention, and the use of renewable and clean energy technologies.\footnote{Id.}

The centerpiece of Title IV is the ARP, a cap-and-trade program for $\text{SO}_2$ emissions. The program requires all fossil fuel electricity generating units (“EGUs”) that produce electricity for sale to obtain acid rain permits\footnote{Each permit allows the emission of one ton of $\text{SO}_2$ per year.} to cover their $\text{SO}_2$ emissions.\footnote{Belden, supra note 17, at 116; Acid Rain Program, EPA, http://www.epa.gov/airmarkets/propsregs/arp/basic.html (last updated July 25, 2012).} The program also requires the implementation of continuous emissions monitors (“CEMs”) for EGUs over 25 megawatts (“MW”) and created accounting and enforcement mechanisms for the program.\footnote{Belden, supra note 17, at 116; Acid Rain Program, EPA, http://www.epa.gov/airmarkets/propsregs/arp/basic.html (last updated July 25, 2012).}

Most EGUs over 25 MW that were in service prior to 1995 are allocated allowances based on their base year fuel consumption and the overall Title IV emission limits.\footnote{Belden, supra note 17, at 116; Acid Rain Program, EPA, http://www.epa.gov/airmarkets/propsregs/arp/basic.html (last updated July 25, 2012).} In Phase I of the program Congress
allocated emissions allowances to 240 of the dirtiest EGUs at 110 power plants in twenty-one states.66 Phase I had aimed to achieve a 3.5 million ton reduction in SO2 emissions before Phase II of the program was to begin in 2000.67 Phase II expanded the sources regulated and set a permanent cap of 8.95 million allowances for total annual allowance allocations to EGUs.68 To comply with the program and save costs, operators of affected facilities can trade allowances between individual units or with other firms.69 Thus, the program allows flexibility by allowing compliance through the buying and selling of allowances.70

The ARP has been a tremendous success, especially in its cost savings. The program is estimated to save $1 billion annually when compared to command-and-control regulatory alternatives.71 Compliance costs for the SO2 program have only been a fraction of the costs predicted before implementation.72 Part of the compliance cost savings have come from lowered SO2 abatement costs that resulted from technological innovations spurred by the cap-and-trade program.73 In addition to low compliance costs, administrative costs for the SO2 program have also been minimal.74 Compliance rates for the SO2 program have been near one hundred percent, with only two known compliance failures through 2001.75 This near unanimous compliance rate is even more remarkable considering a typical compliance rate of eighty percent for other federal air programs.76 The environmental benefits have been equally impressive. By 2001, SO2 emissions had fallen to almost forty percent below 1980 levels.77 Studies have found that the monetary value of human health benefits from particulate reductions is expected to be seven times the costs of controlling emissions during Phase I alone.78 The EPA estimates that the total benefits of the program will exceed $50 billion by the year 2020.79

66. DANIEL H. COLE, POLLUTION & PROPERTY 52 (2002).
67. Id.
68. Id.
69. BURTRAW & PALMER, supra note 42, at 6.
70. See id.
72. See BURTRAW & PALMER, supra note 42, at 14.
73. Id.
74. Id. at 24.
75. Id. at 24–25.
76. Id. at 25.
77. Id. at 8.
78. Id. at 9.
79. Id.
B. The NO\textsubscript{x} Trading Programs

The problems of NO\textsubscript{x} pollution and ozone transport were first addressed in the CAAA. The CAAA set explicit limits for ground level ozone under Title I, mandated the implementation of CEMs for NO\textsubscript{x} on EGUs with a capacity of over 25 MW under Title IV, and created the Ozone Transport Commission (“OTC”) under Sections 176 and 184 of the CAA.\textsuperscript{80} The OTC consists of twelve Northeastern and Mid-Atlantic states that suffered persistent nonattainment of NAAQS for ground level ozone.\textsuperscript{81} The first act of the OTC was to sign a Memorandum of Understanding (“MOU”) on September 27, 1994, which committed the OTC states to a seventy-five percent reduction of NO\textsubscript{x} emissions.\textsuperscript{82}

Pursuant to their MOU, the OTC states implemented the NO\textsubscript{x} Budget Program (“NBP”) to attain their committed reductions. The first phase of the NBP relied on Reasonably Available Control Technology (“RACT”) to achieve emissions reductions, and is commonly referred to as Phase 1 of the program. Phase 2 of the NBP started in May of 1999 and consisted of an OTC-wide cap-and-trade program. The program had an initial regional cap of 219,000 tons of NO\textsubscript{x} emissions per ozone season and covered more than 900 EGUs generating 15 MW or more and more than 120 similarly sized industrial facilities.\textsuperscript{83} Under the NBP, participants were required to control NO\textsubscript{x} only during ozone season, the period from May until September when smog formation is most problematic. Although control was only required during the ozone season, trading of allowances was permitted year-round. The model rule left the allocation of the original allowances up to each individual state. A “serialized” approach was chosen to monitor the allowance market, meaning the EPA would give each allowance a unique serial number.\textsuperscript{84}

The empirical data resulting from the NBP, from its start in 1999 to its eventual replacement in 2002, point to a very successful program. By 2002, the program was resulting in NO\textsubscript{x} emissions thirty-four percent


\textsuperscript{81} Id. at 1064.

\textsuperscript{82} Id. at 1065.


\textsuperscript{84} Id. at 10, 26. For compliance purposes, the EPA acted as the accountant, monitoring the sale and purchase of allowances and comparing each electric utility’s allowances to its emissions. If an electric utility were to emit more than its allowances permitted, an automatic three to one penalty deduction for each ton emitted over the allowance holding was administered.
lower than 1995 levels. Emissions were below allowances for every year of the program, with firms “over-controlling” by 13.5 percent on average. The issue of “leakage,” emissions moving outside of the area of control, never fully developed as a significant threat to program. Compliance rates of the NPB for 1999 through 2002 were almost one hundred percent.

