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ORAL ARGUMENT SCHEDULED FOR APRIL 13, 2012

**IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT**

No. 11-1302, and consolidated cases (Complex)

EME HOMER CITY GENERATION, L.P., et al.,

Petitioners,

v.

**UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY, et al.,**

Respondents.

**ON PETITIONS FOR REVIEW OF A FINAL RULE PROMULGATED BY THE
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

BRIEF FOR RESPONDENTS

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DATED: March 16, 2012

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UNITED STATES ENVIRONMENTAL	)	
PROTECTION AGENCY, et al.,	)	
	)	
Respondents.	)	
	)	

RESPONDENTS' CERTIFICATE OF COUNSEL

Pursuant to Circuit Rule 27(a)(4), counsel for Respondents United States Environmental Protection Agency and Lisa Jackson, Administrator (collectively "EPA") submit this certificate as to parties, rulings, and related cases.

(A) Parties and Amici

(i) Parties, Intervenor, and Amici Who Appeared in the District Court

This case is a petition for review of final agency action, not an appeal from the ruling of a district court.

(ii) Parties to These Cases

All parties, intervenors, and amici appearing in this Court are listed in the Brief for Industry and Labor Petitioners except for amicus American Thoracic Society.

(B) Rulings Under Review

The Agency action under review is “Federal Implementation Plans: Interstate Transport of Fine Particulate Matter and Ozone and Correction of SIP Approvals,” 76 Fed. Reg. 48,208 (Aug. 8, 2011).

(C) Related Cases

The case on review has not been previously before this Court or any other Court. Petitions for review of a related rule, “Federal Implementation Plans for Iowa, Michigan, Missouri, Oklahoma and Wisconsin and Determination for Kansas Regarding Interstate Transport for Ozone,” 76 Fed. Reg. 80,760 (Dec. 27, 2011), are pending in this Court in Public Service Co. v. EPA, No. 12-1023 and consolidated cases. The following cases challenge EPA’s disapproval of State Implementation Plans for Georgia, Ohio, and Kansas and are being held abeyance pending resolution of this case: Ohio v. EPA, No. 11-3988 (6th Cir.); Westar Energy, Inc. v. EPA, No. 11-1333 (D.C. Cir.); Kansas v. EPA, No. 12-1019 (D.C. Cir.); Georgia v. EPA, No. 11-1427 (D.C. Cir.).

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GLOSSARY

CAA	Clean Air Act, 42 U.S.C. §§7401-7671a
CAIR	Clean Air Interstate Rule
CAMx	Comprehensive Air Quality Model with Extension
EGU	Electric Generating Unit
EPA	United States Environmental Protection Agency
FIP	Federal Implementation Plan
FGD	Flue Gas Desulfurization
IPM	Integrated Planning Model
LNB	Low NO _x Burner
NAAQS	National Ambient Air Quality Standard
NERC	North American Electric Reliability Corporation
NODA	Notice of Data Availability
NO _x	Nitrogen Oxides
PM _{2.5}	Fine Particulate Matter
RTC	Response to Comments Document
SCR	Selective Catalytic Reduction
SIP	State Implementation Plan
SO ₂	Sulfur Dioxide
TSD	Technical Support Document

JURISDICTION

This Court has jurisdiction to hear these challenges to the United States Environmental Protection Agency's ("EPA's") Cross-State Air Pollution Rule. See 76 Fed. Reg. 48,208 (Aug. 8, 2011) ("Transport Rule" or "Rule"). The petitions were timely filed and venue is proper. 42 U.S.C. §7607(b)(1). While there is some question regarding aspects of the State Petitioners' standing allegations, the Court need not reach these issues, since the State Petitioners' claims overlap with the Industry Petitioners', whose standing EPA does not contest. See Massachusetts v. EPA, 549 U.S. 497, 518 (2007).

STATUTES AND REGULATIONS

The pertinent statutes and regulations are set forth in the Petitioners' addenda.

STATEMENT OF ISSUES

The Clean Air Act ("CAA") requires state implementation plans ("SIPs") to prohibit emissions that "contribute significantly to nonattainment ... or interfere with maintenance" of the national ambient air quality standards ("NAAQS") in any other State. 42 U.S.C. §7410(a)(2)(D)(i)(I). The Act further requires EPA to adopt a federal implementation plan ("FIP") if a State fails to adopt a SIP meeting this or other CAA requirements. Id. §7410(c)(1). Under controlling Circuit precedent, determining which emissions "contribute significantly" to NAAQS

nonattainment or maintenance problems in other States is properly made, in part, with reference to the amount of emissions reductions that can be achieved in each contributing State in a cost-effective manner. North Carolina v. EPA, 531 F.3d 896, 908 (D.C. Cir. 2008); Michigan v. EPA, 213 F.3d 663, 674-79 (D.C. Cir. 2000). However, in North Carolina, this Court held that the Clean Air Interstate Rule (“CAIR”), 70 Fed. Reg. 25,162 (May 12, 2005), the predecessor to the Transport Rule, did not adequately assure that each “upwind” State would, in fact, make the necessary emissions reductions. Against this background, this case presents the following issues:

1. Did EPA act reasonably and lawfully when it utilized a combined cost-effectiveness and air quality analysis to determine which “upwind” State emissions were “significant” contributors to NAAQS nonattainment and maintenance problems in “downwind” States (as well as the size of each State’s emissions “budget”), while at the same time refining its analysis and regulatory approach to address the concerns raised by the Court in North Carolina?

2. Did EPA act reasonably and lawfully when it issued FIPs to implement the Transport Rule, where none of the States in question had submitted SIPs adequately addressing the requirements of §7410(a)(2)(D)(i)(I)?

3. Does the Transport Rule reasonably respond to North Carolina by determining whether sources in an upwind State interfere with maintenance in a

downwind State *independent* of whether those sources significantly contributed to nonattainment in that downwind State?

4. Did EPA act reasonably and lawfully in utilizing comprehensive air quality modeling, rather than current air quality monitoring data, to develop the Transport Rule, where current monitoring data necessarily reflects the controls required by CAIR, and where the Transport Rule is required by North Carolina to *replace* CAIR?

5. Did EPA use appropriate modeling and technical data to assess the degree of each State's air quality contributions to downwind NAAQS nonattainment and maintenance problems and to develop the State-specific emissions budgets for the Transport Rule?

6. Given North Carolina's direction that EPA structure the rule to better assist States in meeting the Act's attainment deadlines, did EPA act reasonably and lawfully in establishing compliance deadlines of 2012 and 2014?

7. Did the full regulatory context for the Transport Rule, including EPA's notice of proposed rulemaking and three supplemental notices of data availability, provide interested parties with adequate notice and opportunity to comment?

STATEMENT OF THE CASE

The Transport Rule builds on the success of prior EPA actions addressing the interstate transport of air pollutants, a very serious -- and previously somewhat intractable -- public health and welfare issue. The Rule focuses on control of emissions of nitrogen oxides (“NO_x”) and sulfur dioxide (“SO₂”) to address significant interstate contributions to nonattainment and interference with maintenance of the NAAQS for ozone and fine particulate matter (“PM_{2.5}”). The Transport Rule will achieve dramatic health benefits for over 240 million people in the United States.¹ As will be discussed herein, the Rule is entirely consistent with the Act and is supported by a thorough administrative record. Accordingly, the petitions for review should be denied and the stay entered by the Court on December 30, 2011, should be lifted.

¹ See 76 Fed. Reg. at 48,308-11 (1 in 20 deaths in the U.S. is attributable to PM_{2.5} and ozone exposure. The PM_{2.5} aspects of the Transport Rule will, based on 2014 modeling, annually reduce between 13,000 and 34,000 deaths, 15,000 non-fatal heart attacks, 8,700 incidences of chronic bronchitis, 8,500 hospital admissions, and 400,000 cases of aggravated asthma; ozone aspects of the Transport Rule will reduce, during the summer ozone season, 27-120 premature deaths, 240 hospital admissions for respiratory problems, 86 emergency room admissions for asthma, 160,000 days of restricted activity for individuals, and 51,000 days of school absences for children).

STATEMENT OF FACTS

I. STATUTORY BACKGROUND

The NAAQS establish science-based limits on certain pollutants in the ambient air to protect public health and welfare. See 42 U.S.C. §§7408, 7409. States have the responsibility to adopt SIPs adequate to maintain good air quality in “attainment” areas and to bring “nonattainment” areas into compliance with each NAAQS. Id. §7410(a). If States do not, EPA must adopt FIPs to address these deficiencies. Id. §7410(c)(1).

A significant confounding factor in this regulatory process is that NAAQS nonattainment and maintenance problems in many States are caused in part by emissions transported from other States, often over vast distances, requiring the “downwind” State to regulate its own emission sources more stringently to compensate. In some cases, due to transport, there is *no* feasible action the downwind State can take on its own to attain and maintain the NAAQS.² Absent effective federal control, individual States often have little economic or political incentive to self-impose regulatory controls (and attendant costs) within their States solely to address air quality problems in other States.

