Cap and Trade Programs Under the Clean Air Act: Lessons from the Clean Air Interstate Rule and the NOx SIP Call

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I. INTRODUCTION

Air pollutants transported from state to state by wind patterns pose some of today’s most difficult challenges in protecting the public health and environment under the Clean Air Act.¹ Harmful particles of soot, ground-level ozone (also known as smog), and the greenhouse gases that are causing global climate change often travel hundreds of miles from their origins.² Because the downwind states suffering the adverse consequences from these transboundary pollutants cannot exercise jurisdiction over the upwind sources, the states depend on the federal government for assistance.³

Nearly a decade ago the U.S. Environmental Protection Agency (EPA or the Agency) adopted its first rule to combat interstate ozone pollution. That rule, the NOₓ SIP Call, was so named because it required 23 states to adopt revised “state implementation plans” (SIPs) in an effort to reduce emissions of nitrogen oxides (NOₓ) and volatile organic compounds (VOCs) that together form ground-level ozone.⁴ The SIP Call was issued under section 110(a)(2)(D) of the Clean Air Act,  

1. William H. Rodgers, Jr., ENVIRONMENTAL LAW § 3.16 (2009) (“interstate pollution promises to retain its reputation as one of the more intractable problems of air quality”).


4. Finding of Significant Contribution and Rulemaking for Certain States in the
known as the “good neighbor” provision because it requires each state to ensure that emissions from sources within its borders do not “contribute significantly” to air pollution in another state.\(^5\) EPA implemented several innovative elements in the rule, including an emissions trading program that enabled regulated entities to buy and sell NO\(_X\) emissions “allowances” under an over-arching regional limit or “cap.”\(^6\) Such “cap and trade” schemes have grown in favor because, at least in theory, they create incentives for firms to develop the most cost-effective means of reducing emissions, thereby spurring technological innovation and improving the economic efficiency of the regulatory scheme.\(^7\) While the validity of the SIP

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6. NO\(_X\) SIP Call, supra note 4, at 57,430-31 & 57,456-57.
Call’s trading scheme was not litigated, many parties challenged other innovations in the rule, including EPA’s emissions “budgets” for the states. The U.S. Court of Appeals for the D.C. Circuit rejected most of the claims and generally upheld the rule in *Michigan v. EPA.*

Despite progress under the SIP Call, air quality in many states continued to deteriorate, in significant part because of emissions from upwind jurisdictions. As a result, in 2005 EPA adopted a second, more comprehensive rule to address both NOX and sulfur dioxide (SO2) emissions through the coordinated actions of 28 states. That initiative, the Clean Air Interstate Rule (CAIR), was modeled on the NOX SIP Call and included a regional cap and trade program for NOX and another for SO2. CAIR was well recognized as one of the most important rules to improve air quality adopted by the Bush Administration, and received support from many environmental organizations and states. The regulated community,

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8. 213 F.3d 663 (D.C. Cir. 2000).

9. Rule to Reduce Interstate Transport of Fine Particulate Matter and Ozone (Clean Air Interstate Rule); Revisions to Acid Rain Program; Revisions to the NOX SIP Call, 70 Fed. Reg. 25,162 (2005) [hereinafter CAIR]. Technically, the District of Columbia is also subject to CAIR, id. at 25,167, but for simplicity this article refers to the regulated entities as the “28 states.”

10. Id. at 25,172, 25,273.

perhaps recognizing that some emissions limits were inevitable, also generally supported the rule because of the flexibility offered by the trading program.\(^{12}\)

Delivering a shocking blow, last year the D.C. Circuit struck down CAIR in its entirety in *North Carolina v. EPA*,\(^{13}\) severely disrupting EPA’s plans to rely on the rule as the anchor for many regulatory efforts in the years to come.\(^{14}\) The court held, among other things, that the cap and trade programs violated section 110(a)(2)(D),\(^{15}\) which, like much of the Clean Air Act, does not expressly authorize emissions trading.\(^{16}\) In the past, EPA faced little judicial resistance to

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\(^{12}\) Shiffman and Sullivan, *supra* note 11 (describing industries’ support for CAIR).

\(^{13}\) 531 F.3d 896 (D.C. Cir.), modified on reh’g in part, 550 F.3d 1176 (D.C. Cir. 2008).

\(^{14}\) Leora Falk, *Without ‘Foundation’ of Interstate Rule, Carbon Markets Face Uncertain Future*, 39 ENV’T REP. (BNA) 2361 (2008) (quoting Sam Napolitano, director of EPA’s Clean Air Markets Division, as saying “CAIR is the foundation of everything we are doing for air quality for the next decade”).

\(^{15}\) 531 F.3d at 907-908.

\(^{16}\) The one notable exception is the acid rain program of the 1990 amendments to the Clean Air Act, by which Congress established a cap and trade program for \(\text{SO}_2\) emissions from power plants. That program represented “the first large-scale experiment ever conducted with emissions trading,” and “has been an unmitigated success from both environmental and economic perspectives.” Cole and Grossman, *supra* note 7, at 932, 934. In fact, the success of the acid rain program has contributed to the strong interest in cap and trade programs generally.
the handful of limited trading mechanisms it developed, such as its “bubbling”
policy, even without explicit statutory authority.17 Reversing that trend, the North
Carolina opinion, striking down CAIR, potentially serves as the death knell for
emissions trading under the interstate provisions of section 110(a)(2)(D).

More generally, the North Carolina and Michigan decisions may have
profound implications for the future of cap and trade programs under other
provisions of the Clean Air Act, and not only for harmful ozone and soot, but also
for greenhouse gases. To consider those future ramifications, this article
compares and contrasts the two rules and judicial decisions to understand why the
D.C. Circuit struck down CAIR even as it upheld the SIP Call. The analysis
begins in section II with an explanation of the NOX SIP Call and the reasoning of
the Michigan court that allowed EPA to build several creative elements into the
rule. Section III provides basic information about CAIR and the North Carolina
decision, with that rule and case analyzed in more detail in section IV in light of

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Congress experimented with emissions trading in this one provision tells us little
about whether that practice is available under statutory provisions written long
before the 1990 amendments.