While the OTC was designing the NBP, a large-scale effort by the EPA was also underway to create its own NOx trading program that included the Midwestern and Southern states. This effort was spurred by an early realization that ozone nonattainment areas cannot demonstrate attainment by implementing control measures only within the nonattainment area. Concurrent with the EPA’s efforts, in 1997 eight Northeastern states filed good neighbor petitions seeking a finding that twelve states and the District of Columbia were “interfering” with NAAQS attainment in downwind states. Stakes were high because if the petition succeeded and the EPA issued a finding of interference, then all sources contributing to downwind NAAQS interference would be forced to shut down in three months unless the EPA stepped in to regulate. The EPA did make a finding of interference in response to the petition. The EPA, however, “harmonized” its Section 126 finding with a forthcoming NOx SIP Call program by making compliance due at the same time. The EPA’s actions were largely upheld in Appalachian Power Co. v. EPA.

85. Id.
86. Id.
87. Id. at 13.
88. Id. at 12.
90. Section 126 of the Clean Air Act, or the “good neighbor provision,” allows downwind states to petition the EPA to make a finding that an upwind state is in violation of the good neighbor provision. See 42 U.S.C. § 7426(b) (2012).
91. Belden, supra note 17, at 48.
92. Id.
94. A SIP call is a procedure set forth in Section 110(k)(5) where the Administrator can require a state to revise a SIP that is “substantially inadequate” as necessary to correct inadequacies.
95. Belden, supra note 17, at 48–49.
On January 10, 1997, the EPA announced a planned SIP call that required more stringent NO\textsubscript{x} limits. When promulgated in 1998, the NO\textsubscript{x} SIP Call required twenty-two states and the District of Columbia to submit SIP revisions that significantly reduced NO\textsubscript{x} emissions.\footnote{Del. Dep’t of Natural Res. & Envtl. Control, Div. of Air & Waste Mgmt., Delaware Plan for Meeting the Nitrogen Oxide Budget Requirements Contained in the EPA \textit{NO\textsubscript{x} SIP Call 3} (2000), \textit{available at} http://www.dnrec.state.de.us/air/aqm_page/docs/pdf/noxsip_1.pdf [hereinafter DNREC].} The NO\textsubscript{x} SIP Call imposed on each state an overall limit for NO\textsubscript{x} emissions known as a “budget.”\footnote{Id. at 4.} Each jurisdiction was allowed to use its own methods to meet this budget.

To foster the creation of an emissions trading market, however, the EPA announced it would automatically approve any SIP that contained emissions trading provisions contained in the Federal Register.\footnote{Id.} Additionally, the EPA provided the same accounting, technical assistance, and monitoring services to run the NO\textsubscript{x} SIP Call trading program as it provided in the NBP.\footnote{Id.}

Immediately following its announcement, the NO\textsubscript{x} SIP Call was “spectacularly unpopular” and became the focus of numerous lawsuits by upwind states.\footnote{Id. at 1068.} These cases were consolidated in \textit{Michigan v. EPA}.\footnote{Michigan v. EPA, 213 F.3d 663 (D.C. Cir. 2000).} In \textit{Michigan}, the court upheld the EPA’s determination that nineteen of the twenty-two states included in the program were contributing significantly to nonattainment of ozone NAAQS in downwind states.\footnote{Id.} Consistent with the \textit{Michigan} court’s orders, Wisconsin, Georgia, and Missouri were excluded from the program.\footnote{DNREC, supra note 97, at 3.} The question of whether air trading was a valid mechanism to comply with the SIP Call was, importantly, not addressed in the case. Thus, with the validity of air trading under the SIP Call not called into question by the D.C. Circuit, allowance trading under the NO\textsubscript{x} SIP Call began in 2003 for the OTC states and on May 31, 2004 for the eleven non-OTC states.\footnote{Aulisie \textit{et al.}, supra note 83, at 6.} Like its NBP predecessor, the NO\textsubscript{x} SIP Call was hugely successful in reducing NO\textsubscript{x} emissions. At the end of the NO\textsubscript{x} SIP Call program in 2008, the EPA reported that NO\textsubscript{x} emissions were nine percent below the annual
cap for 2008 and sixty-two percent lower than NO\textsubscript{x} emissions levels in 2000.\textsuperscript{107}

\textbf{C. The Clean Air Interstate Rule ("CAIR")}

The EPA formally unveiled the replacement to the NO\textsubscript{x} SIP Call, CAIR, on March 10, 2005. The program is essentially a synthesis of the ARP of the CAAA and the NO\textsubscript{x} SIP Call expanded to include all stationary sources in twenty-eight Eastern states and the District of Columbia.\textsuperscript{108} CAIR included both long- and short-term targets for NO\textsubscript{x} and SO\textsubscript{2} reduction. In the short term, CAIR mandated a reduction of SO\textsubscript{2} emissions to forty-five percent below 2003 levels by 2010 and a reduction of NO\textsubscript{x} emissions by fifty-three percent below 2003 levels by 2009.\textsuperscript{109} In the long term, CAIR called for a seventy percent reduction of SO\textsubscript{2} emissions and a sixty percent reduction of NO\textsubscript{x} emissions by 2015.\textsuperscript{110} Like the previous NBP and NO\textsubscript{x} SIP Call, CAIR does not require states to participate in the respective trading programs. Instead, CAIR only offers trading programs as a cost-effective option to meet NAAQS for SO\textsubscript{2}, NO\textsubscript{x}, and particulate matter ("PM\textsubscript{2.5}"). In a 2006 modification of the final version of CAIR, the EPA created a FIP that would serve as a stand-in for a SIP until states submitted their own rules that were accepted by the EPA.\textsuperscript{111} This FIP contained the SO\textsubscript{2} and NO\textsubscript{x} trading programs as its mechanism for emissions reductions.

Various petitioners, including the state of North Carolina and several industry groups, challenged many of the provisions within CAIR. The grievances of all parties against CAIR were considered in \textit{North Carolina v. EPA} in 2008.\textsuperscript{112} The D.C. Circuit Court was sympathetic to the majority of the grievances brought against CAIR. In its entirety, the court found CAIR to be so “fundamentally flawed” that “no amount of tinkering . . . or revising . . . will transform [it], as written, into an acceptable rule.”\textsuperscript{113} Because the EPA developed CAIR as a single regional program, the court held that “all its components must stand or

\begin{flushleft}
\textsuperscript{108} Belden, supra note 17, at 48–49.
\textsuperscript{109} Id. at 49.
\textsuperscript{110} Id.
\textsuperscript{112} North Carolina v. EPA, 531 F.3d 896 (D.C. Cir. 2008) (per curiam).
\textsuperscript{113} Id. at 930.
\end{flushleft}
fall together.”\textsuperscript{114} Under this reasoning the court saw no choice but to vacate the entire rule and remand to the EPA to develop a new one. In doing so, the court identified a number of flaws with CAIR.