² Many States that contribute to nonattainment and maintenance problems in other States also have nonattainment and maintenance problems that are in part caused by out-of-State emissions, so they are both “upwind” and “downwind.”

Congress first addressed these issues in the 1970 version of the CAA by requiring transport-related “intergovernmental cooperation” provisions in SIPs. 42 U.S.C. §1857c-5(a)(2)(E) (1970). When this “cooperation” approach proved ineffective, Congress amended the statute in 1977 to require, more directly, that all SIPs contain provisions prohibiting emissions from particular stationary sources that “will prevent” attainment or maintenance of the NAAQS in other States. 42 U.S.C. §7410(a)(2)(E) (1977). In adding these (and related) new provisions in 1977, Congress recognized that existing law gave States insufficient incentive to control their interstate pollution contributions, raising significant environmental and equity concerns.³

By 1990, there was an even greater awareness that certain air pollution problems were unlikely to be successfully addressed without enhanced control of

³ For example, the House Committee viewed existing law as “an inadequate answer to the problem of interstate air pollution.” H.R. Rep. No. 95-294, at 330 (1977), reprinted in 4 A Legislative History of the Clean Air Act Amendments of 1977 (“1977 Legis. Hist.”), at 2797 (Comm. Print 1978) (JA03208). The House Report stressed that one of the problems under the existing law was that its effectiveness depended largely on “prevention or abatement” by upwind States that in reality had little “incentive and need to act.” Id. The Senate Committee Report noted similar concerns with the existing law, “resulting in serious inequities among several States, where one State may have more stringent implementation plan requirements than another State.” S. Rep. No. 95-127, at 41 (1977), reprinted in 3 1977 Legis. Hist. 1415 (JA03203). Accordingly, the new provisions were “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. at 1416 (JA03204).

interstate pollution transport.⁴ Further, the statutory “will prevent” criterion established in 1977 proved difficult to meet in practice, thus thwarting effective regulation. See Michigan v. EPA, 213 F.3d at 674. For these reasons, Congress made a significant change to §7410(a)(2)(D) in 1990, extending the reach of that provision to cover multiple sources and other emissions activities that “contribute significantly” to downwind nonattainment or maintenance problems (whether or not they can be shown to “prevent” attainment or maintenance).⁵

II. REGULATORY BACKGROUND

A. The NO_x SIP Call and the Clean Air Interstate Rule (“CAIR”)

Following the 1990 CAA amendments, EPA and various States began an effort to address interstate contributions to ozone nonattainment in a cooperative and comprehensive fashion. Although a consensus was not reached, the technical

⁴ See S. Rep. No. 101-228, at 48 (1989), reprinted in 5 Legislative History of the Clean Air Act Amendments of 1990, at 8388 (“1990 Legis. Hist.”) (JA03230). See also S. Debate on H.R. Conf. Rep. No. 101-952 (1990) (statement of Sen. Lautenberg), reprinted in 1 1990 Legis. Hist. at 1106 (regarding impact of interstate pollution transport in New Jersey) (JA03225); S. Rep. No.101-228, at 49 (1989), reprinted in 5 1990 Legis. Hist. at 8389 (regarding New York City) (JA03231).

⁵ Compare 42 U.S.C. §7410(a)(2)(E) (1977) (“prohibiting [emissions from] any *stationary source* within the State ... which will ... *prevent* attainment or maintenance by any other State”) (emphasis added), with 42 U.S.C. §7410(a)(2)(D)(i)(I)(1990) (“prohibiting, consistent with the provisions of this [subchapter], any source *or other type of emissions activity* within the State ... which will ... *contribute significantly* to nonattainment in, or interfere with maintenance by, any other State”) (emphasis added).

work of this group provided much of the foundation for EPA's 1998 "NO_x SIP Call." See 63 Fed. Reg. 57,356, 57,361 (Oct. 27, 1998). That rule required 22 States and the District of Columbia to restrict emissions of NO_x to address their interstate contributions to ozone nonattainment and established a mechanism to address such contributions -- the NO_x Budget Trading Program.

This Court upheld the NO_x SIP Call in most significant respects in Michigan v. EPA. The Court found that EPA acted permissibly in utilizing "a very low threshold of contribution," based on emissions data and air quality modeling, to determine which upwind/downwind linkages were sufficient to warrant inclusion of particular States. 213 F.3d at 675. The Court also upheld EPA's decision to base each such "contributing" State's NO_x emissions "budget" primarily on the amount of emissions that could be controlled in a "highly cost-effective" manner (i.e., by application of controls costing less than \$2,000 per ton); among other things, this assured that all States would have to make the same minimum degree of investment in addressing pollution problems to which they collectively contribute. Id. at 675-79.

In 2005, EPA promulgated CAIR, a more comprehensive rule that built upon the NO_x SIP Call and also addressed interstate contributions to PM_{2.5} pollution problems through annual NO_x and SO₂ emission limitations. 70 Fed. Reg. 25,162 (May 12, 2005).

The Court remanded CAIR in North Carolina v. EPA, 531 F.3d 896 (D.C. Cir. 2008).⁶ North Carolina re-affirmed Michigan's general acceptance of a cost-effectiveness analysis to help determine the amount of each State's "significant" contribution, but found the methodology used by EPA to set State budgets fundamentally flawed because it divided a budget found to be cost-effective for the *region* among the States based on equitable considerations and preexisting allowance allocations under the acid rain provisions in CAA Title IV. Id. at 917-18. The Court also found that, due to CAIR's relatively broad trading provisions and other features, the rule did not adequately assure that each upwind State would, in fact, eliminate its significantly contributing emissions. Id. at 907-08. The Court also held that EPA did not harmonize CAIR's regulatory deadlines with the NAAQS attainment deadlines facing the "downwind" States, id. at 911-12, and that the rule failed to give independent effect to the statute's prohibition of emissions that "interfere with maintenance" in other States. Id. at 908-11. Although the Court ultimately agreed to leave CAIR in place as an interim measure, it also stressed, in unequivocal terms, that its forbearance would not be "indefinite" and that EPA must remedy expeditiously the "fundamental flaws" the Court had identified. North Carolina, 550 F.3d at 1178.

⁶ The Court initially vacated CAIR, id. at 930, but after rehearing, remanded without vacatur. North Carolina v. EPA, 550 F.3d 1176 (D.C. Cir. 2008).

B. The Transport Rule

The Transport Rule represents EPA's response to the Court's directives in North Carolina. See 76 Fed. Reg. 48,208 (Aug. 8, 2011). The Rule identifies those States with emissions that significantly contribute to ozone or PM_{2.5} nonattainment or maintenance problems in other States, establishes emissions budgets for covered electric generating units ("EGUs") in each such State,⁷ and promulgates FIPs to achieve the necessary reductions in each State. Id. at 48,209-16. Phase I of the Rule addresses emissions beginning in 2012, immediately replacing CAIR with a rule remedying CAIR's flaws. Phase II addresses emissions in 2014 and beyond and applies more stringent SO₂ reduction requirements in those States that EPA determined could not install the controls necessary to achieve all required emissions reductions by 2012. Id. at 48,211. Although the Transport Rule allows emissions trading so that sources can accommodate the unavoidable variability in electricity generation and utilization, the Rule also maintains State-specific limits by means of assurance provisions that "ensure that the necessary emission reductions occur within each covered state." Id. at 48,271.

⁷ To address significant contribution to downwind ozone problems, the Transport Rule establishes a budget for NO_x, an ozone precursor, during the ozone season, and for downwind PM_{2.5} problems, the Rule establishes annual budgets for NO_x and SO₂, which are PM_{2.5} precursors.