17. EPA’s bubbling policy was upheld in the now-famous Chevron decision.
firm to aggregate all emissions within a single plant, as if under a “bubble,” for
purposes of the “new source review” program). To be sure, bubbling did not
involve the same sort of multi-firm trades contemplated under modern cap and
trade programs, but it did involve the exchange of emission “credits” from one
regulated source to another. In a related manner, EPA adopted policies in the
1970s on emissions offsets, banking and netting (a concept similar, but not
identical, to bubbling). See Cole and Grossman, supra note 7, at 923 & n.105. In
the mid-1980s, EPA also conducted “a small-scale and temporary but highly
successful experiment in tradable rights to lead-content in gasoline.” Id. at 931.
the SIP Call and *Michigan*. Finally, section V offers lessons for cap and trade programs in the coming years. The article concludes that together the *Michigan* and *North Carolina* decisions do not entirely eliminate the Agency’s ability to implement emissions trading and other innovative measures, but restrain the Agency’s discretion with ambiguous limits that will have to be refined in subsequent rulemakings and litigation.\textsuperscript{18} The continuing uncertainties surrounding EPA’s authority highlight the difficulty of using a 40-year-old statute to implement the modern tool of emissions trading for urban smog, global climate change and other pressing air quality concerns.

II. THE NOX SIP CALL AND THE *MICHIGAN* DECISION

A. The NOX SIP Call

Issued in 1998, the NOX SIP Call required 23 upwind states, primarily in the midwest and southeast, to reduce emissions of NOX and VOCs to help abate ozone levels in downwind states along the eastern seaboard.\textsuperscript{19} The rule represented EPA’s first attempt to implement the good neighbor provision of section 110(a)(2)(D), one of the few provisions in the Clean Air Act that addresses the

\textsuperscript{18} In theory, the ambiguities could be eliminated by legislation clarifying EPA’s authority. In fact, shortly after the *North Carolina* decision, a bill was introduced to codify CAIR, but no further action was taken on it. \textit{See} S. 3469, 110th Cong., 2d Sess. (2008) (the “CAIR Reinstatement Act of 2008,” which “directed and authorized [EPA] to implement” the rule).

\textsuperscript{19} NOX SIP Call, \textit{supra} note 4, at 57,358. Some portions of this description of the SIP Call are taken from the author’s earlier analysis of that rule and the *Michigan* decision. \textit{See generally} McCubbin, \textit{supra} note 4.
interstate transport of pollution. That provision was designed to protect downwind states from air pollution released from upwind states by prohibiting “any source . . . within [a] State from emitting any air pollutant in amounts which will . . . contribute significantly” to another state’s inability to achieve the national standards for clean air.

The SIP Call began with the premise that interstate air pollution can only be addressed with multi-state efforts coordinated on a regional scale. To foster that coordination, EPA established emissions “budgets” for each state, designating the acceptable level of NOX emissions from that jurisdiction. The rule also established a model cap and trade program that allowed sources to buy and sell emissions allowances. Neither of those innovations, described more fully below,

20. Under section 176A, EPA may designate “transport regions” – areas of the country that are affected by a common interstate air pollution problem – and may establish a "transport commission" comprised of state representatives to recommend control measures for the transport region. 42 U.S.C. § 7506a. In section 184, Congress established one particular transport region: the Northeast Ozone Transport Region for twelve northeastern states and the District of Columbia. Id. § 7511c(a). In addition, section 126 allows downwind states to petition EPA to impose limits directly on upwind stationary sources that violate section 110(a)(2)(D). Id. § 7426(b)-(c).


22. See McCubbin, supra note 4, at 53-54 (discussing “collective contributions”).

23. NOX SIP Call, supra note 4, at 57,377-78, 57,439 (Table III-11).
is expressly authorized by section 110(a)(2)(D).

As the first step, EPA relied on sophisticated data from air quality modeling to determine which states’ emissions were causing increases in ozone levels in neighboring states.25 After identifying those state-to-state linkages, the Agency had to determine which upwind emissions were “significantly” contributing to those downwind ozone levels, a concept the Clean Air Act does not further clarify. EPA defined emissions as “significant” based not only on the amount of ozone an upwind state contributed to downwind areas, but also on what types of pollution sources were found in the state and whether affordable pollution controls were available for those sources.26 In particular, the Agency studied emissions control options for various facilities and determined which controls could be deemed “highly cost-effective.”27 It identified highly cost-effective controls for only a small subset of the hundreds of different types of sources that emit NOX.28 EPA then determined what types of pollution sources were found in each state, and calculated the total NOX emissions expected if those sources used whatever highly

24. Id. at 57,430-31 & 57,456-57.

25. See McCubbin, supra note 4, at 52-54 (describing air quality considerations in detail).

26. NOX SIP Call, supra note 4, at 57,377-78.

27. Id.

28. EPA determined that out of the hundreds of emitters that a state might regulate, highly cost-effective controls were available for four types of sources: (1) large boilers and turbines that generate electricity at power plants; (2) large boilers and turbines at industrial facilities; (3) cement kilns; and (4) stationary internal combustion engines (such as pipeline compressors). Id. at 57,399-402.
cost-effective controls were available. The resulting figure, which represented a subset of the state’s total NOX emissions, became the “budget” for that jurisdiction. Any NOX emissions above that level were deemed to be the “significant” contributions that had to be eliminated, and emissions at or below that level were deemed insignificant.\textsuperscript{31}

EPA did not dictate that the states actually impose the highly cost-effective controls; instead, each state could choose to regulate any number of sources with any mix of controls as long as it did not exceed its budget.\textsuperscript{32} To assist the states in meeting their budgets cost-effectively, the SIP Call established an optional cap and trade program.\textsuperscript{33} Under this scheme, a state could allocate to its sources a total number of allowances equal to the state budget. A regulated entity would then have several compliance options. It could emit NOX in the amount covered by the allowances it held; it could over-control its emissions and sell its unneeded allowances to other facilities or bank them for future use; or it could emit more NOX than covered by its allowances and buy more from other facilities to cover the excess. As a result, while emissions in some states might be higher than their budgets, emissions in other states might be lower than the budgets, so that throughout the entire region the total emissions would not exceed the cap.

\begin{itemize}
\item \textsuperscript{29} Id. at 57,403.
\item \textsuperscript{30} Id. at 57,377-78.
\item \textsuperscript{31} Id.
\item \textsuperscript{32} Id. at 57,378.
\item \textsuperscript{33} Id. at 57,430-31 & 57,456-57.
\end{itemize}
B. MICHIGAN

In the Michigan case, eight of the 23 upwind states along with dozens of industries challenged the SIP Call.\textsuperscript{34} The litigants did not raise the particular question of the trading scheme’s viability, and instead challenged two fundamental aspects of the rule.

First, the petitioners argued that EPA’s identification of significant emissions improperly focused on the availability of highly cost-effective pollution controls, rather than air quality data.\textsuperscript{35}

\textsuperscript{34} Michigan, 213 F.3d at 667-68.