First, and most importantly, the court interpreted the good neighbor provision of the CAA to require an individual state-by-state analysis of sources that contribute significantly to downwind nonattainment areas, but the cap-and-trade programs contained in CAIR were region-wide programs, not based on individual source contributions.\textsuperscript{115} Second, the EPA failed to analyze the “interfere with maintenance” prong of the good neighbor provision.\textsuperscript{116} Next, the court mandated the EPA to harmonize the SO\textsubscript{2} and NO\textsubscript{x} emission reduction requirements under CAIR with the SO\textsubscript{2} and NO\textsubscript{x} NAAQS.\textsuperscript{117} Additionally, the court found the allowance allocation criteria of fuel type to be arbitrary and highly favorable toward coal states.\textsuperscript{118} The court also found the expiration of ARP SO\textsubscript{2} allowances under the program to be without statutory support.\textsuperscript{119} Finally, the court found that the allocation of NO\textsubscript{x} and SO\textsubscript{2} emission allowances was not based on each upwind state’s interference or contribution to nonattainment.\textsuperscript{120}

The court’s order to vacate CAIR took all interested parties by surprise. While numerous parties challenged various sections and provisions of CAIR, few wished for the entire rule to be thrown out entirely. Indeed, electricity generators had already invested billions to comply with the start of CAIR in 2009 by purchasing equipment and allowances.\textsuperscript{121} With the rule vacated, electric utilities were left with billions of dollars in now worthless allowances and equipment that they intended to finance through the sale of those allowances.\textsuperscript{122} Additionally, the instability created in future expectations meant wide fluctuations in spot prices for SO\textsubscript{2} \textsuperscript{123} and NO\textsubscript{x} \textsuperscript{124} allowances.\textsuperscript{125}

\begin{itemize}
  \item 114. \textit{Id}. at 929.
  \item 115. BELDEN, supra note 17, at 50.
  \item 116. \textit{Id}.
  \item 117. \textit{Id}.
  \item 118. \textit{Id}.
  \item 119. \textit{Id}.
  \item 120. \textit{Id}.
  \item 122. \textit{Id}.
  \item 123. After the decision in \textit{North Carolina v. EPA}, SO\textsubscript{2} prices dropped to $300 per ton, down from $1,600 in 2006 and $600 in early 2008.
  \item 124. NO\textsubscript{x} allowance prices suffered a decline from nearly $5,000 per ton to just above $1,000 per ton in a short time.
\end{itemize}
With such chaos arising from the vacating of CAIR, states, electric utilities, environmental groups, and the EPA banded together to ask the appeals court to reconsider the order to vacate. In December of 2008, the D.C. Circuit decided to rehear the case. The new decision allowed CAIR to remain in place until a suitable replacement could be formulated. In the concurring opinion, Judge Judith Rogers acknowledged that “[t]he rule has become so intertwined with regulatory scheme that [overturning it] would sacrifice clear benefits to public health and the environment while the EPA fixes the rule.”

D. The Cross State Air Pollution Rule ("CSAPR")

On July 6, 2011, the EPA issued the final Cross-State Air Pollution Rule. The rule is intended to serve as the court-ordered replacement for CAIR, and was specifically designed to withstand judicial scrutiny by addressing the concerns of the North Carolina v. EPA court. The final rule applies only to power plants of more than 25 MW and excludes some of the industrial sources covered under the NOx SIP Call and CAIR. CSAPR requires a total of twenty-eight states to reduce their annual SO2 and NOx emissions and/or ozone season NOx emissions to attain the 1997 ozone and fine particle NAAQS and 2006 fine particle NAAQS. In CSAPR, the EPA establishes emissions budgets for each of the states and allows interstate emissions trading within the same program (e.g., trading SO2 allowances to be used in the SO2 program)


127. Id. at 1178.

128. Id. at 1178–79 (Rogers, J., concurring).


131. BELDEN, supra note 17, at 51.

132. Many states are in nonattainment for standards set by both the 1997 fine particle NAAQS and 2006 fine particle NAAQS.

subject to a state emissions cap plus a variability limit.\textsuperscript{134} To ensure that the rule was implemented quickly, the NO$_x$ and SO$_2$ programs under CSAPR were to take effect in January 2012, with more-stringent emission reduction requirements coming online in 2014.\textsuperscript{135} The EPA projects that, if implemented, CSAPR will reduce NO$_x$ emissions by fifty-four percent and SO$_2$ emissions by seventy-three percent compared to 2005 levels.\textsuperscript{136}

CSAPR, however, has not yet been implemented. On December 30, 2011, the Court of Appeals for the D.C. Circuit issued a stay of the rule until legal challenges filed by a coalition of state and industry petitioners were resolved.\textsuperscript{137} In their brief, the petitioners had four arguments against CSAPR: (1) the EPA does not have the authority to impose FIPs without first allowing states to develop their own implementation plans; (2) CSAPR violates the CAA (and the decision in \textit{North Carolina v. EPA}\textsuperscript{138} that led to invalidation of the predecessor CAIR) by collectively regulating upwind states without regard to the significance of their individual contributions to downwind nonattainment or inability to stay in attainment; (3) that, contrary to the CAA, CSAPR does not give independent effect to a state’s ability to achieve compliance with air quality standards versus maintain compliance with them; and (4) that the EPA did not provide adequate opportunity for notice and comment on the proposed rule.\textsuperscript{139}

\section*{IV. THE FAILURE OF CSAPR: \textit{EME HOMER CITY GENERATION, L.P. v. EPA}}

On August 21, 2012, the D.C. Circuit decided the case of \textit{EME Homer City Generation, L.P. v. EPA}, which determined the fate of

\textsuperscript{134} \textit{Belden}, supra note 17, at 51.

\textsuperscript{135} \textit{Id}. at 51–52.

\textsuperscript{136} \textit{Id}. at 51–52.