C. Supplements and Revisions to the Transport Rule

In December 2011, EPA issued a rule adding five States -- Iowa, Michigan, Missouri, Oklahoma, and Wisconsin -- to the Rule's ozone-season NOx trading program. See 76 Fed. Reg. 80,760 (Dec. 27, 2011) ("Supplemental Rule"). Further, on February 7, 2012, EPA signed a rule revising certain aspects of the Transport Rule State budgets for Florida, Louisiana, Michigan, Mississippi, Nebraska, New Jersey, New York, Texas, and Wisconsin, as well as new unit set-asides in Arkansas and Texas, and making certain other technical revisions to State budgets and unit-specific FIP emissions allocations. 77 Fed. Reg. 10,324 (Feb. 21, 2012) ("Revisions Rule"). This rule also delayed the Transport Rule's assurance penalty provisions until January 1, 2014.⁸

STANDARD OF REVIEW

This case is subject to the standard of review set forth in §7607(d)(9), under which the Court asks whether the challenged action was "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." Id. This standard of review "is a narrow one," and the Court is not "to substitute its judgment for that of the agency." Citizens to Preserve Overton Park, Inc. v. Volpe, 401 U.S. 402, 416 (1971). The pertinent question is simply "whether the [agency's] decision was

⁸ Concurrently, EPA issued a "direct final" rule to revise (contingent on any public comments) 2012 and 2014 Transport Rule State budgets in other States and to revise certain new unit set-asides. 77 Fed. Reg. 10,342 (Feb. 21, 2012).

based on a consideration of the relevant factors and whether there has been a clear error of judgment.” Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43-44 (1983). Particular deference is given to an agency with regard to technical matters within its area of expertise.⁹

Judicial deference also extends to an agency’s interpretation of a statute it administers. Chevron U.S.A. Inc. v. NRDC, 467 U.S. 837, 842-45 (1984). Under the first step of Chevron, if Congress has “directly spoken to the precise question at issue,” that intent must be given effect. 467 U.S. at 842-43. However, under Chevron’s second step, “if the statute is silent or ambiguous with respect to the specific issue, the question for the court is whether the agency’s answer is based on a permissible construction of the statute.” Id. at 843.

SUMMARY OF ARGUMENT

The Transport Rule represents the culmination of decades of Congressional, administrative, and judicial efforts to fashion a workable, comprehensive regulatory approach to interstate air pollution issues that have huge public health implications. The legislative history of the Act clearly reflects Congressional frustration with the historical failure of upwind States to take effective action on their own to curtail their contributions to pollution problems in downwind States,

⁹ See Baltimore Gas & Elec. Co. v. NRDC, 462 U.S. 87, 103 (1983); see also, e.g., West Virginia v. EPA, 362 F.3d 861, 867-68 (D.C. Cir. 2004); Allied Local & Reg’l Mfrs. Caucus v. EPA, 215 F.3d 61, 73 (D.C. Cir. 2000).

as well as a deliberate effort to provide EPA with effective and flexible authority to address these issues. The Transport Rule effectuates this Congressional intent and many, if not most, of the specific features of the Rule challenged by Petitioners are direct responses to guidance from North Carolina and Michigan.

Petitioners argue that EPA incorrectly gauged the “significant contribution” of particular States. However, EPA’s task was to develop a regulatory approach that addressed the *entirety* of this complex, interstate pollution issue, where contributions from numerous upwind States typically are linked to particular downwind nonattainment and maintenance problems. From a technical perspective, EPA explained why an air quality-only approach (such as that advocated by Petitioners here) would not be an effective or efficient *overall* response to the complex collective-contribution problem presented here, and this analysis stands essentially undisputed. Further, the mixed air-quality and cost-effectiveness approach EPA instead adopted was previously upheld in both Michigan and North Carolina.

Petitioners also argue that EPA should not have issued FIPs, but instead should have delayed the relevant compliance dates to give States additional time to submit their own SIPs. However, the Act has obligated States to adopt SIP provisions to address interstate air pollution since the 1970s, and it has been clear since North Carolina that neither the CAIR FIPs, which were remanded to EPA yet

remain in place in several States, nor SIP provisions that merely implemented the requirements of CAIR, satisfied this long-unsatisfied obligation.

For each State subject to the annual NO_x and SO₂ requirements of the Transport Rule, EPA made a finding of failure to submit and/or disapproved a SIP with respect to the 2006 PM_{2.5} NAAQS, except for South Carolina and Texas, and for those States (as well as others), EPA made a finding of failure to submit for the 1997 PM_{2.5} NAAQS. For each State subject to the NO_x ozone-season requirements, EPA made a finding of failure to submit for the 1997 ozone NAAQS. Thus, pursuant to §7410(c)(1), EPA has not only the authority, but the *obligation*, to promulgate a FIP for each of these States to address the interstate transport requirement of §7410(a)(2)(D)(i)(I).

Petitioners' claim that EPA's approach to interference with maintenance is inconsistent with North Carolina is based on a fundamental misreading of that decision. In North Carolina, the Court held that EPA could not consider interference with maintenance only to justify the continuation of controls on States that had significantly contributed to nonattainment in areas that later came into attainment, but must independently determine whether a State interferes with maintenance or significantly contributes to nonattainment. That is exactly what EPA has done here by separately identifying contribution to maintenance

receptors. Furthermore, the Transport Rule does not relieve downwind States of the obligation to address pollution from their own sources.

Petitioners also challenge EPA's use of the Integrated Planning Model ("IPM") to establish state emissions budgets. IPM is a well-known economic model used to predict power sector generation and emissions. It has been used by EPA in prior transport-related rulemakings and recognized by this Court as a reasonable tool for these purposes. Contrary to Petitioners' arguments, IPM's assumptions are well-founded and EPA rationally explained any apparent discrepancies with actual data.

EPA also reasonably projected which areas of the eastern United States would have attainment or maintenance issues in 2012 and, thus, needed to be addressed by the Rule. This Court directed EPA to replace CAIR from the "ground up," so EPA reasonably identified areas of concern by using a "no-CAIR base case" for 2012 that shows what air quality would be in those areas minus emission reductions due solely to CAIR. While EPA reasonably did not base its model on recent air quality data that *includes* CAIR-induced emission reductions, as Petitioners advocate, it did use several years of monitored air quality data to establish the model's bounds and to check its accuracy compared to real world conditions. EPA also applied emissions inventory data that appropriately accounted for all non-CAIR emissions reductions expected to occur by 2012.

Petitioners also fail to challenge effectively the basis and reasonableness of the Transport Rule's compliance deadlines. This Court expressly directed EPA to develop a rule with requirements that are harmonized with the CAA attainment deadlines and that eliminates significant contribution to downwind problems as "expeditious[ly] as practicable." It is undeniable that the emissions reductions required by the Transport Rule in 2012 through 2014 (and beyond) will help the areas of concern identified in the Rule to meet the applicable NAAQS deadlines. None of the Petitioners' technical challenges calls into question the practicability of meeting the Rule's budgets in 2012, especially considering the compliance flexibility built into the Rule, its allowance trading program, the fact that the Rule has a cushion to account for annual variability of emissions, and the way the Revisions Rule substantially mitigated any alleged compliance burden (including by delaying until 2014 certain enforcement provisions).

A number of Petitioners also claim they did not have sufficient opportunity to comment on aspects of the Rule. However, the proposed rule, combined with three separate supplemental notices, provided all interested parties with more than ample notice and opportunity to comment on EPA's methodology, data, and general approach. Nothing in the Act or the Administrative Procedure Act required more. Moreover, the Revisions Rule has, in any event, addressed many of the alleged "errors" of concern to particular States and utilities. Petitioners thus

cannot show any material defect in the notice or opportunities to comment provided by EPA, and they certainly cannot satisfy the stringent standard for alleged procedural errors established by §7607(d)(8).

ARGUMENT

I. EPA’S APPROACH TO “SIGNIFICANT CONTRIBUTION” IS CONSISTENT WITH THE ACT AND IS WELL-SUPPORTED BY THE ADMINISTRATIVE RECORD

EPA utilized a multi-factor analysis of air quality impacts and cost-effectiveness to determine the amount of each State’s “significant contribution.” EPA began by using air quality modeling to identify downwind areas with nonattainment or maintenance problems for the PM_{2.5} and ozone NAAQS, as well as the upwind States whose contributions to one or more of those downwind areas exceed specified threshold amounts (one percent of the applicable NAAQS). 76 Fed. Reg. at 48,224-46. States with emissions above the applicable thresholds for at least one upwind-to-downwind linkage were further analyzed for inclusion in the Rule.

EPA first identified the emissions that would remain in those States after application of ascending cost thresholds of emission reductions, and then assessed the impact of those upwind State emission reductions on air quality in the downwind areas to which each State was “linked” through air quality modeling (with each State’s “significant contribution” being the reductions available at the

cost threshold identified by this multi-factor analysis). Id. at 48,246-65. EPA then calculated the emission “budgets” for each upwind State subject to the Rule based on EGU emissions in an average year after all significant contribution has been eliminated. Id. at 48,259. For PM_{2.5}, EPA set annual budgets for NO_x and SO₂. For the SO₂ budgets, EPA separated upwind States into two groups – “Group 1” and “Group 2” -- based on the severity of the downwind problem to be addressed. Id. at 48,257, 48,264. Because they are linked to areas with worse nonattainment and maintenance problems, “Group 1” States are required to make more stringent reductions, and their final SO₂ budgets are based on the amount of SO₂ that will be emitted if controls costing up to \$2,300 per ton are implemented.¹⁰ The SO₂ budgets for “Group 2” States are based on less stringent controls costing up to \$500 per ton. Overall, EPA’s analyses indicated that these reductions would cost-effectively address each State’s significant interstate contributions to PM_{2.5} nonattainment and maintenance problems. Id. at 48,209-12, 48,253-55.