\textsuperscript{35} See McCubbin, supra note 4, at 57.
As a result, they asserted, EPA’s rule lead to anomalous results. Two states releasing the same amount of ozone precursors to downwind states nevertheless could be seen as contributing dramatically different “significant” amounts of those pollutants by EPA’s definition. To take a simple example, assume Indiana’s NO$_X$ emissions were produced primarily by large power plants, for which highly cost-effective controls were available, while Kentucky’s arose primarily from automobiles, for which highly cost-effective controls were supposedly not available. EPA would require Indiana to eliminate its emissions, but not Kentucky, even if both states contributed equally to downwind ozone levels, as shown by air quality data.\textsuperscript{36}

The \textit{Michigan} majority rejected the petitioners’ concerns about anomalous results and the illegality of the cost considerations. It held that although Congress had not explicitly authorized EPA to consider the control costs, nothing in the text of section 110(a)(2)(D), the overall structure of the Clean Air Act, or the Act’s legislative history indicated that Congress intended to bar EPA from doing so.\textsuperscript{37} The Agency, therefore, could exercise its discretion under the statute. That was a controversial decision, with Judge David B. Sentelle dissenting because, in his view, EPA could not consider pollution control costs when identifying significant emissions unless Congress expressly provided that authority.\textsuperscript{38}

As their second main challenge to the NO$_X$ SIP Call, the petitioners argued that EPA violated the states’ rights under the cooperative federalism mandated by the

\begin{itemize}
\item \textsuperscript{36} \textit{Id.} at 56.
\item \textsuperscript{37} 213 F.3d at 679.
\item \textsuperscript{38} \textit{Id.} at 695 (Sentelle, J., dissenting).
\end{itemize}
Clean Air Act.\textsuperscript{39} Under that scheme, the Agency cannot compel states to impose any particular control scheme. Instead, each state may choose which sources to regulate and which measures to adopt, and EPA may not question a state’s choices as long as the state comes into compliance with the national standards for clean air.\textsuperscript{40}

Although the state petitioners claimed that the SIP Call effectively required them to impose the highly cost-effective controls on which EPA had based the states’ emissions budgets, the \textit{Michigan} court disagreed.\textsuperscript{41} It found the states could still meet the budgets even if they chose not to implement the highly cost-effective controls. State governments could rely on programs to reduce NO\textsubscript{X} emissions from automobiles, for instance, which were still \textit{reasonably} cost-effective, even if not \textit{highly} cost-effective.\textsuperscript{42} In sum, \textit{Michigan} found flexibility in the statute that allowed EPA to develop an innovative approach for addressing the interstate transport of air pollution.\textsuperscript{43}

\begin{thebibliography}{99}
\bibitem{39} Id. at 685-88.
\bibitem{41} 213 F.3d at 685-88.
\bibitem{42} Id. at 688.
\bibitem{43} \textit{See also} Appalachian Power Co. v. EPA, 249 F.3d 1032 (D.C. Cir. 2001)
\end{thebibliography}
III. THE CLEAN AIR INTERSTATE RULE AND THE NORTH CAROLINA DECISION

Unfortunately, the NO\textsubscript{X} SIP Call proved inadequate to remedy the growing interstate pollution problems. Concentrations of ground-level ozone and its NO\textsubscript{X} and VOC precursors continued to increase.\textsuperscript{44} Concentrations of fine soot particles, which had not been addressed by the NO\textsubscript{X} SIP Call, also endangered the public health in many states. In response, the Bush Administration urged Congress to adopt legislation known as the Clear Skies Act that would have established an interstate cap and trade program for NO\textsubscript{X}, SO\textsubscript{2} and mercury (another pollutant of concern).\textsuperscript{45} This bill, one of the Bush Administration’s signature environmental legislative initiatives, was not well received by many states and the environmental community, who believed, among other things, that the emissions targets were not sufficiently stringent.\textsuperscript{46} In the meantime, to pressure EPA into adopting a more

\begin{itemize}
\item \textsuperscript{44} See Pamela Najor, \textit{Report Says Major Switch from Coal to Gas Would Achieve Reductions in Key Pollutants}, 31 ENV’T REP. (BNA) 2459 (Nov. 24, 2000) (environmental organization urging dramatic cuts in SO\textsubscript{2}, NO\textsubscript{X}, mercury and carbon dioxide).
\item \textsuperscript{45} See Pamela Najor, \textit{Report Says Major Switch from Coal to Gas Would Achieve Reductions in Key Pollutants}, 31 ENV’T REP. (BNA) 2459 (Nov. 24, 2000) (environmental organization urging dramatic cuts in SO\textsubscript{2}, NO\textsubscript{X}, mercury and carbon dioxide).
\item \textsuperscript{46} See Pamela Najor, \textit{Report Says Major Switch from Coal to Gas Would Achieve Reductions in Key Pollutants}, 31 ENV’T REP. (BNA) 2459 (Nov. 24, 2000) (environmental organization urging dramatic cuts in SO\textsubscript{2}, NO\textsubscript{X}, mercury and carbon dioxide).
\end{itemize}
aggressive regulatory scheme, the state of North Carolina petitioned the Agency under section 126 of the Clean Air Act, a corollary to section 110(a)(2)(D), asking EPA to directly regulate the sources in upwind states that were adversely affecting North Carolina’s air quality.47 The Agency initially resisted, but as it became clear that Congress would not pass the Clear Skies Act, EPA recognized that it would have to act.48 Preferring to rely on coordinated multi-state actions rather than direct federal control of sources, EPA denied the section 126 petitions and adopted CAIR to achieve regional emissions reductions similar to those under the

requirements. See David Whitman, Partly Sunny: Why Enviros Can’t Admit That Bush’s Clear Skies Initiative Isn’t Half Bad, WASHINGTON MONTHLY (December 2004), available at www.washingtonmonthly.com/features/2004/0412.whitman.html (last visited Oct. 13, 2008) (describing criticism that “Clear Skies was worse than inadequate – it was a dangerous, dishonest bill that the EPA itself knew would result in more deaths and pollution than the current law”).


48. Shiffman and Sullivan, supra note 11 (“When the Senate killed the proposed Clear Skies bill in 2005, Bush’s EPA turned to rulemaking.”). While technically EPA had proposed CAIR a few weeks before North Carolina’s section 126 petition, that proposed rule was subsidiary to the Administration’s main goal of passing the Clear Skies legislation.
Like the NO\textsubscript{X} SIP Call, CAIR was promulgated under the good neighbor provision of section 110(a)(2)(D).\textsuperscript{50} The rule required 28 upwind states to reduce their NO\textsubscript{X} and SO\textsubscript{2} emissions to alleviate ozone and soot particles downwind.\textsuperscript{51} As with the earlier rule, EPA relied on sophisticated air quality data and complex computer modeling to determine which upwind states contributed emissions to downwind pollution levels.\textsuperscript{52} Similarly, the Agency set state emissions budgets that considered the cost-effectiveness of pollution controls, but allowed the states to achieve the required emissions reductions with whatever mix of controls they chose.\textsuperscript{53} EPA also established two optional cap and trade programs, one for NO\textsubscript{X} emissions and one for SO\textsubscript{2} emissions.\textsuperscript{54} Despite these similarities, CAIR differed from the NO\textsubscript{X} SIP Call in important ways that eventually led to its demise.