\textsuperscript{138} 531 F.3d 896 (D.C. Cir. 2008).

CSAPR. The court held 2–1 that the rule should be vacated and remanded. Judge Brett M. Kavanaugh, writing for the majority, identified several problems in CSAPR. First, echoing North Carolina v. EPA, the court held that “[the] EPA may not force a State to eliminate more than its own ‘significant’ contribution to a downwind state’s non-attainment.” The court held that the EPA did not take each state’s individual contribution to the nonattainment of downwind states into consideration when it calculated each state’s emissions budget. Furthermore, the court held that the EPA must allocate the burden of controlling air pollution amongst upwind states in a way that is directly proportional to each upwind state’s individual contribution to a downwind state’s nonattainment. Pursuant to this requirement, the court noted that upwind states cannot be forced to “share the burden of reducing other upwind states’ emissions.” Second, Judge Kavanaugh held that the EPA incorrectly applied the holding of Michigan v. EPA to CSAPR by allowing cost considerations to determine emissions budgets. According to Judge Kavanaugh, the EPA may consider costs in a decision to lessen emission requirements on states, but it may not consider cost efficiency in deciding to impose stricter standards on states. Finally, the court held that the EPA’s “FIP-first” approach under CSAPR, where the EPA required state adherence with an EPA drafted FIP before states were allowed an initial opportunity to create their own SIPs, was impermissible. The court held that the FIP-first approach by the EPA was an “unprecedented application of the good neighbor provision,” and that the CAA required that the states at least be given a chance to draft their own SIPs.

Judge Rogers dissented, arguing Judge Kavanaugh’s opinion represented a “trampling on this court’s precedent on which the [EPA] was entitled to rely in developing the Transport Rule rather than be blindsided by arguments raised for the first time in this court.” Judge Rogers further explained, “the result is the endorsement of a ‘maximum delay’ strategy for regulated entities, rewarding States and industry for

141. Id. at 20.
142. Id. at 24–25.
143. See id. at 26–27.
144. Id. at 20 (quoting North Carolina v. EPA, 531 F.3d 896, 921 (D.C. Cir. 2008)).
145. Id. at 27.
146. Id. at 25.
147. Id. at 28.
148. Id.
149. Id. at 38.
cloaking their objections throughout years of administrative rulemaking procedures and blindsiding the agency with both a collateral attack on its interpretation of Section 110(a) and an objection raised for the first time in this court.\footnote{150}

On October 5, 2012, the EPA filed a petition to rehear the case. In its petition, the EPA stated that:

The panel’s decision upends the appropriate relationship of the judicial, legislative, and executive branches of government by rewriting clear legislation, ignoring explicit statutory jurisdictional limits, and stepping into the realm of matters reserved by Congress and the courts to the technical expertise of administrative agencies. Especially in light of the enormous public health and regulatory significance of the Transport Rule, these clearly are issues of “exceptional importance.”\footnote{151}

On January 24, 2013, the D.C. Circuit denied the EPA’s and the American Lung Association’s requests for a rehearing of \emph{EME Homer City Generation, L.P. v. EPA, No. 11-1302 (D.C. Cir. Jan. 24, 2013)}\footnote{152}. Following the denial of rehearing, the EPA and the American Lung Association filed Petitions for Writs of Certiorari to the U.S. Supreme Court. The EPA’s petition in particular came as a surprise to many observers who believe that the risks of an adverse ruling in the Supreme Court outweigh both the potential of a successful appeal and the benefit of maintaining CSAPR.\footnote{153} On June 24, 2013, the Supreme Court granted certiorari and agreed to hear the appeal.\footnote{154} Oral arguments are scheduled for fall of 2013 with a decision expected in spring of 2014.\footnote{155}

\footnote{150. \emph{Id.} at 60.}
\footnote{151. Petition for Rehearing En Banc at 12, EME Homer City Generation, L.P. v. EPA, No. 11-1302 (D.C. Cir. Oct. 5, 2012), \emph{available at} http://www.edf.org/sites/default/files/EPA_Petition_to_Reconsider_Cross_State_Ruling.PDF.}
\footnote{154. Lawrence Hurley, \emph{U.S. Justices to Hear EPA Appeal over Air Pollution Rule}, \emph{YAHOO NEWS} (June 24, 2013), http://news.yahoo.com/supremecom-court-justices-hear-epa-appeal-over-air-134238381.html.}
\footnote{155. \emph{See id.}.}
V. UNCERTAINTY: PREDICTING THE OUTCOME OF THE APPEAL TO THE U.S. SUPREME COURT

The grant of certiorari lists three questions to be presented before the court: (1) whether the court of appeals had jurisdiction to consider the challenges; (2) whether states can be exempt from adopting SIPs until after the EPA adopts a rule quantifying each state’s interstate pollution obligations; and (3) whether the EPA’s method of determining each state’s significant contribution was wrongfully rejected.156

The first question encompasses the issue raised in Judge Roger’s dissent. Specifically, the EPA argues that objectors to CSAPR “waived” the ability to challenge the FIP-first policy and the EPA’s determination of “significant contribution” when they failed to raise those issues in administrative proceedings before the EPA in 2010 and 2011.157 The EPA argues that, pursuant to 42 U.S.C. § 7607(b), the objectors were precluded from challenging the FIP-first and significant contribution determination sixty days after the EPA finding (rejecting the SIPs of states subject to CSAPR as inadequate) was published in the Federal Register.158 The second question asks whether the EPA is required to promulgate a rule quantifying each state’s interstate pollution obligation before the EPA can require a State to develop a SIP to address those pollution obligations. The EPA argues that no such requirement exists in the CAA, and that states are capable of doing their own air modeling and thus able to determine their own good neighbor obligations.159 Finally, the third question asks whether the EPA’s method of calculating significance, which theoretically could force states to reduce pollution more than their contribution to another state’s nonattainment, is permissible. The EPA argues that the term “significant” is ambiguous and thus should be afforded deference under Chevron U.S.A., Inc. v.

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157. Brief for the Federal Petitioners at 34, EPA v. EME Homer City Generation, L.P., Nos. 12-1182 and 12-1183 (U.S. Sept. 4, 2013), 2013 WL 4761309, at 19; see also 42 U.S.C. § 7607(d)(7)(B) (2012) (“only objection to a rule or procedure which was raised during the period of public comment . . . may be raised during judicial review”).