Petitioners challenge how EPA integrated considerations of cost-effectiveness into the calculation of each State’s “significant contribution,” and appear to argue that under the statute, “significant contribution” must, in the

¹⁰ The 2012-13 budgets for “Group 1” States are based on the amount of SO₂ that will be emitted if controls up to \$500 per ton are implemented, and the budgets for 2014 and beyond are based on the amount of SO₂ that will be emitted if controls costing up to \$2,300 per ton are implemented. 76 Fed. Reg. at 48,260.

first instance, be defined *exclusively* by air quality considerations. Ind. Br. 19-24; State Br. 31-35. Petitioners argue that while EPA may consider costs *after* it makes this initial, air-quality-based determination of “significance,” it may only do so to *reduce* the regulatory obligations of upwind States. Ind. Br. 23; State Br. 36. In Petitioners’ view, the Transport Rule is flawed in part because it does not adequately correlate an upwind State’s reduction requirements with the degree to which that State exceeds applicable screening thresholds for particular downwind linkages. Ind. Br. 22-23; State Br. 34-35. They further argue that the Rule over-controls in some cases because it requires upwind States to reduce emissions more than is strictly necessary to enable downwind States to attain or maintain the NAAQS. Ind. Br. 26-34; State Br. 35-37.

These arguments fail for two main reasons. First, and perhaps most importantly, the legal premise of most of Petitioners’ arguments is flatly inconsistent with Michigan, in which the Court upheld the fundamental aspects of the approach used here. Second, Petitioners’ significant contribution arguments mostly ignore the complexities of the interstate pollution problem addressed by the Transport Rule and the overwhelming record support for EPA’s significant contribution approach. Petitioners’ policy arguments largely focus instead on misleading and oversimplified *hypothetical* examples of their own creation, a technique that falls far short of meeting their burden of demonstrating that the Rule

was either arbitrary or capricious based on the complexity of the task and the contents of the record before EPA.

A. The Transport Rule’s Approach to “Significant Contribution” Is Consistent with the Act and This Court’s Precedent.

1. Cost considerations are a proper part of the Transport Rule’s “significant contribution” approach.

Petitioners argue, in essence, that emissions “contributions” from upwind States can only be deemed “significant” (and hence subject to regulation under §7410(a)(2)(D)) to the extent they are shown to *prevent* downwind areas from attaining or maintaining the NAAQS. However, this is no different than the 1977 Act’s “will prevent” approach that Congress replaced in 1990. See supra at 6-7. By adopting the present “contribute significantly” standard, Congress moved away from the stringent strictures of a causation-based approach, expanding the authority (and corresponding duty) of States and EPA to regulate effectively in this area. See Michigan, 213 F.3d at 674.

Petitioners’ arguments are further undercut by guidance from this Court interpreting the “contribute significantly” standard. This issue was the principal focus of Michigan (reviewing the NOx SIP Call). In that rule, like the Transport Rule, EPA first used air quality modeling to establish the upwind-to-downwind linkages that determined which States should be further analyzed for inclusion in the Rule. Michigan, 213 F.3d at 675. In the second step of its analysis, EPA did

not require wholesale cutbacks in the upwind States' NOx emissions, but rather, only those reductions that could be achieved through the application of "highly cost-effective controls." Id. As the Court observed, "EPA's design was to have a lot of states make what it considered modest NOx reductions, uniformly limited to ones that could be achieved (in EPA's estimate) for less than \$2000 a ton. As a result, naturally, the ultimate line of 'significance,' whether measured in volume of NOx emitted or arriving in nonattainment areas, would vary from state to state depending on variations in cutback costs." Id.

In Michigan (as here), "State and Industry/Labor petitioners argue[d] that this approach runs afoul of §7410(a)(2)(D), which they read as prohibiting any consideration of costs or cost-effectiveness in determining what contributions are 'significant.'" Id. The Court initially observed that "none of the states proposes that EPA, if reversed, must require complete extirpation of their NOx emissions. Rather, the gamble -- at least of the small contributors -- is evidently that if EPA were barred from considering costs, it never would have included such states."

Id.¹¹

¹¹ The dynamic in this case is much the same. As is discussed in Part I.B.1, infra, EPA thoroughly considered and sought comment on a variety of alternative approaches to "significant contribution" in developing the proposed Transport Rule. EPA rejected approaches based solely on air quality considerations because, generally speaking, those would have resulted in far more burdensome and costly controls on upwind States than would an approach that integrated cost-effectiveness analyses. Perhaps for this reason, few, if any, of the Petitioners

Ultimately, the Court thoroughly and unambiguously rejected the argument that EPA's determination of which emissions are "significant" must be based solely on air quality considerations to the exclusion of costs. Id. at 677-79. The Court reasoned that the word "significant" is ambiguous, id. at 677-78, that the term as used in this context "does not in itself convey a thought that significance should be measured in only one dimension -- here, in the petitioners' view, health alone," id. at 677, and that a preclusion of cost considerations would require "a rather express congressional direction" not present in §7410(a)(2)(D). Id. at 678-79.

This Court also rejected Petitioners' related argument that EPA's approach was impermissible because it applied a uniform cost-effectiveness criterion to determine the degree of emission reductions across all States subject to the Rule. Id. at 679-80. The Petitioners in Michigan argued, again much like Petitioners here, that EPA should have made "reductions from sources near the nonattainment areas (or otherwise more damaging, molecule for molecule) more valuable than ones from distant sources...." Id. at 679. They also criticized EPA's approach on the basis that "where two states differ considerably in the amount of their

submitted comments to EPA actually advocating adoption of an air quality-only based approach to significant contribution. Rather, the handful of comments received in support of such an approach came primarily from downwind States seeking more stringent "upwind" controls. See, e.g., Primary RTC at 446-48 (comments of Connecticut and Delaware) (JA01755-57).

respective NO_x contributions to downwind nonattainment, under the EPA rule even the small contributors must make reductions equivalent to those achievable by highly cost-effective measures.” Id. In response, the Court simply explained that EPA had articulated a reasonable basis in the record for its decision to use a cost-effectiveness approach to “significant contribution” for the rule as a whole, that the effects objected to by petitioners naturally flowed from EPA’s decision, and that “[o]ur upholding of that decision logically entails upholding this consequence.” Id.

Oddly, despite Michigan’s conclusive resolution of many of the “significant contribution” issues presented in this case, Petitioners mention that decision only in passing in their briefs, premising their legal arguments instead on mistaken interpretations of portions of North Carolina. For example, both Industry and State Petitioners highlight excerpts from North Carolina in which the Court observed that, whatever the merits of EPA’s “redistributional instinct,” the statute does not give EPA the authority to “force an upwind state to share the burden of reducing other upwind states’ emissions.” North Carolina, 531 F.3d at 921; see State Br. 37; Ind. Br. 22. However, these quotations do not come from the portion of North Carolina that addresses general significant contribution issues, but rather, from the portion of that decision that specifically addressed EPA’s equity-based rationale for using “fuel factors” to divide a budget determined to be cost-effective only at

the regional level into State NO_x budgets. Similarly, Petitioners stress North Carolina's admonition that "according to Congress, individual state contributions to downwind nonattainment do matter" and that "EPA is not exercising its section [7410](a)(2)(D)(i)(I) duty unless it is promulgating a rule that achieves something measurable toward the goal of prohibiting sources 'within the State' from contributing to nonattainment or interfering with maintenance 'in any other State.'" North Carolina, 531 F.3d at 907; *see* Ind. Br. 21; State Br. 32. This time, Petitioners overlook that these observations were made specifically in response to the Court's critique of the CAIR emissions trading program, which the Court viewed as too flexible to assure that a sufficient number of sources in particular upwind States would actually reduce emissions, as opposed to simply purchasing emission allowances.

In the Transport Rule, EPA faithfully responded to the cited aspects of North Carolina by not using fuel factors and by adopting "assurance provisions" to limit the degree to which sources can meet their compliance obligations through interstate trading. *See generally* 76 Fed. Reg. at 48,209-16, 48,270-71, 48,303-04. EPA also adjusted its significant contribution analysis to assure that emissions budgets were developed using a more State-specific, rather than regional, analysis. *See* Part II.B.3, *infra*. The more significant point, however, is that although Petitioners repeatedly suggest otherwise, the Court in North Carolina expressly

re-affirmed Michigan's holdings on the significant contribution issues that are most important and controlling here. 531 F.3d at 917 (affirming Michigan's holding as to the general consideration of costs in determining significant contribution, and Michigan's rejection of "claims that applying a uniform cost criterion across states was irrational because both smaller and larger contributors had to make reductions achievable by the same highly cost-effective controls").