CAIR was the centerpiece of the Bush Administration’s efforts to improve air quality and received support from many quarters. Although many states and environmental organizations thought that the long-term goals in CAIR, like the

\begin{itemize}
  \item Section 126 Denial, \textit{supra} note 47, at 25,328; CAIR, \textit{supra} note 9, at 25,162.
  \item CAIR, \textit{supra} note 9, at 25,170.
  \item \textit{Id.} at 25,167. Technically, 23 states and the District of Columbia were required to reduce annual SO\textsubscript{2} and NO\textsubscript{X} emissions to address soot, and 25 states (including some not subject to the annual limits) were required to reduce summertime NO\textsubscript{X} emissions to address ozone. In total, 28 states and the District of Colombia were covered by the rule. \textit{Id.}
  \item \textit{Id.} at 25,233-55.
  \item \textit{Id.} at 25,229-33.
  \item \textit{Id.} at 25,273-85.
\end{itemize}
Clear Skies legislation, were not sufficiently aggressive, they viewed the rule as a good step toward addressing interstate air pollution.\textsuperscript{55} Conversely, regulated industries were concerned about the stringency of the budgets, but appreciated the ability to use the cap and trade programs to meet those requirements cost-effectively.\textsuperscript{56}

Not all aspects of the rule, however, received universal acceptance. The state of North Carolina, for example, believed the trading programs should be restrained in certain respects.\textsuperscript{57} Likewise, some industries disagreed with adjustments EPA made to the state budgets late in the rulemaking.\textsuperscript{58} The parties brought these concerns to the D.C. Circuit, seeking to win improvements in the rule, but not to

\begin{itemize}
\item \textsuperscript{55} Shiffman and Sullivan, \textit{supra} note 11 (“Environmental advocates thought CAIR set weak long-term goals but nonetheless were eager to see the scrubbers installed.”).
\item \textsuperscript{56} \textit{Id.} (describing “[p]ower companies and others in industry [who] did not relish spending billions to erect scrubbers,” but favored the cap and trade program).
\item \textsuperscript{58} \textit{Id.} at 72,315 (after CAIR was finalized, EPA received a petition for administrative reconsideration on the budget adjustments, but refused to reopen the rule on that issue and only provided “some additional analysis” to support its original approach).
\end{itemize}
overturn it entirely. Such a narrow decision was not to be.

The North Carolina court rejected several elements of CAIR, but this analysis focuses only on the two most important holdings. First, the court struck down the NOX and SO2 cap and trade programs because they violated section 110(a)(2)(D) of the Clean Air Act (an issue not addressed in the Michigan opinion on the SIP Call). Second, it held that the NOX and SO2 budgets assigned to the states were arbitrary or contrary to the law, with EPA essentially having abused the budget-setting discretion granted in Michigan. Because of CAIR’s “fatal flaws,” the panel initially vacated the entire rule, creating turmoil in the market for emissions allowances and in the regulatory efforts of the federal and state governments. EPA, power companies, states and environmental organizations all called for swift congressional action to codify CAIR, without success. Relief

59. 531 F.3d at 907-08.

60. Id. at 918 (SO2 budgets are “arbitrary, capricious, . . . or not otherwise in accordance with law”); id. at 921 (NOX budgets are “arbitrary and capricious”).

61. Id. at 901, 929-930. The North Carolina court rejected other aspects of CAIR as well, including EPA’s interpretation of the statutory phrase “interfere with maintenance,” the 2015 deadline for compliance, the inclusion of the state of Minnesota, and the Agency’s attempt to harmonize CAIR’s SO2 requirements with the acid rain program of the Clean Air Act.

62. Shiffman and Sullivan, supra note 11 (describing the “huge regulatory hole” left by the ruling and the millions of dollars lost in the allowance market within 24 hours of the decision).

63. Id. (describing the election-year politics that prevented passage of a bill). See also Editorial, A Major Setback for Clean Air, NEW YORK TIMES (July 16, 2008), available at http://www.nytimes.com/2008/07/16/opinion/16wed3.html (last
finally came after the Agency and others filed petitions with the D.C. Circuit for reconsideration on the merits and remedy, arguing that vacating CAIR would severely disrupt federal and state efforts to protect the public health from air pollutants. 64 In response, the panel remanded the rule to the Agency, rather than vacating it. 65 The judges declined to reconsider the merits, which was not at all surprising since the decision was issued per curiam. 66

Of importance, the North Carolina panel did not undercut some of the key holdings from the Michigan decision, such as authorizing EPA to set emissions budgets for the states. In addition, it continued to allow the Agency to consider the cost-effectiveness of pollution controls when identifying the emissions that were significantly contributing to downwind pollution. 67 To be sure, there are hints in the North Carolina opinion that the cost considerations were accepted only grudgingly, 68 which is not surprising since the panel included the dissenting judge visited July 22, 2008) (urging legislative or administrative fix).

64. See, e.g., Petition for Rehearing or Rehearing En Banc (EPA), North Carolina v. EPA, 531 F.3d 896 (D.C. Cir. 2008) (No. 05-1244); Petition for Rehearing or Rehearing En Banc of Environmental Intervenors Environmental Defense Fund et al., North Carolina v. EPA, 531 F.3d 896 (D.C. Cir. 2008) (No. 05-1244).

65. 550 F.3d 1176 (D.C. Cir. 2008).

66. Id.

67. Id. at 917.

68. See, e.g., id. (The judges “would have expected EPA to require states to eliminate contributions above the [air quality] threshold” but would not “disturb” EPA’s decision to focus only on “emissions that sources within a state can eliminate by applying ‘highly cost-effective controls.’”).
in the earlier case. Nonetheless, that flexible approach for implementing section 110(a)(2)(D) was ultimately reinforced.