158. Brief for the Federal Petitioners, supra note 157 at 34.

159. See id. at 29.
and that its approach is consistent with the holding of *Michigan v. EPA.*

There are several issues with the EPA’s arguments. First, the EPA’s waiver argument is invalid because objectors did appear to raise the issue in comments to CSAPR and CAIR within the Federal Register, and the same issues of FIP-first and significant contribution were central to the issues in *North Carolina v. EPA.* Furthermore, the EPA’s argument creates a catch-22 whereby objectors found to have insufficient SIPs were tasked with either revising their SIPs to comply with unknown standards or objecting to the finding of deficiency in bad faith. Finally, any objection to a hypothetical rule would not yet be ripe for review as it was not yet a final agency action.

The EPA’s second argument builds off this conundrum. The EPA argues that it can force states to make reductions without quantifying what reductions the states need to make, but such an approach violates the cooperative federalism principles embedded in the CAA. The EPA may only issue an FIP to “fill all or a portion of a gap or otherwise correct all or a portion of an inadequacy in a [SIP].” The FIP process is intended to create a Federal backstop authority and thus the EPA must allow states to take the first try at developing a SIP. The EPA cannot possibly expect states to create an adequate SIP if the criteria for adequacy have not yet been defined. Similarly, the EPA should not expect states to take their own shot in the dark using publicly available data to comply with a rule that has not yet been developed.


163. EPA had yet to promulgate CSAPR at the time.

164. None of the CSAPR states dispute that they are violating the good neighbor provision, the issue is by how much.


166. *See* *Train v. NRDC*, 421 U.S. 60, 79 (1975) (“The Act gives [EPA] no authority to question the wisdom of a State’s choices of emission limitations if they are part of a plan which satisfies the standards of [42 U.S.C. § 7410(a)(2)].”).

The EPA’s final argument is contradictory to the plain meaning of the CAA. Under the good neighbor provision, states are prohibited from emitting pollution that “contribute[s] significantly to nonattainment in, or interfere[s] with maintenance of,” a NAAQS in another state. CSAPR allows the EPA to force a state to overcontrol, thereby forcing that state to eliminate more than its individual significant contribution to another state’s nonattainment. The EPA argues that this interpretation is permissible because the word “significant” is ambiguous and can be reasonably interpreted to include a portion of emissions larger than that portion of a state’s emissions which has been determined to actually contribute to a downwind state’s nonattainment status. This interpretation, however, lies contradictory to the plain meaning of the statute. The CAA prohibits individual states from creating SIPs that allow emissions to significantly contribute to nonattainment. Thus, the duty to create a compliant SIP is an individual duty, not a collective duty shared by several states. Because Congress intended the duty to create compliant SIPs to be an individual duty, the term “significant” cannot be interpreted to include emissions for which a state is not individually responsible. Thus, even if the Supreme Court found the word “significant” to be ambiguous, a regulation that interprets significant as including over controlling would likely be invalid under step two of Chevron.

Also contrary to the EPA’s claims, Michigan v. EPA does not support the interpretation that significant means more than an individual state’s contribution to another state’s nonattainment. While the Michigan court found the word “significant” to be ambiguous, the court did not hold that this ambiguity permitted the EPA to force a state to reduce more than its own contribution to another state’s nonattainment. Instead, the court held that the term “significant” could include an amount that was less than a state’s actual contribution to nonattainment.

172. 467 U.S. at 844–45 (stating that agency constructions of statutory language must be reasonable).
174. See id.
Given the weaknesses of the EPA’s arguments, it is unlikely that the agency will prevail before the Supreme Court and that CSAPR will survive. Even the EPA does not have much confidence in its arguments before the Supreme Court, as evidenced by the fact that the EPA has already begun developing a new rule to replace CSAPR.\(^\text{175}\) Regardless of the outcome of the Supreme Court appeal, CSAPR is a failure. CSAPR was specifically designed to withstand judicial scrutiny, but instead it became just the latest in a series of EPA air pollution rules mired in years of delays and costly legal battles. This Note argues that even success at the Supreme Court should not deter the EPA from reexamining air transport policy in United States and the search for quicker, cheaper, and legally stronger approaches to regulation. To begin this process, two questions must be addressed in the aftermath of \textit{EME Homer}: first, why is the EPA unable to promulgate a permissible air transport rule; and second, what can and should the EPA do going forward?

\section*{VI. The Reasons Why the EPA Has Failed to Promulgate a Successful Air Transport Rule and How It Should Change Its Approach}

\subsection*{A. The Problem}

The failure of CAIR and CSAPR illustrates three fundamental problems in air transport policy: the increasing politicization of air pollution policy, the EPA’s failure to adequately engage stakeholders, and the inadequacy of the CAA as currently enacted to address interstate air pollution transport. Air pollution policy enjoyed bipartisan support from the enactment of the Air Pollution Control Act in 1955 up to the CAAA in 1990. The CAAA, for example, passed 401–21 in the House of Representatives, 89–11 in the Senate, and was signed by President George H.W. Bush.\(^\text{176}\) Since the passage of the CAAA, over twenty years ago, not one piece of air pollution legislation has been signed into law. While this erosion of bipartisanship is evident beyond the context of air pollution policy, the highly publicized implosions of the Clear Skies Act

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of 2003 and the American Clean Energy and Security Act of 2009 illustrate the particularly divisive nature of air pollution policy.