Thus, many of Petitioners' legal arguments at bottom are no more than attempts to re-open issues that were resolved in Michigan.¹² Accordingly, they are precluded. *See, e.g., Davis v. Dep't of Justice*, 610 F.3d 750, 753 (D.C. Cir. 2010) ("[o]ne three-judge panel ... does not have the authority to overrule another three-judge panel of the court") (citation omitted), *cert. denied*, 131 S. Ct. 1013 (2011).¹³

¹² It bears emphasis that these "significant contribution" and cost issues were hardly peripheral in Michigan. They were central both to the majority opinion and the dissent, and were the primary focus of the Petitioners' requests for rehearing en banc and certiorari, all of which were denied. *See* Petition for Rehearing and Petition for Rehearing En Banc of Industry Labor Petitioners, at 6-13 (D.C. Cir. No. 98-1497, filed April 20, 2000) (JA03264-71); Petition for Rehearing and Rehearing En Banc of the Petitioning States, at 4-15 (D.C. Cir., No. 98-1497, filed April 20, 2000) (JA03283-94); Petition for Writ of Certiorari, at 14-19 (S. Ct., No. 00-445, filed Sept. 20, 2000) (JA03330-35).

¹³ To the extent Petitioners' arguments suggest that North Carolina overruled Michigan on some of the issues presented here, that claim too must be rejected, since the panel in North Carolina would not have had the authority to do so.

2. There is no pertinent basis to distinguish Michigan from this case.

Petitioners mistakenly argue that Michigan can be distinguished since, in their view, that decision only authorized EPA to use cost considerations to *reduce* the compliance obligations of upwind States. Ind. Br. 23; State Br. 36. To begin with, it does not appear that any party made this argument in comments during the rulemaking; unless Petitioners can show otherwise, they are barred from presenting that argument here. 42 U.S.C. §7607(d)(7)(B). In any event, Michigan rejected this very contention, reasoning that since it was permissible for EPA to apply a uniform cost-effectiveness standard across all States subject to the rule, the natural (and permissible) consequence would be that “even the small contributors must make reductions equivalent to those achievable by highly cost-effective measures.” Michigan, 213 F.3d at 679.

If anything, this aspect of Michigan applies with even more force here. While EPA identified the uniform cost threshold used in the NO_x SIP Call based solely on a determination of what controls were “highly cost effective,” in this Rule EPA “relies on an analysis that accounts for both cost and air quality improvement to identify the portion of a state’s contribution that constitutes its significant contribution to nonattainment and interference with maintenance.” 76 Fed. Reg. at 48,248. In addition, for PM_{2.5} regulation, the Transport Rule utilized differing cost thresholds based on the severity of the downwind nonattainment

problem to which the upwind contribution is linked. *Id.* at 48,264. Obviously, if applying the *uniform* cost-effectiveness criterion in Michigan did not render EPA's approach to significant contribution statutorily infirm, that conclusion can only be bolstered where EPA used a more tailored, two-tier approach that considered both cost and air quality.¹⁴ This is particularly true since here, as in Michigan, EPA thoroughly compared its approach to significant contribution with air-quality-only (and other) approaches, and found that the alternative approaches were no more effective, and in many ways less effective, than EPA's approach in terms of environmental results, costs, and workability. *See infra* Part I.B.1; *see also* Michigan, 213 F.3d at 679 (noting that EPA's mostly undisputed analysis "found that non-uniform regional approaches by comparison did not 'provide either a significant improvement in air quality or a substantial reduction in cost'").

In sum, the Transport Rule's approach to significant contribution is entirely consistent with the statute and this Court's precedent.

¹⁴ Moreover, it is not clear that Petitioners' approach would necessarily result in less stringent regulation (which perhaps explains why Petitioners did not advocate it in any meaningful way in comments). As discussed above, in Michigan, this Court upheld the NO_x SIP Call, which found emissions controls costing \$2,000 per ton not only to be "cost-effective," but "highly cost-effective." Obviously, if control costs of \$2,000 per ton were "highly" cost effective in the 1990s, then it is hard to imagine any cost-based rationale that could justify relaxing emission limitations below that level (as adjusted upward to today's dollars).

B. The Transport Rule's Significant Contribution Analysis Is Reasonable and Well-Supported.

1. EPA's combined air quality and cost-effectiveness approach to significant contribution is reasonable.

In the preamble to the proposed Transport Rule, EPA explained that before choosing its significant contribution approach, it also considered a variety of other approaches (some cost-based, some air quality-based, and some reflecting elements of both), and EPA referred interested parties to a supporting technical support document ("TSD") for more detail. 75 Fed. Reg. 45,210, 45,298-99 (Aug. 2, 2010) (referencing Alternative Significant Contribution Approaches Evaluated TSD (July 2010) ("Alternative Approaches TSD") (JA02306-20)). Of the many alternative approaches considered by EPA, the one closest to the approach Petitioners appear to advocate is the "fixed air quality threshold approach," which would have "define[d] a threshold limit value for an air quality contribution from an upwind state to a downwind monitor" and then would have required upwind States to "reduce emissions such that their contribution to all downwind monitors is at (or below) the level of the threshold." Alternative Approaches TSD at 3 (JA02308). While such an approach might be workable in a hypothetical world where interstate pollution transport problems involve only single upwind-to-downwind State linkages, see, e.g., Ind. Br. 22-23; State Br. 35-37, in reality, most upwind States contribute to nonattainment and maintenance problems in multiple

downwind States, and all downwind nonattainment and maintenance problems are caused by the combined contributions of local emissions and transported emissions from multiple upwind States.¹⁵

The most obvious air quality-only approach to this “collective contribution” problem would require each upwind State to reduce its emissions to address the maximum contribution that the State makes to any downwind nonattainment problem, but this would result in much larger and more costly required emission reductions in upwind States than would be necessary, collectively, to address the identified downwind nonattainment and maintenance issues, and the resulting limitations in certain States would be so onerous as to make the control regime practically unworkable. Alternative Approaches TSD at 4-5 (explaining, among other things, that such an approach would require certain upwind States to reduce NO_x emissions -- from *all sources*, not only the power sector -- by over 90 percent) (JA02309-10). While these problems theoretically could be addressed somewhat by raising the level of the applicable screening threshold (which likely would result in controls in fewer upwind States), such adjustments would create a substantial risk of undercontrol, and the required emissions limitations falling on

¹⁵ Typically, EPA’s modeling showed that for each downwind receptor with an ozone or PM_{2.5} nonattainment problem, there are numerous (sometimes as many as two dozen or more) upwind States whose emissions make some contribution to the problem. See generally Air Quality TSD, App. D (JA02700-13).

the remaining upwind States would still be extraordinary (in many cases well over 50 percent of emissions from all sources). Id. at 5-6 (JA02310-11). The reality is that the mixed cost and air quality approach used by EPA achieves the environmental results required by the Act at far lower cost to upwind States and utilities than would an air quality-only approach. There is no evidence in the record that it would even have been *possible* to implement an air quality-only approach in a practical way.

Given EPA's thorough explanation in the proposal of the problems and challenges associated with air quality-only approaches, it is not surprising that EPA received few comments (and only one that EPA has located from a Petitioner¹⁶) advocating such an approach. No commenter proposed an alternative, comprehensive air quality-based methodology that would be workable and effective in practice. If Petitioners truly felt that EPA should adopt one of the air quality-based alternative approaches discussed at the time of proposal, or some variant thereof, they were required to present these views "forcefully" in comments. Vt. Yankee Nuclear Power Corp. v. NRDC, 435 U.S. 519, 553-54 (1978). Whether their failure to do so formally rises to the level of waiver, it at the very least bolsters the reasonableness of EPA's adoption of its proposed approach. In other words, just as in Michigan, EPA here analyzed a range of legally

¹⁶ See Primary RTC at 1394 (comments of Wisconsin DNR) (JA02056).

permissible approaches, reasonably explained why it believed the approach it selected was the one most likely to achieve the necessary environmental objectives in a practical fashion, and commenters offered “no material critique of EPA’s methodology in reaching this answer.” Michigan, 213 F.3d at 679. The deferential arbitrary and capricious standard of review requires no more.

2. The air quality thresholds EPA used to help establish upwind-to-downwind linkages were reasonable.

EPA used numerical thresholds (one percent of the applicable NAAQS) to determine, out of the larger universe of upwind-to-downwind linkages identified in the air quality modeling, which upwind State contributions to downwind problems are so small as to warrant exclusion, while a combination of air quality and cost-effectiveness analyses were conducted to determine whether, and, if so, how much, States above the threshold are “significantly contributing” to downwind nonattainment problems. The upwind States identified in this analysis became the universe of States subject to the Transport Rule. See generally 76 Fed. Reg. at 48,222-46.¹⁷ Once those States were identified, their “significant contributions” were defined not in relation to the thresholds, but instead with respect to the amount of emissions within each State that could be reduced at a specific cost

¹⁷ See also North Carolina, 531 F.3d at 916-17 (recognizing that similar thresholds used in CAIR were used only to help determine the inclusion or exclusion of particular States in the rule, not the amount of each State’s “significant contribution”).

threshold identified for each State by utilizing the combined cost-effectiveness and air quality analyses described above. Id. at 48,246-65.