IV. ANALYSIS OF NORTH CAROLINA IN LIGHT OF THE NOX SIP CALL AND MICHIGAN

To understand why the D.C. Circuit struck down CAIR but upheld the NOX SIP Call, the terse and rather confusing North Carolina decision must be deciphered. That effort is made possible only with a careful review of the lengthy Federal Register notices by which EPA promulgated both CAIR and the SIP Call. The resulting analysis, presented below, reveals that CAIR violated what can best be described as a core principle of section 110(a)(2)(D), even though the judges did not speak in those terms. That provision, the court found, requires each upwind state to take responsibility for eliminating its own significant contributions downwind. The court emphasized that the statutory language prohibits sources “within [one] State” from “contribut[ing] significantly to [air pollution] in . . . any other State.” From this, the panel wrote, it is clear that “according to Congress, individual state contributions to downwind [pollution] do matter,” and those offending emissions in each state must be addressed. While the NOX SIP Call satisfied this principle of individual state responsibility, CAIR did not. Instead, EPA seemed to pursue goals for the 28-state region as a whole, without apparent focus on each state’s particular relationship to downwind conditions.

69. The North Carolina panel included Judge David B. Sentelle, who dissented in Michigan.

70. 531 F.3d at 907 (emphasis in original, but bracketed words added).

71. Id.
This fundamental failure informed the *North Carolina* court’s holdings on both the state emissions budgets and the emissions trading programs. Moreover, although not acknowledged expressly, the court’s perception of the budgets critically influenced its view of the trading provisions. Thus, although the opinion addressed the trading issue first, the analysis here will reverse the order, to better explain the issues.

A. **NO\textsubscript{X} AND SO\textsubscript{2} BUDGETS: APPARENTLY ARBITRARY BURDEN-SHARING AMONG THE STATES**

The *North Carolina* panel’s finding of arbitrary emissions budgets in CAIR was made against the backdrop of the NO\textsubscript{X} SIP Call. In that earlier rule, EPA clearly tailored each state’s budget to its own contribution to downwind pollution. In particular, the Agency assessed the types of pollution sources that were found within each particular state.\footnote{NO\textsubscript{X} SIP Call, *supra* note 4, at 57,403.} The Agency then calculated the emissions reductions expected from the state assuming the sources within its borders used any highly cost-effective controls identified by EPA.\footnote{Id. at 57,377-78.} The Agency repeatedly emphasized that the emissions to be eliminated were only a *subset* of each state’s total emissions of ozone precursors – and certainly were not more than necessary to mitigate its downwind impacts.\footnote{See *Michigan*, 213 F.3d at 675 (“EPA’s rule called for termination of only a subset of each state’s contribution,” citing 63 Fed. Reg. at 57,403.).} Because the regional cap represented the sum of all the state budgets, it too reflected the upwind contributions to downwind...
Both Michigan and North Carolina described EPA as applying “uniform” controls in the SIP Call, perhaps giving the impression that the emissions budgets were not, in fact, tailored to each state. Not so. While EPA made certain uniform assumptions about the cost-effectiveness and efficacy of pollution control devices for all states, the Agency applied those assumptions to each state’s particular inventory of sources, resulting in state-specific budgets.

By contrast, EPA’s method for setting the NOX and SO2 budgets under CAIR appeared to violate the core principle of section 110(a)(2)(D) by imposing obligations unrelated to each state’s contribution to downwind pollution. The impropriety of the Agency’s approach, however, was not apparent at first glance—at least not for the NOX budgets—because the method EPA used to set the CAIR budgets was similar to the process it had used in the NOX SIP Call. In both rules, EPA inventoried the sources in each state, considered whether any highly cost-effective pollution controls were available for those sources, and calculated each state’s budget assuming those controls were used.

In CAIR, the Agency went so far as to recognize that for some facilities, such as power plants, the ability to abate emissions depended on which fuel was burned. Natural gas-fired power plants, for example, released fewer NOX

75. NOX SIP Call, supra note 4, at 57,439 (Table III-11).

76. Michigan, 213 F.3d at 679-80 (rejecting challenge to uniform controls in the SIP Call); North Carolina, 531 F.3d at 908, 917 (discussing same in CAIR).

77. CAIR, supra note 9, at 25,229-33.

78. Id. at 25,230-31.
emissions than coal-fired power plants for each unit of “heat input” to the boiler (a measure of the energy content of the fuel, expressed in British thermal units (Btus)). If EPA required all power plants to emit no more than, say, 0.15 pounds of NOX per million Btus (lbs/mmBtu), coal-fired power plants might have to spend as much as $2,000 per ton of reduced emissions, whereas natural gas-fired plants would spend less than half that. Or, putting it another way, if a natural gas-fired power plant were required to spend $2,000 per ton of avoided NOX, its emissions rate would be roughly 0.06 lbs/mmBtu, far lower than the rate of 0.15 lbs/mmBtu achieved at a coal-fired facility for the same cost. To impose the same compliance costs on all power plants, EPA took account of those fuel differences when it assessed the emissions reductions that could be achieved with highly cost-effective pollution controls. As a result, the final CAIR state budgets assumed natural gas-fired power plants would emit less NOX per mmBtu than coal-fired facilities.

While that process may have been entirely reasonable, the CAIR budgets floundered because EPA did not use the same methodology in setting the total compliance costs on all power plants, EPA took account of those fuel differences when it assessed the emissions reductions that could be achieved with highly cost-effective pollution controls. As a result, the final CAIR state budgets assumed natural gas-fired power plants would emit less NOX per mmBtu than coal-fired facilities.

79. Id.

80. Id. The Federal Register notice only hints at these facts. They are buried deep in the technical support document accompanying the final rule and in EPA’s response to an administrative petition for reconsideration on the fuel-adjusted budgets. See Technical Support Document: Regional and State SO2 and NOX Emissions Budgets (EPA 2005); Reconsideration Denial, supra note 57, at 27,315.

81. EPA made things quite complicated by not simply adjusting the expected emission rates to reflect the various fuels, but by discounting past heat input data on which future projections of fuel usage were based. In particular, for oil-fired power plants EPA gave only 60% credit for historical heat input, and for natural-gas fired units, it only gave 40% credit. CAIR, supra note 9, at 25,231 (adjustment factors of 0.6 and 0.4).
regional cap or, for that matter, in proposing its initial budgets.\(^8^2\) (Why the Agency used different methods is not entirely clear.\(^8^3\)) Instead, the CAIR cap and initial budgets assumed, for ease of calculation, that all power plants burned the same fuel and could achieve the same emissions rate at the same cost.\(^8^4\) As a result, when EPA subsequently adjusted the budgets to reflect the compliance costs associated with various fuels, some states’ budgets grew and some shrank.