The inability of Congress to pass a legislative solution to air transport has forced the EPA to address the problem through regulation. CAIR, for example, was the direct product of the failure of the Clear Skies Act. Unfortunately for the EPA, the D.C. Circuit’s jurisprudence has become increasingly less deferential during the same time that the political process has further broken down. Under the CAA, the D.C. Circuit is the exclusive venue for review of regulations that either apply nationally or apply locally but have nationwide scope or effect. In practice, this means any challenge to an air transport regulation will be heard in the D.C. Circuit. Since the Supreme Court’s decision in *Chevron v. NRDC*, the D.C. Circuit has been more inclined than any of the other circuits to reverse an agency decision. Even as the national trend for reversal of agency decisions has been declining, the likelihood of the D.C. Circuit reversing an agency decision is increasing. Over the past ten years many prominent EPA regulations promulgated under the stationary sources provisions of the CAA have met their end in the D.C. Circuit. In addition to the failure of CAIR and CSAPR, the D.C. Circuit has vacated revisions to the NAAQS for PM$_{2.5}$, the Clean Air Mercury Rule (“CAMR”), rules for controlling hazardous air pollutants (“HAPs”) from boilers (Boiler maximum achievable control technology (“MACT”)), rules for controlling HAPs from commercial and industrial solid waste incineration units (“CISWI”), rules for

177. The Clear Skies Act was an amendment to the Clean Air Act, proposed by President George W. Bush and modeled after the CAAA of 1990. The amendment was introduced into both chambers but was killed when it stalled in the Senate Environment and Public Works Committee.

178. Waxman-Markey was an amendment to the Clean Air Act designed to serve a comprehensive response to climate change. The bill passed in the House of Representatives 219–212, but never received a vote in the Senate.


182. Id. (noting that the reversal rate of the D.C. Circuit from 1980 through 1985 was 14.22% but has been above 22.93% since. Meanwhile, the national reversal rate was 19.22% from 1980 through 1985 and has been slightly above 15% since).

183. See New Jersey v. EPA, 517 F.3d 574, 583 (D.C. Cir. 2008).


185. Id.
cement emissions,\textsuperscript{186} and others. It is also important to note that this nonexhaustive list of failed regulations includes those promulgated under both the Bush and Obama Administrations.

The EPA also shares responsibility for the failure of CAIR and CSAPR. The EPA has done a poor job of lobbying Congress, the public, environmental organizations, and industry for support in crafting air regulations and leveraging what support it already has. Voters are generally very supportive of air regulations. When asked, voters favored the promulgation of CSAPR to the status quo sixty-seven percent to sixteen percent.\textsuperscript{187} Even self-identified Republican voters, who are thought to be generally opposed to air regulation, favored the rule forty-eight percent to thirty percent.\textsuperscript{188} In addition, the electric utility industry has generally been supportive of regulations containing air trading programs, such as CAIR and CSAPR. When it comes to air pollution regulations, regulated entities want two things: flexibility and a clear, durable national price signal.\textsuperscript{189} Air trading mechanisms, such as those found in the NO\textsubscript{X} SIP Call, CAIR, and CSAPR, are the best way to provide for these needs. Indeed, when CAIR was invalidated, many electric utilities pleaded with the D.C. Circuit to rehear the case.\textsuperscript{190} The EPA must communicate to regulated parties that if they want the flexibility and durability of air trading programs, they need to show their support of programs such as CAIR and CSAPR. As discussed below in detail, the only plausible alternative to CSAPR is not a weaker air trading program, but a more stringent, less flexible SIP Call that will undoubtedly be more burdensome and costly than any trading program. Thus, it is in the best interest of electric utilities to defend the EPA’s ability to promulgate air trading regulations. The EPA has failed to make this clear to both the D.C. Circuit and regulated parties. While the EPA may have lost its ability to enlist electric utilities to come to its defense in support of CSAPR, the defeat of CSAPR has created an opportunity to powerfully incentivize electric utilities and other stakeholders to lobby for legislative reform.

The final and perhaps most significant problem illustrated by the failure of CAIR and CSAPR is that the CAA is simply inadequate as

\textsuperscript{186} See Portland Cement Ass’n v. EPA, 665 F.3d 177 (D.C. Cir. 2011).
\textsuperscript{188} Id.
\textsuperscript{190} See Wagman, supra note 121.
currently enacted to address the problem of persistent ozone nonattainment and interstate air pollution transport. As illustrated by the discussion of the history of the CAA above, Congress has struggled to create mechanisms to effectively address air transport as an environmental, economic, and regulatory problem. Congress first attempted to address these problems through regional cooperation in the Air Quality Act of 1967, but states proved unwilling to cooperate and the Act lacked any “teeth” to compel them to either cooperate or individually pursue emissions reductions. Congress’s next attempt, the Clean Air Act Amendments of 1970, had the necessary enforcement “teeth,” but created perverse incentives to comply with individual state emission requirements by exporting air pollution through air transport. Congress responded with the Clean Air Act Amendments of 1977, which strengthened the good neighbor provision to combat the perverse incentive it had created in the 1970 Act. However, Congress’s efforts once again were insufficient to compel action. Even with the strengthening of Section 110(a)(2)(D), the provision remained too flexible to force EPA action, and too narrow to be effectively used in the courts. Congress’s only real success in combating air transport has been the ARP established by the CAAA in 1990. The ARP’s effectiveness is in part due to the fact that Congress specifically laid out how the program was to be implemented and administered by the EPA. This forced the EPA to actually implement and administer the program and shielded the program from judicial scrutiny. Unfortunately, the ARP ran its course, and the existing legal framework is not working to significantly address the acid rain and air transport problem.191 Importantly, Congress did not address NOx transport in the ARP; instead Congress left the EPA with only the good neighbor provision and limited incentives for regional cooperation192 to address the problem. While Congress has clearly recognized the problem of interstate air pollution, it has given the EPA ineffective tools to adequately address it.193

There are essentially two mechanisms in the CAA to address air transport: Sections 110(a)(2)(D) and 126(b). Section 110(a)(2)(D), or the good neighbor provision, requires states to submit SIPs that include adequate provisions prohibiting “any source or other type of emissions


192. Primarily the creation of the OTC.

activity” within a state from emitting any air pollutant in amounts that “contribute significantly to nonattainment in, or interference with maintenance by,” any other state of any primary or secondary NAAQS.\textsuperscript{194} Section 110(k)(5) gives the EPA the authority to require states to revise SIPs that are “substantially inadequate” through a process known as a “SIP Call.”\textsuperscript{195} SIPs that allow a state to violate the good neighbor provision are substantially inadequate, and thus authorize the EPA to issue a SIP Call that requires the offending state to revise its SIP. The EPA may initiate a SIP Call on its own accord or in response to a Section 126(b) petition. Section 126(b) allows states to petition the EPA to make a finding that “any major source or group of stationary sources” in an upwind state is in violation of the good neighbor provision.\textsuperscript{196} The EPA is required to make a finding in response to a Section 126 petition within sixty days of receipt.\textsuperscript{197} If the EPA makes a finding, no new or modified sources may be built or operated, and existing sources must be shut down in three months in the upwind states, unless the EPA directly regulates these sources by establishing emissions limitations. In practice, the severity of a Section 126 finding means that the EPA never acts on the authority given to it under Section 126. Instead the EPA publishes a rule that “harmonizes” pending Section 126 findings with a SIP Call.\textsuperscript{198}