Petitioners advance arguments premised on an alleged mismatch between the amount of a State's "significant contribution" (as defined in Petitioners' view by the numerical thresholds) and the amount of its required emission reductions (as determined, in their view, by a cost-effectiveness analysis). See, e.g., Ind. Br. 22-23; State Br. 32-34, 36-37. Their basic point appears to be that EPA's analytical framework must be flawed since it is possible, albeit hypothetically, that a particular upwind State might be assigned an emissions budget that could have the effect of reducing its emissions below that needed to reach the one percent screening level.

This argument likely has been waived by failure to comment, 42 U.S.C. §7607(d)(7)(B),¹⁸ and, in any event, constitutes little more than an attack on a

¹⁸ Although the volume of comments received on the rule makes definitive statements difficult, EPA is not aware of *any* comments that argued that EPA's proposed approach was flawed because of the theoretical possibility that a State's emissions, after implementation of the rule, could fall below the one-percent screening threshold. The only comment EPA has been able to locate that is even arguably relevant is a very brief and conclusory passage in the State of Tennessee's comments that focuses on a somewhat different point: "A lower cost threshold should be considered for any State that can reduce their contribution below 1% significance using cost thresholds below the maximum values (\$2,000/ton for SO₂ and \$500/ton for NO_x), if applicable." Primary RTC at 514 (JA01823). Even if this comment is deemed to relate to the same issue raised by Petitioners, it obviously raises none of the legal and technical arguments they present here.

straw man. The record shows that EPA used the cited numerical thresholds to screen out the upwind States with the lowest contributions from further consideration with respect to particular linkages. Petitioners have articulated no tangible basis for finding the one-percent thresholds to be arbitrary or capricious for the limited analytical purpose for which they were established.¹⁹ The screening thresholds otherwise say nothing about what part of each State's contribution should be considered "significant."

Further, whatever the relevance of this argument, Petitioners make no showing that the scenario they hypothesize will actually occur in any State subject to the Rule. In fact, data in the record suggest that, at the cost thresholds used in the Rule, such a scenario is extremely *unlikely* to occur.²⁰

¹⁹ Petitioners do briefly assert that the screening thresholds are too low to constitute analytically reliable measures. *See* State Br. 33; Ind. Br. 20 n.7. As EPA explained, some arguments of this sort made by commenters were premised on the limitations of air quality *monitoring* techniques, while the screening thresholds, by contrast, are simply an analytical tool applied to air quality *modeling* data. 76 Fed. Reg. at 48,237-38. Furthermore, EPA explained that the thresholds chosen were otherwise also completely consistent with applicable modeling guidance and rounding conventions. *Id.*; Primary RTC at 335 (JA01644). Perhaps more significantly, Petitioners' articulation of this argument only further undermines their broader argument. Obviously, if the one-percent thresholds are not reliable enough even to serve as an analytical screening tool, it is hard to see how those thresholds could credibly serve as the ultimate touchstone for determining each State's actual significant contribution, as Petitioners suggest.

²⁰ Due to the lack of comments, this was not an issue that EPA analyzed in a direct fashion for the Rule. However, based on data in the record, EPA believes no State would fall below the threshold for all of its annual and daily PM_{2.5} linkages

3. EPA's emission budget analysis was State-specific.

Petitioners also argue that, in contravention of North Carolina, EPA allegedly developed the State budgets on a regional, as opposed to State-specific, basis. Ind. Br. 21-22; State Br. 35-37. In fact, and in contrast with the regional approach used in CAIR, EPA used a state-specific cost and air quality-based multi-factor approach to identify appropriate cost thresholds. See 76 Fed. Reg. at 48,246-59, 48,271. The calculation of each State's significant contribution was based on an analysis that focused on the reductions available within the State and air quality improvements at downwind receptors linked to the relevant State.²¹ The methodology then sets State budgets based on emissions within the State that

after implementation of the Rule. First, adding together the data regarding both sulfate and nitrate contributions at the appropriate cost thresholds suggests that, even with all required reductions, all covered States except Maryland will remain at or above the one percent threshold for at least one of their annual PM_{2.5} linkages. See, e.g., Annual PM_{2.5} AQAT, EPA-HQ-OAR-2009-0491-4458 (spreadsheets estimating for each covered State sulfate contributions at the \$2,300 cost threshold ("2300CT") level and base case nitrate contributions ("Annual AMMN" to each downwind receptor)) (JA02986-92); Air Quality TSD, App. D (JA02700-13). Second, Maryland's contribution to Lancaster, Pennsylvania with respect to daily PM_{2.5} is so far above the threshold (see Air Quality TSD, App. D, at D-7 to D-10 (JA02706-09)(identifying annual PM_{2.5} linkages)) that there is no reason to believe it would fall below that threshold after implementation of the Rule.

²¹ See 76 Fed. Reg. at 48,248 ("EPA identifies what emission reductions are available at various cost thresholds, quantifying the emission reductions that would occur within each state at ascending costs per ton of emission reductions."); id. at 48,253 ("EPA ... evaluate[s] the impact on air quality for downwind nonattainment and maintenance receptors from upwind reductions in 'linked' states.").

would occur after elimination of that State's significant contribution.²² The reductions within the State available at the appropriate cost thresholds constitute the State's "significant contribution." Id. at 48,260.

Thus, unlike the NOx SIP Call and CAIR, where a regional budget was simply sub-divided among the States, in the Transport Rule, each State's budget was calculated individually based on specific emission reductions available within that State at the specified cost thresholds. Id. at 48,248. True, the specified cost thresholds were applied consistently to the States subject to the Rule, but this at most is a challenge to EPA's use of the cost-effectiveness criterion (which, as discussed above, was indisputably upheld by the Court in both Michigan and North Carolina), not to whether that criterion was applied here in a sufficiently State-specific manner.

For similar reasons, there is no merit to Industry Petitioners' suggestion that the Transport Rule runs afoul of North Carolina because EPA modeled the air quality improvements to be expected in downwind areas based on expected emissions reductions from all upwind contributors together, rather than on the basis of reductions from each upwind contributor individually. Ind. Br. 21-22.

²² See 76 Fed. Reg. at 48,249 ("EPA uses the information regarding emission reductions available in each 'linked' upwind state at the appropriate cost threshold to form a state 'budget' representing the remaining emissions from covered sources for the state in an average year once significant contribution to nonattainment and interference with maintenance have been eliminated.").

This argument is completely inapposite because North Carolina required EPA to determine each upwind State's *contributions* individually, and the Transport Rule clearly complied with that directive. The fact that EPA modeled the resulting *effectiveness* of the individually-determined upwind State controls in a collective fashion has nothing whatsoever to do with the cited portion of North Carolina, and is completely reasonable given the collective nature of the environmental problem presented here.

4. EPA's approach does not result in impermissible "overcontrol" of emissions from upwind States.

EPA's consideration of each State's emissions and particular contribution in setting the budgets included the assessment of, among other things, "how much air quality improvement in downwind states results from upwind state emission reductions at different levels; whether, considering upwind emission reductions and assumed local (in-state) reductions, the downwind air quality problems would be resolved; and the components of the remaining downwind air quality problem." 76 Fed. Reg. at 48,256. Nonetheless, Industry Petitioners argue that the cost thresholds selected by EPA were more stringent than necessary to address the downwind air quality problems that are the focus of the Rule. Ind. Br. 26-30. The gist of this argument appears to be that EPA was obligated to remodel various scenarios and shift reduction requirements among States until it identified the

single, least stringent rule that could still adequately address downwind nonattainment and maintenance problems.

Like many of Petitioners' other arguments, this argument is entirely theoretical, and makes no attempt to account in any meaningful way for the realities of the complex, interstate pollution problem addressed by the Transport Rule. Petitioners cherry-pick isolated examples of downwind areas that are modeled to have better air quality following implementation of the Rule than the minimum required by the applicable NAAQS. Ind. Br. 27-28. However, Petitioners do not grapple at all with the fact that each of the downwind areas subject to the Rule typically has multiple upwind contributors, each of which is also a contributor to downwind air quality problems in other States.²³ Given the web of interconnecting upwind/downwind linkages, the better-than-minimum environmental results in particular downwind areas cannot be said to demonstrate

²³ To illustrate, consider contributions to annual PM_{2.5} nonattainment with respect to the Madison, Illinois receptor that Petitioners cite. Ind. Br. 30. In addition to contributions from Illinois itself, this problem is caused by "significant" contributions from nine upwind States. Air Quality TSD at D-7 to D-8 (JA02706-07). These nine contributing States, in turn, generally also contribute to numerous other downwind nonattainment and maintenance problems. See id. at E-2 to E-3 (JA02715-16) (all but two of the nine each contribute to annual PM_{2.5} nonattainment in seven to 12 downwind areas across the mid-atlantic, midwest and southeast).

arbitrary or capricious “over-control” in any particular upwind State.²⁴ At most it illustrates the collective nature of interstate pollution contributions.