Comparing the initial and final state budgets, the North Carolina court became concerned that the Agency had shifted allowable emissions from state to state without good reason. Rather than explaining that it was seeking greater equity among the power plants (which might have satisfied the court), the Agency provided a muddled explanation that appeared to focus only on cost-sharing among the states.\(^8^5\) The Agency noted, for example, that it was trying to achieve “a more equitable budget distribution [for] the different States.”\(^8^6\) It also made the nearly

\(^8^2\) Id. at 25,197, 25,226, 25,230 (cap); Rule to Reduce Interstate Transport of Fine Particulate Matter and Ozone (Interstate Air Quality Rule), 69 Fed. Reg. 4566, 4585 (Jan. 30, 2004) (proposed budgets).

\(^8^3\) EPA first mentioned these fuel-adjusted budgets in a supplemental proposal, and it simply indicated that it was responding to a suggestion from commenters on the original proposal. See Supplemental Proposal for the Rule to Reduce Interstate Transport of Fine Particulate Matter and Ozone (Clean Air Interstate Rule), 69 Fed. Reg. 32,684, 32,689 (June 10, 2004).

\(^8^4\) CAIR, supra note 9, at 25,197, 25,220 (basing the cap on a NO\(_X\) emissions rate of 0.15 pounds per million Btus, the same rate assumed in the NO\(_X\) SIP Call).

\(^8^5\) At most, the agency wrote, in one sentence, about the “greater burden on coal plants to control emissions.” Id.

\(^8^6\) Id.
incomprehensible statement that “[s]tates receiving larger budgets under this approach are generally expected to be those having to make the most reductions.” Based on these cryptic remarks, the North Carolina court believed the Agency was requiring some states to eliminate more than their own contributions to downwind pollution in an effort to shift the financial burdens of emissions reductions—all in the name of “equity” among the upwind states contrary to the requirements of section 110(a)(2)(D).

EPA made matters worse by suggesting this particular methodology was just one of many the Agency could have used for assigning state budgets, with none of them having any more relevance than the others to the states’ effects downwind. It wrote that “the choice of method in setting State budgets, with a given regionwide total annual budget, makes little difference in terms of the levels of

87. Id. at 25,231 n.68.

88. North Carolina, 531 F.3d at 919 (EPA improperly used the fuel adjustment factors “purely for the sake of sharing the burden of emissions reductions fairly”); id. at 921 (EPA cannot “force an upwind state to share the burden of reducing other upwind states’ emissions” or to “exceed the mark”).

89. Even if equity among the upwind states is not an appropriate factor under section 110(a)(2)(D), the legislative history of that provision certainly focuses on restoring equity between the upwind states, on the one hand, and the downwind states, on the other. Historically, downwind states had imposed more stringent pollution control requirements on their emissions sources than had their upwind neighbors, thus imposing "a distinct economic and competitive disadvantage" for those sources. See S. Rep. No. 95-127 at 41 (1977), available at LEXIS, Clean Air Act Amendments of 1977 Legislative History, at 25. Congress intended “to equalize the positions of the States with respect to interstate pollution by making a source at least as responsible for polluting another State as it would be for polluting its own State.” Id.
resulting regionwide annual SO₂ and NOₓ emissions reductions.”⁹⁰ With that statement and the poor explanations of the last-minute fuel adjustments, EPA left the impression that the NOₓ budgets were simply arbitrary.

For similar reasons the North Carolina panel held that the SO₂ budgets were improper. As the baseline for those budgets, EPA decided to use the level of emissions allowed under Title IV of the Clean Air Act, a cap and trade program adopted by Congress in 1990 to prevent acid rain by limiting the SO₂ emissions that cause it.⁹¹ That decision was not entirely unreasonable because power plants subject to the SO₂ trading programs under Title IV and CAIR would need to coordinate efforts under both.⁹² EPA failed, however, to explain how the Title IV baseline related in any way to upwind emissions causing downwind difficulties. As the court wrote, it “is unclear how the quantitative number of allowances created by 1990 legislation to address one substance, acid rain, could be relevant to 2015 levels of an air pollutant, particulate matter.”⁹³ Nor was it clear how the 65% reduction from that baseline directed by EPA would mitigate any significant

⁹⁰ 531 F.3d at 907 (quoting CAIR, supra note 9, at 25,231) (emphasis added).

⁹¹ Id. at 25,229. See 42 U.S.C. §§ 7651-7651e. Separately, the court ruled that EPA did not have authority to reduce the number of Title IV allowances to bring that program into harmony with the more stringent SO₂ cap of CAIR. 531 F.3d at 921-22. Thus, on remand, EPA will face a special challenge in setting state budgets for SO₂ emissions.

⁹² Technically Title IV also establishes NOₓ emissions limits (without a cap and trade program). See 42 U.S.C. § 7561f. Those limits are less stringent than the NOₓ SIP Call’s requirements, and any necessary coordination between the statutory and regulatory requirements was completed with that earlier rule.

⁹³ 531 F.3d at 917.
downwind contributions as required by section 110(a)(2)(D). Instead, as the
panel noted, that figure coincided with the emissions levels sought under the Clear
Skies Act proposed a few years earlier by the Bush Administration, with the
implication being that CAIR represented nothing more than the Agency’s attempt
to implement the air pollution policies of that failed legislation. In short, in
support of broad regional goals, EPA appeared to have arbitrarily assigned NO\textsubscript{X}
and SO\textsubscript{2} budgets without accounting for each state’s responsibility to eliminate its
own contributions to downwind pollution.

B. THE CAP AND TRADE PROGRAMS: NO ASSURANCE OF EMISSIONS
REDUCTIONS IN EACH STATE

The *North Carolina* court rejected the NO\textsubscript{X} and SO\textsubscript{2} cap and trade programs of
CAIR for two reasons. The first, although initially difficult to discern, harkens
back to the apparently arbitrary budgets. If the budgets do not reflect the states’
downwind contributions, then, in the court’s view, EPA cannot assure that the
trading scheme will eliminate those emissions as required by section 110(a)(2)(D).
As the panel noted, “[i]t is unclear how EPA can assure that the trading programs it
has designed in CAIR will achieve section 110(a)(2)(D)(i)(I)’s goals if we do not
know what each upwind state’s ‘significant contribution’ is to another state.”
That theme is woven throughout the trading discussion as the judges continually

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94. The 65% reduction is required by the year 2015. EPA set an interim
requirement of a 50% reduction by the year 2010. 70 Fed. Reg. at 25,229-30.

95. 531 F.3d at 916.

96. *Id.* at 908.
criticized the Agency for not “measuring” the significant contributions.97

That criticism reflects a poor choice of words. Even in the NOX SIP Call, the budgets did not “measure” the significant contributions, if “measuring” suggests that EPA simply relied on air quality sampling and computer modeling to objectively calculate emissions levels. Instead, in the SIP Call, EPA also made a policy judgment about how aggressively upwind states should reduce their emissions, given the costs of pollution controls, and factored that into the Agency’s assessment of the emissions that would be deemed “significant” in each state. Thus, although the North Carolina court overstated the issue by faulting EPA for a lack of “measurements,” it ultimately concluded that CAIR’s arbitrary budgets did not instill any confidence in the trading program built on those budgets.