There are two major problems inherent in the Section 110 and 126 mechanisms. First, SIP Calls, although firmly grounded in CAA authority, have been prone to delay tactics through judicial challenge.\textsuperscript{199} While the SIP Call is hung up in the inevitably long judicial process, the states in nonattainment, due to air transport, miss their attainment deadlines and are subject to severe administrative penalties mandated by the CAA.\textsuperscript{200} A second and more fundamental problem is that a SIP Call is by its nature a very blunt regulatory instrument. One of the most troublesome issues of air transport is that the costs and benefits of air pollution transport mitigation are concentrated geographically. Due to the upwind/downwind nature of air transport, almost all of the potential benefits of air transport mitigation lie in the Northeastern states while all costs lie in the Midwestern states. This poses a political problem in

\begin{itemize}
\item[195.] \textit{Id.} § 7410(k)(5).
\item[196.] \textit{Id.} § 7426(b).
\item[197.] \textit{Id.} § 7426(c).
\item[199.] See\textit{Michigan v. EPA}, 213 F.3d 663 (D.C. Cir. 2000).
\item[200.] Caplan, \textit{supra} note 193, at 189–90.
\end{itemize}
determining what state interests are more important, Northeastern or Midwestern.\textsuperscript{201}

Furthermore, a SIP Call forces a state to reduce emissions without regard to cost.\textsuperscript{202} CSAPR and CAIR were promulgated pursuant to the EPA’s good neighbor and SIP Call authority, but there is no explicit authority in the good neighbor provision that allows the EPA to implement an air trading program or any other specific policy\textsuperscript{203} as a SIP Call compliance mechanism. As highlighted by the \textit{EME Homer} and \textit{North Carolina} courts, using air trading as a compliance mechanism for a SIP Call is also problematic because the very nature of air trading means some states will be permitted to emit more than their emissions budgets through the purchase of allowances, and some states will overcontrol their emissions by voluntarily installing new controls and selling the excess allowances. The \textit{EME Homer} court held that a downwind state may not be forced\textsuperscript{204} to overcontrol and that an upwind state may share the collective burden of control only through proportional allotment of their individual contributions to the downwind state’s nonattainment.\textsuperscript{205} While the decisions in \textit{EME Homer} and \textit{North Carolina} do not explicitly ban the use of an air trading mechanism, the realities of air modeling\textsuperscript{206} and the narrowness of their holdings make it practically impossible for the EPA to develop an air trading program that could meet the requirements laid out by the D.C. Circuit. Thus, the cost-effective compliance strategy of air trading is practicably impermissible under the CAA unless specifically authorized by statute like the ARP. In practice this means that any SIP Call promulgated by the EPA, through its own action under Section 110(k)(5) or in response to a Section 126 petition, will require inflexible and harsh emissions cuts from states violating the good neighbor provision.

\begin{itemize}
\item \textsuperscript{201} \textit{Id.} at 206.
\item \textsuperscript{202} Some cost effectiveness analysis is allowed in a SIP Call. \textit{See} Michigan v. EPA, 213 F.3d 663, 677 (D.C. Cir. 2000).
\item \textsuperscript{203} \textit{See} Virginia v. EPA, 108 F.3d 1397, 1414 (D.C. Cir. 1997) (holding that an EPA rule promulgated under the good neighbor provision that forced the OTC states to adopt California’s low emission vehicle standards (LEV) to meet Ozone NAAQs was an impermissible exercise of the EPA’s authority).
\item \textsuperscript{204} Through either EPA mandate or market realities. \textit{See} EME Homer City Generation, L.P. v. EPA, 696 F.3d 7, 25 (D.C. Cir. 2012).
\item \textsuperscript{205} \textit{Id.} at 35–40.
\item \textsuperscript{206} \textit{See} Federal Implementation Plans: Interstate Transport of Fine Particulate Matter and Ozone and Correction of SIP Approvals, 76 Fed Reg. 48,207, 48,231 (Aug. 8, 2011) (stating that “[n]ational rulemakings are not attainment demonstrations” and that the EPA is “not able to perform fine scale analyses for each area”).
\end{itemize}
B. The Way Forward

Given the holding of the *EME Homer* court, it is practically impossible to rewrite CSAPR into an acceptable rule. Furthermore, the ruling of the court essentially precludes the promulgation of any rule tailored to address interstate air pollution that contains air trading as a compliance mechanism under the CAA as currently enacted. In the short term, this leaves the EPA with two options going forward: do nothing or issue a SIP Call.

CAIR remains in place in the aftermath of *EME Homer*. If CAIR continues to remain in place following the Supreme Court appeal of *EME Homer*, Phase 2 of the program will begin in 2015, and it has a more stringent NO\textsubscript{X} and SO\textsubscript{2} emissions cap.\textsuperscript{207} In addition, the EPA’s Mercury and Air Toxics Standards (“MATS”) are driving SO\textsubscript{2} and NO\textsubscript{X} reductions through caps on mercury\textsuperscript{208} emissions at a faster rate than either CAIR or CSAPR could have had they been upheld.\textsuperscript{209} *North Carolina v. EPA*, however, ordered the EPA to replace CAIR by an acceptable rule and explicitly did not grant an indefinite period of time for the EPA to develop an acceptable rule.\textsuperscript{210} Indeed, the D.C. Circuit has signaled that it is losing patience with the EPA and its attempts to develop an acceptable rule.\textsuperscript{211} Therefore, if the EPA does not act, CAIR will eventually be vacated and the NO\textsubscript{X} SIP Call will become the law of the land.\textsuperscript{212} Such an event would be a significant defeat for environmental protection.\textsuperscript{213}

Instead of waiting for the courts to invalidate CAIR, the EPA should pursue its other short-term option and go on the offensive. The decision in *EME Homer* and the likely outcome of the Supreme Court appeal leave one regulatory option in air transport mitigation to the EPA. Under *EME Homer*, the EPA has the authority to issue a SIP Call pursuant to Section 100(k)(5) and demand emissions cuts without the availability of


\textsuperscript{208} Mercury, SO\textsubscript{2} and NO\textsubscript{X} are co-pollutants, which in practice means mitigation of one often leads to the mitigation of the other two.