In other words, in addressing contribution to a specific area in the Northeast, for example, EPA may coincidentally bring some monitors in the Southeast below the level needed for attainment. There is, however, no way to channel the reductions aimed at reducing contribution to a particular area to ensure that they benefit that area exclusively.²⁵ For this reason, averaging the design values of all of the receptors linked to upwind States (as Petitioners have) provides little, if any, useful information. See Ind. Br. 28. Simply put, the fact that some, but not all of the States linked to a particular receptor are required to make greater reductions

²⁴ Indeed, in the final air quality modeling, several locations continue to experience nonattainment and/or maintenance issues, in spite of the emission reductions required here. For example, five areas are projected to have 24-hour PM_{2.5} issues, while ten sites in two areas (Houston, TX and Baton Rouge, LA) will have ozone problems. Air Quality TSD at 58, 62 (JA02466, 02470).

²⁵ To illustrate, if State X is linked only to a single annual PM_{2.5} nonattainment receptor (receptor A) that EPA determined will come into attainment if the States linked to it implement controls available at \$500 per ton, State X only needs to implement the controls available at \$500 per ton. However, other States (Y and Z) linked to receptor A may be required to make additional reductions based on linkages to other daily PM_{2.5} nonattainment receptors. The reductions States Y and Z must make to resolve their significant contribution to those other receptors will have the collateral effect of improving air quality at receptor A, perhaps to a level below the NAAQS. That reductions made in States Y and Z (for reasons unrelated to receptor A) could bring the design value for receptor A below the NAAQS is not a reasonable basis to allow State X to avoid making *any* reductions, which would effectively shift the responsibility for addressing its significant contribution to States Y and Z, contravening North Carolina, 531 F.3d at 921.

due to their contributions to other receptors does not provide a reasonable basis for eliminating or lowering some States' emission reduction requirements.

Further, contrary to Petitioners' assertions, EPA made direct and explicit efforts to ensure that no State was required to do more than necessary to address its significant contribution and interference with maintenance. EPA did not "simply set budgets based on its view of what constitutes 'reasonable' and 'cost effective' emission controls irrespective of downwind attainment status," as Petitioners claim. Ind. Br. 27. Instead, the cost thresholds were identified based on "current analyses of the cost of available emission reductions, the pattern of interstate linkages for pollution transport, and the downwind air quality impacts specifically related to the 1997 ozone NAAQS, the annual 1997 PM_{2.5} NAAQS and the 2006 24-hour PM_{2.5} NAAQS." 76 Fed. Reg. at 48,256. For example, the \$500 per ton cost threshold was selected because it represented the minimum level that would secure "a significant amount of lowest-cost NO_x emission reductions from EGUs, largely accruing from the installation of combustion controls, such as low-NO_x burners, and constitutes a reasonable cost level for operation of existing NO_x controls such as SCRs." Id.; see also id. at 48,251-52, 48,257 (similar discussion for SO₂ and annual NO_x, respectively). As EPA explained in the proposed rule, its analysis indicated that very few additional NO_x reductions would occur at cost thresholds below \$500 per ton. 75 Fed. Reg. at 45,257.

Tellingly, Petitioners articulate no direct challenge to the reasonableness of these bases for the cost thresholds, instead focusing exclusively on an argument that, in their view, it is at least possible that EPA could have selected lower cost thresholds in certain cases and still have achieved acceptable environmental results. Ind. Br. 31-34. In fact, the steps taken by EPA in the Transport Rule to base significant contribution determinations on changes in downwind air quality on a State-by-State and receptor-by-receptor basis is one of the major features that distinguishes this Rule from CAIR and the NO_x SIP Call. While in the earlier two rules, EPA set cost thresholds based on identifying “highly cost-effective controls,” in this Rule, EPA explicitly examined air quality impacts of upwind reductions on specific downwind receptors and excused some States from making deeper reductions precisely because the downwind areas to which they were linked had nonattainment or maintenance problems that were relatively easily resolved (i.e., with reductions at lower cost thresholds). See 76 Fed. Reg. at 48,248, 48,257.²⁶

²⁶ Industry Petitioners argue that even this amount of differentiation was insufficient. In their view, EPA should have further sub-categorized Group 1 States based not only on the seriousness of the downwind nonattainment problem, but also on the basis of the relative culpability of each upwind State that contributes to that downwind problem. Ind. Br. 33-34. This is merely a variant of Petitioners’ broader (and meritless) challenge to the cost-effectiveness approach. Since it would have been permissible under Michigan for EPA to have utilized a single, uniform cost-effectiveness criterion, there is no basis for arguing that after making the reasonable decision to differentiate Group 1 and Group 2 States based

There also is no merit to Petitioners' claim that the Transport Rule improperly excuses downwind States from their statutory obligations and transfers them to upwind States. Ind. Br. 24-26. Congress established specific and complementary duties for upwind and downwind States. Areas in nonattainment are subject to stringent requirements under the Act and areas that have moved from nonattainment to attainment need to have maintenance plans containing the controls necessary to keep them in attainment. See generally 42 U.S.C. §§7501-7515. By the same token, Congress expressly required upwind States to control their emissions that contribute significantly to nonattainment and maintenance problems in other States. Id. §7410(a)(2)(D). As discussed above, the manner in which EPA balanced these complementary duties in the Transport Rule is reasonable and the same in all relevant respects as the approach approved by the Court in Michigan.

To carry their burden of demonstrating that the Transport Rule is arbitrary and capricious, Petitioners must do more than show that the Rule will not result in every downwind area stopping precisely "on a dime" at the level of the NAAQS.

on the severity of the environmental problem to be addressed, the statute then required EPA to undertake a further and essentially unbounded multi-dimensional technical analysis to assure that every upwind State's significant contributions were extinguished at the lowest possible cost. See 76 Fed. Reg. at 48,257. Moreover, and contrary to Petitioners' suggestion, EPA did not ignore state control costs at this stage of its analysis, but instead analyzed them and found them to be similar within each group. Id.

See Kennecott Greens Creek Min. Co. v. MSHA, 476 F.3d 946, 954 (D.C. Cir. 2007) (“our standard of review under the arbitrary and capricious test is only reasonableness, not perfection”). Instead, they must show that EPA overlooked some evidence in the record that would have resulted in a demonstrably more precise, effective, and workable overall control regime. Petitioners conspicuously have not done so.

5. Petitioners’ “One Way Ratchet” argument is meritless.

Petitioners also allege that the Transport Rule is arbitrary and unfair because, in some cases, EPA refused to increase 2014 State emission budgets from 2012 levels, while in other cases, EPA reduced some 2014 State budgets from 2012 levels. Ind. Br. 34-36. This argument is simply a rhetorical attempt to manufacture a conflict between two essentially unrelated, entirely reasonable, and relatively minor aspects of EPA’s analysis.

On the first issue, EPA limited the emission budgets for certain States to 2012 levels even where modeling results indicated that there might otherwise be an increase in generation (and consequent emissions) in the State between 2012 and 2014. EPA’s analysis showed that the modeled increase in generation would primarily be due to “emissions leakage,” i.e., a shift in generation and emissions from certain States to others as the result of efforts by utilities to minimize costs. See Significant Contribution TSD at 7 (JA02936); see also 76 Fed. Reg. at 48,257-

63, 48,261. Were such shifts to occur, it would undermine the Court's directive in North Carolina, 531 F.3d at 907-08, that each State actually make its required emission reductions. Accordingly, EPA acted reasonably in taking steps to avoid creating incentives for such shifts in generation, and Petitioners have offered no direct rebuttal to the analysis of these issues set forth in the cited portion of the record.

On the second issue, EPA lowered 2014 emissions budgets in some States from their corresponding 2012 budgets where emissions were projected to decrease between 2012 and 2014 due to requirements outside of the Transport Rule, such as consent decrees and state law requirements. 76 Fed. Reg. at 48,261; see also, e.g., Primary RTC at 504, 2148 (JA01813, 02094) (arguing EPA should take into account reduction requirements that apply in 2012 and beyond). EPA explained in both the proposed and the final rules that budgets would be based on emissions that would remain after implementation of all controls available at the \$500 per ton cost threshold, and EPA's methodology faithfully implements that approach. It was reasonable, and well within EPA's discretion, to determine that when factors other than the Transport Rule push emissions downward, the 2014 budgets should be adjusted to correctly reflect emissions remaining after operation of all controls (including those installed after 2012 but by 2014) available at the \$500 per ton threshold.