If this were the D.C. Circuit’s only criticism, then emissions trading under section 110(a)(2)(D) would clearly be viable, as long as EPA’s budgets met the court’s expectations. Indeed, if the cap and trade program of the NOX SIP Call came up today for review under this aspect of the North Carolina decision, the rule would pass muster because its state budgets appeared sound, reflecting each state’s contribution to downwind pollution. In fact, however, the North Carolina court had a more fundamental concern about trading schemes under the good neighbor provision.

The D.C. Circuit’s concern arose from the principle of individual state responsibility embedded in section 110(a)(2)(D). That provision arguably cuts

97. Id. at 907 (“EPA did not purport to measure each state's significant contribution” to downwind pollution); id. (EPA “has not measured the unlawful amount of pollution for each upwind-downwind linkage”); id. at 908 (EPA “must measure each state's ‘significant contribution’ to downwind [pollution] even if that measurement is not directly correlated with each state’s individualized air quality impact on downwind [pollution] relative to other upwind states”).
against interstate emissions trading because it requires emissions reductions within each upwind state when it prohibits sources “within the State from emitting any air pollutant in amounts which will . . . contribute significantly” to downwind pollution.\(^98\) Under the CAIR cap and trade programs, a regulated facility would not have to eliminate its own emissions, but could buy allowances from sources in other states. The judges gave the example of sources in Alabama that contribute to high soot levels in Davidson County, North Carolina.\(^99\) They feared the upwind sources “could purchase enough NO\(_X\) and SO\(_2\) allowances to cover all their current emissions, resulting in no change in Alabama’s contribution” to pollution in Davidson County.\(^100\)

Such a possibility would not be a concern if an emissions reduction anywhere within the 28 covered states would help Davidson County. In fact, however, even as the overall emissions level throughout the region would remain under the cap, the benefits of the emissions reductions would not be felt uniformly throughout the 28-state region, because not every upwind state contributes to pollution in every downwind state. According to EPA’s data, emissions in Missouri, for example, do not reach North Carolina.\(^101\) Consequently, if facilities in Alabama buy

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98. 42 U.S.C. § 7410(a)(2)(D)(i)(I) (emphasis added). Cf. E. Donald Elliott, "Portage Strategies for Adapting Environmental Law and Policy in a Logjam Era," 17 NYU Env'l. L.J. 24, 47-48 (2008) (arguing that the statutory scheme in section 110(a)(2)(D) is silent on whether emissions trading can be used, and therefore under Chevron EPA should have had full discretion to implement what is clearly a national policy for that regulatory approach).

99. 531 F.3d at 907.

100. Id.

101. CAIR, supra note 9, at 25,247-50 (describing state-to-state linkages).
allowances from sources in Missouri, then North Carolina jurisdictions will see no relief from the lower emissions in that distant state.

In theory, to ensure that each state reduced its downwind contributions consistent with section 110(a)(2)(D), the D.C. Circuit could have banned all emissions trading, but it did not do so. The court merely held, in language repeated several times, that CAIR must “achieve[] something measurable toward the goal of prohibiting sources ‘within the State’ from contributing to [pollution] ‘in any other State.’”102 This modest restriction on trading allows the Agency to

Missouri is subject to CAIR because it affects Illinois, Indiana and a few other states. Id. Conversely, for some pollutants, such as greenhouse gases, an emissions reduction in any one state would benefit all states (and nations) relatively uniformly. That is so because greenhouse gases released anywhere in the world contribute to a global increase in atmospheric temperatures. See Victor B. Flatt, Taking the Legislative Temperature: Which Federal Climate Change Legislative Proposal Is “Best”? , 102 Nw. U. L. Rev. Colloquy 123, 136 (2007), available at http://www.law.northwestern.edu/lawreview/colloquy/2007/32/ (last visited Aug. 23, 2009) (describing the harm from greenhouse gas emissions as “worldwide and dispersed”). See also Kaswan, supra note 7, at 53 (greenhouse gas emissions “do not raise direct distributive justice concerns”). Thus, it is interesting to consider whether a court might be less concerned about interstate trading of greenhouse gases under the good neighbor provision of section 110(a)(2)(D). We are a far cry, however, from EPA invoking that provision to address climate change. Before that, EPA would have to adopt a national ambient air quality standard for greenhouse gases, which it strongly objects to doing. See Patricia Ross McCubbin, EPA’s Endangerment Finding for Greenhouse Gases and the Potential Duty to Adopt National Ambient Air Quality Standards to Address Global Climate Change, 33 S. ILL. U. L.J. 437 (2009) (analyzing whether, despite its objections, EPA will be forced to adopt such national standards) [hereinafter McCubbin, National Standards].

102. Id. (emphasis added); id. at 908 (“CAIR must include some assurance that it achieves something measurable toward the goal of prohibiting sources ‘within the
continue pursuing the goal shared by many parties of using cap and trade programs to address regional air pollution. The limits of EPA’s authority to do so, however, are ambiguous because the judges did not explain what “something measurable” means. In its brief, the petitioner North Carolina asked for “reasonable measures” to guarantee some emissions reductions within each state, by, for example, limiting the use of banked allowances once they exceeded 10% of the state’s total budget. With that restriction, sources in Alabama would have to eliminate at least some of their own emissions each year, thereby providing relief to North Carolina. The D.C. Circuit’s opinion did not discuss the petitioner’s suggestion at all, favorably or unfavorably, so it is unclear whether such regulatory limits on trades are necessary.

The court did note, however, that EPA’s modeling of the emissions allowance market suggested that, even without any prescribed limits on trades, sources in

State’ from contributing to [air pollution] in ‘any other State.’”); id. at 919 (rejecting an approach to setting SO2 budgets that “would not necessarily achieve something measurable toward the goal of prohibiting sources ‘within the State’ from contributing significantly to downwind nonattainment); id. at 921 (“CAIR should achieve something measurable towards” the goal of having “each state . . . eliminate its own significant contribution to downwind pollution.”).

At one point, the court wrote that “CAIR must do more than achieve something measurable.” Id. at 908 (emphasis added). That statement most likely does not contradict the other statements, but rather reinforces the court’s criticism of the arbitrary budgets, because the judges went on to write that “to do so, [EPA] must measure each state’s ‘significant contribution’ to downwind [pollution]. . . .” Id.