\textsuperscript{209} Barclay et al., *supra* note 207.

\textsuperscript{210} 531 F.3d at 929–30.

\textsuperscript{211} Dan Farber, *The D.C. Circuit’s Activist Ruling on Interstate Pollution*, LEGAL PLANET (Sept. 5, 2012), http://legalplanet.wordpress.com/2012/09/05/the-d-c-circuits-activist-ruling-on-interstate-pollution/.

\textsuperscript{212} *North Carolina*, 531 F.3d at 930.

\textsuperscript{213} The NO\textsubscript{X} SIP Call’s emissions caps are significantly higher than CAIR’s.
an air trading program as a compliance mechanism. The *Michigan v. EPA* decision can serve as a drafting guide for the promulgation of such a rule.

First, to comply with the decision in *EME Homer* the EPA would have to conduct a detailed state-by-state modeling that would determine each state’s individual contribution to a downwind state’s nonattainment of NAAQS.\(^{214}\) The NO\(_x\) SIP call and the decision in *Michigan v. EPA* provide examples of how to permissibly conduct such modeling. The NO\(_x\) SIP Call, for example, used models that “predicted the impact of upwind emissions on downwind ozone levels using three measures: (1) the absolute magnitude of the ozone contribution from an upwind to a downwind state; (2) the relative magnitude of the upwind state’s contribution compared to the downwind state’s ozone level; and (3) the frequency of the contributions.”\(^{215}\)

Next, the EPA would need to determine which upwind sources were contributing “significantly” to ozone levels in downwind states. Under the holding of *EME Homer*, the EPA may adjust the significance finding downward for cost considerations, but may not force a state to “exceed the mark.”\(^{216}\) The NO\(_x\) SIP Call once again provides a permissible model of how to accomplish this task. The NO\(_x\) SIP Call considered three factors for determining the significance of a state’s contribution to nonattainment: (1) “collective contributions,”\(^{217}\) (2) frequency of a state’s contribution; and (3) consideration of pollution control costs.\(^{218}\) The third factor is important because it allows some cost consideration to be incorporated into the otherwise blunt instrument of a SIP Call. The consideration of costs is controversial,\(^{219}\) but cost considerations in the manner conducted under the NO\(_x\) SIP Call have been endorsed by the D.C. Circuit in both *Michigan v. EPA* and *EME Homer*. The third step is for the EPA to determine an emissions budget based off of the air modeling data and make significant contribution findings for each of the states that are in violation of the good neighbor provision. The final step

\(^{214}\) See *EME Homer City Generation, L.P. v. EPA*, 696 F.3d 7, 18 (D.C. Cir. 2012).


\(^{216}\) *EME Homer*, 696 F.3d at 18 (citing *North Carolina*, 531 F.3d at 921).

\(^{217}\) A recognition that “while a single state’s emissions, in absolute terms, might be contributing relatively small amounts of ozone downwind, the EPA determined that those emissions might nevertheless be contributing significantly to another state’s ozone nonattainment when combined with the emissions of other states.” McCubbin, *supra* note 215, at 54.

\(^{218}\) See id.

\(^{219}\) See id.
is to have the states devise their own methods for meeting that emissions budget and publish those methods in a revised SIP.

The EPA’s administrative costs for such an approach would likely be very low, and the environmental benefits would likely be equal to (or greater than) they would be under a trading program. Furthermore a rule enacting such a SIP Call could be enacted relatively quickly. Perhaps the greatest benefit of enacting a SIP Call in this manner is that the authority to do so is firmly rooted in the CAA under Section 110(k)(5), making such a rule easily defensible in court. The downside of a SIP Call approach without flexible mechanisms is that the burden on states and electric utilities is extremely high and thus SIP calls are spectacularly unpopular.

While the burdensome and unpopular approach of a SIP Call may be detrimental, it is also a tremendous opportunity for the EPA. Very few parties believe that a SIP Call is the best solution to air pollution transport; SIP Calls are just too blunt of a regulatory instrument. Given the holdings of North Carolina and EME Homer Generation, legal scholars on both the left and right believe that a legislative solution akin to the Acid Rain Trading Program is the best solution going forward.220 Right now, however, there is little incentive for stakeholders to press Congress to enact legislative reform. Proposing an onerous SIP Call rule as outlined above, would create a powerful incentive for stakeholders to come together and pressure Congress to take action. The EPA would undoubtedly draw criticism for proposing such a SIP Call, but the EPA has a great opportunity to frame the issue and emphasize the role of the D.C. Circuit and Congress in creating the problem.

If the EPA publishes a notice of proposed rulemaking for a SIP Call to comply with EME Homer, the EPA must clearly communicate to stakeholders that the agency’s hands are tied by the tools given to it under the CAA and the inflexibility of the D.C. Circuit. The EPA could then work with stakeholders to help draft a legislative solution. If the SIP Call is challenged in court, the EPA could assert that the SIP Call was forced by the D.C. Circuit’s inability to articulate a workable solution. The court would then be forced to either uphold the SIP Call or provide a less burdensome solution that is permissible under the CAA.

VII. CONCLUSION

The holdings of *EME Homer Generation, L.P. v. EPA* and *North Carolina v. EPA*, the likely outcome of the *EME Homer* appeal, the current politicization of air pollution policy, the limited effectiveness of the Clean Air Act in addressing interstate air pollution, and the EPA’s own failure to effectively engage stakeholders have left the EPA with nothing but the most burdensome of regulatory options to address air pollution transport. The use of a SIP Call under Section 110(k)(5) should not, however, be seen as a regulatory liability by the EPA, but rather as an opportunity to rally stakeholders to achieve what everyone agrees is the preferable solution: a legislative amendment to the Clean Air Act.