Alabama would actually make reductions at their own facilities, presumably because buying enough allowances from out-of-state sources to cover all their emissions would be prohibitively expensive. Although the opinion hinted that such market studies might be sufficient to demonstrate “something measurable” toward reductions in each state, this particular analysis from the Agency did not satisfy the judges. The reasoning is not entirely clear, but it appears the panel once again returned to the issue of arbitrary budgets. If, as the court believes, EPA does not have accurate information on each state’s significant downwind contributions, then the Agency cannot properly model how the allowance market will address those individual contributions and instead can “only assure[] that the entire region’s significant contribution will be eliminated.”

In other circumstances, however, the Agency might be able to satisfy the court by using market analyses to demonstrate that each state will, in fact, be taking responsibility for eliminating at least some of its offending emissions. Indeed,

104. 531 F.3d at 907 (citing Section 126 Denial, supra note 47, at 25,344-45).

105. See Section 126 Denial, supra note 47, at 25,344-45 & n. 16 (describing the “Integrated Planning Model,” which EPA uses “to examine costs and, more broadly, analyze the projected impact of environmental policies on electric power sector”).

106. Id. (noting, in the context of the modeling, that it “is possible that CAIR would achieve section 110(a)(2)(D)(i)(I)’s goals”) (emphasis added).

107. Id. at 907.

108. Indeed, a recent opinion from the D.C. Circuit suggests that possibility, although the case is not directly related to section 110(a)(2)(D). In Natural Resources Defense Council v. EPA, the petitioners challenged EPA’s decision to allow a regional emissions trading program instead of requiring all sources to install the “reasonably available control technology” (RACT) as specified by
given the apparently sound budgets of the NOX SIP Call, if EPA had been able to
provide such a showing under the budgets set by that rule, then the SIP Call’s cap
and trade program might pass muster, even under the standards of the North
Carolina court. Whether, in fact, such market studies could be persuasive, with
the potential difficulties of predicting where emissions reductions will occur,
remains to be seen.

In sum, CAIR failed because, in pursuing policies deemed appropriate for the
total 28-state region, EPA did not protect the principle of individual state
responsibility the court found in section 110(a)(2)(D). The budgets appeared to
impose obligations on the states without regard to their contributions downwind.
Similarly, the emissions trading schemes did not guarantee emissions reductions in
each state. The NOX SIP Call, on the other hand, survived because the budgets
seemed to compel states only to eliminate their own offending emissions, which
possibly would have also helped the trading mechanism prevail if it had been
challenged.

V. LESSONS FROM MICHIGAN AND NORTH CAROLINA FOR THE FUTURE OF CAP AND
TRADE PROGRAMS UNDER THE CLEAN AIR ACT

The Michigan and North Carolina decisions have important implications for
the future of cap and trade programs under the Clean Air Act. Together the two
decisions offer EPA a surprising degree of flexibility to pursue its policy

section 172(c)(1) of Clean Air Act. 571 F.3d 1245 (D.C. Cir. 2009). The court did
not entirely ban emissions trading under that provision, but required EPA on
remand to demonstrate that the trading program achieves the same level of
emissions reductions as installing RACT would. Id. at 1256-57 (discussing North
Carolina decision).
preferences in the implementation of section 110(a)(2)(D), but with ambiguous limits. *Michigan* gave the Agency discretion to consider pollution control costs when determining how aggressively states should abate their emissions, and also allowed EPA to set emissions budgets for each state, even though doing both is not expressly authorized in the statute and potentially leads to anomalous results. That flexibility was reinforced and extended in *North Carolina*, which did not undercut those key rulings from *Michigan* and, importantly, did not ban interstate emissions trading altogether under the good neighbor provision of section 110(a)(2)(D).

Nevertheless, in future rulemakings, even as EPA may establish a trading scheme, fundamentally it must protect the principle of individual state responsibility underlying the good neighbor provision. The precise contours of that obligation are unknown, but at a minimum, the Agency must ensure some emissions reductions in every upwind state, possibly by studying the practical limits of the allowance market or by imposing regulatory limits on the use of out-of-state allowances. More generally, to protect that core value, EPA will have to avoid the appearance of imposing policy goals on a multi-state region without carefully demonstrating how those goals relate to conditions on the ground in each state. Calling for states to act in pursuit solely of economic efficiency or burden-sharing regionwide will not be tolerated.

The broader lesson from *Michigan* and *North Carolina* extends beyond section 110(a)(2)(D) to other authorities of the Clean Air Act. Although the D.C. Circuit is willing to allow the Agency to use innovative approaches to address air pollution, even under legislative provisions that do not explicitly authorize them, the court will not allow the implementation of regulatory initiatives that stretch the statute beyond recognition. Thus, even if EPA, states, industries, and environmental organizations all believe sound public policies support the use of
cap and trade programs, the court may not allow that approach under statutory authorities written for different purposes.

To take just one example, under the “new source performance standards” of section 111 of the statute, EPA is exploring the possibility of implementing a cap and trade program for certain facilities that emit greenhouse gases. That provision does not expressly authorize emissions trading, and many states and environmental organizations believe such a program fundamentally conflicts with the section 111 scheme, which generally imposes the same emissions standards on all members of an industrial category. In fact, those parties challenged EPA’s first attempt to implement a cap and trade program under that provision, in its Clean Air Mercury Rule. The D.C. Circuit invalidated that rule on other


grounds, leaving the legality of emissions trading unclear. In EPA’s effort now to revive that approach for greenhouse gases, it will face equally vehement opposition. The challengers might very well be able to persuade the judges that the core principle of section 111 is to require each facility to control its own emissions, rather than paying others to make reductions through a trading scheme. As a result, mirroring the North Carolina decision, the court would likely restrict the Agency’s ability to establish a cap and trade program under section 111, even if, as in the earlier case, it did not ban emissions trading altogether.

VI. CONCLUSION

While emissions trading remains viable under section 110(a)(2)(D), the limits of EPA’s authority to adopt such a scheme under that provision or other sections of the Clean Air Act are ambiguous. The lingering uncertainties highlight the challenge of using a 40-year-old statute to implement modern regulatory tools to address urban smog, harmful soot, global climate change and other pressing air quality challenges.

113. Id. at 583 (invalidating the Clean Air Mercury Rule because EPA improperly reversed an earlier decision to regulate mercury emissions from power plants under section 112, not section 111, of the Clean Air Act). The Obama Administration appears to have abandoned any plans for trading of mercury emissions. See Andrew Childers, EPA Considers Combination of Standards, Trading for Interstate Rule Replacement, 40 ENV’T REP. (BNA) 1693 (July 17, 2009) (describing EPA’s plans to issue to “maximum [achievable] control technology” standards for mercury from power plants under section 112).