For all the foregoing reasons, the Court should reject Petitioners' challenge to the Transport Rule's significant contribution approach.

II. EPA HAS STATUTORY AUTHORITY TO PROMULGATE THE TRANSPORT RULE FIPS

Petitioners assert that EPA lacked authority to implement the Transport Rule by promulgating FIPs. State Br. 20-31. However, EPA's authority to issue the FIPs in the Transport Rule is express:

The Administrator *shall* promulgate a Federal implementation plan at any time within 2 years after the Administrator –

(A) finds that a State has failed to make a required submission or finds that the plan or plan revision submitted by the State does not satisfy the minimum criteria established under subsection (k)(1)(A) of this section, or

(B) disapproves a State implementation plan submission in whole or in part,

unless the State corrects the deficiency, and the Administrator approves the plan or plan revision, before the Administrator promulgates such Federal implementation plan.

42 U.S.C. §7410(c)(1) (emphasis added).

For each State subject to the Transport Rule, EPA made a finding of failure to submit and/or disapproved a SIP submission. Thus, pursuant to §7410(c)(1), EPA has not only the authority, *but the obligation*, to promulgate a FIP for each of these States to address the interstate transport requirement of §7410(a)(2)(D)(i)(I). Specifically, for each State subject to the annual NO_x and SO₂ requirements,

except South Carolina and Texas, EPA made a finding of failure to submit and/or disapproved a SIP submission related to the 2006 PM_{2.5} NAAQS, and for South Carolina and Texas (and other States) EPA made a finding of failure to submit for the 1997 PM_{2.5} NAAQS. EPA-HQ-OAR-2009-0491-4527 (“FIP TSD”) (JA03167-78). For each State subject to the Rule’s ozone-season requirements, EPA made a finding of failure to submit for the 1997 ozone NAAQS. Id.

Petitioners do not address the clear import of the statutory language, i.e., that EPA *shall* promulgate a FIP within two years of making a finding of failure to submit or disapproving a SIP. Rather, Petitioners claim: (1) that EPA’s findings of failure to submit and SIP disapprovals were inappropriate; and (2) that, for States for which EPA approved a CAIR SIP (which applied only to the 1997 NAAQS), that approval eliminated EPA’s authority to promulgate a FIP for those NAAQS. Neither of these arguments has merit.

A. Petitioners’ Claim That States Were Not Required to Submit SIPs to Meet Their Statutory Obligation to Address Interstate Transport Is Not Properly Before the Court and Is Meritless.

Petitioners do not contest that EPA made the failure to submit findings and SIP disapprovals on which EPA’s FIP obligations are based. Nor do Petitioners address the fact that §7410(c)(1) requires EPA to promulgate a FIP within two years of making such findings. Rather, Petitioners argue that the Court should vacate EPA’s findings and disapprovals because the States were not required to

comply with the requirement of §7410(a)(2)(D)(i)(I) until *after* EPA promulgated the Transport Rule. Although not expressed as such, the only way Petitioners could avoid the unambiguous application of §7410(c)(1) is if the Court vacates EPA's findings and disapprovals. Thus, Petitioners' claim must be read as a belated attempt to seek review of those actions. As discussed below, nothing makes the States' obligation to comply with the Act's express interstate transport requirements contingent on regulatory action by EPA. However, the Court lacks jurisdiction to even consider that issue because Petitioners' claims are time-barred.

The findings and disapprovals on which EPA's authority and obligation to promulgate the Transport Rule FIPs rests were published in the Federal Register. The CAA provides that any petition for review of EPA's actions must be filed in the appropriate Court of Appeals within 60 days of the action. 42 U.S.C. §7607(b). Such provisions are jurisdictional. Slinger Drainage, Inc. v. EPA, 237 F.3d 681, 682 (D.C. Cir. 2001). No judicial review was sought of EPA's findings of failure to submit, and the time for such review has passed. The time for judicial review of EPA's SIP disapprovals has also passed and no petitions for review were filed, except with regard to EPA's disapproval of proposed transport SIPs submitted by Georgia, Kansas, and Ohio to address the 2006 PM_{2.5} NAAQS.²⁷ Because

²⁷ Ohio v. EPA, No. 11-3988 (6th Cir.); Westar Energy, Inc. v. EPA, No. 11-1333 (D.C. Cir.); Kansas v. EPA, No. 12-1019 (D.C. Cir.); Georgia v. EPA,

Petitioners' claims seeking vacatur of EPA's other findings were not brought within 60 days, they are time-barred and cannot be considered by the Court.

The claims concerning Georgia, Kansas, and Ohio are also not properly before the Court because they are pending elsewhere and are not the subject of these petitions for review. Moreover, the claim that EPA disapproved these submissions because they did not comply with the Transport Rule (State Br. 29-31) is unfounded. EPA disapproved Kansas' submission because Kansas failed to submit *any* technical demonstration that the control measures it was implementing would meet statutory requirements. 76 Fed. Reg. 14,831, 14,833 (Mar. 18, 2011) (JA03464). EPA disapproved the Ohio and Georgia submissions because they relied on CAIR, which did not address the 2006 PM_{2.5} NAAQS. 76 Fed. Reg. 43,175, 43,178 (July 20, 2011) (JA03534); 76 Fed. Reg. 43,159, 43,161 (July 20, 2011) (JA03524).

Even if the Court had jurisdiction, Petitioners' claim that States were free to ignore their obligation to address interstate transport is meritless. The statute is unambiguous. States must revise their SIPs within three years after EPA promulgates a new or revised NAAQS, 42 U.S.C. §7410(a)(1), and such SIPs *must* contain provisions adequate to prohibit emissions that would contribute

No. 11-1427 (D.C. Cir.). Those petitions are being held in abeyance pending resolution of this case.

significantly to nonattainment or interfere with maintenance in other States. Id. §7410(a)(2)(D)(i)(I). Nothing in the statute makes the States' obligation contingent on any prior action by EPA.

Nor is there any reason why States could not have timely met that obligation. Because the States have repeatedly failed to meet their obligations, EPA has been compelled to act and develop a methodology to address interstate contribution. However, EPA has *never* stated that its methodology is the only way that a State can demonstrate it is addressing interstate transport, and, for the 2006 PM_{2.5} NAAQS, EPA had developed guidance to assist States in making the required demonstrations. Any State that wanted to develop its own SIP after North Carolina made clear that CAIR would be replaced *could have done so*. That States chose not to address interstate transport should not create an excuse for further delay of compliance with the clear statutory requirement. See 6-7, supra.

At bottom, Petitioners argue that the Court should elevate policy considerations above the statute's plain language. However, as this Court has stated, "All the policy reasons in the world cannot justify reading a substantive provision out of a statute." North Carolina, 531 F.3d at 910. Further, the argument Petitioners make here is indistinguishable from the one the Court rejected in Appalachian Power Co. v. EPA, 249 F.3d 1032 (D.C. Cir. 2001), which concerned EPA's imposition of requirements under §7426 after the Court had stayed implementation of similar requirements under the NO_x SIP Call. Petitioners there

asserted, based on principles of “cooperative federalism,” that EPA was required to allow States to revise their own SIPs before imposing remedies under this section. Id. at 1046. The Court rejected that argument, holding that the requirements of section 7426 could not be ignored based on policy concerns. Id. at 1046-47. The Court should similarly reject Petitioners’ argument here that policy concerns trump the unambiguous provisions of sections 7410(a)(2)(D)(i)(I) and 7410(c)(1).

B. EPA’s Approval of CAIR SIPs Does Not Eliminate Its Authority to Issue the Transport Rule FIPs.

Petitioners’ second claim is that EPA’s approval of SIPs under CAIR terminated EPA’s authority to issue the Transport Rule FIPs.²⁸ The Act, however, states that EPA’s obligation to promulgate a FIP is terminated only if “the State corrects the deficiency, *and* the Administrator approves the plan or plan revision.” 42 U.S.C. §7410(c)(1) (emphasis added). In rejecting CAIR as insufficient to satisfy the Act, North Carolina made clear that the CAIR SIPs do not correct the deficiency.

Moreover, even if correct, this argument would apply only to a narrow subset of the States subject to the Transport Rule. First, this argument is irrelevant to the annual NO_x and SO₂ requirements (except for South Carolina and Texas) because EPA either made a finding of failure to submit or disapproved a proposed

²⁸ In CAIR, as here, EPA initially promulgated FIPs for all covered States, some of which were subsequently replaced by SIPs.

SIP for the 2006 PM_{2.5} NAAQS, which CAIR did not address. (While many of these States are also subject to the Rule because of the 1997 PM_{2.5} NAAQS, that is immaterial because it does not change the applicable requirements.) This argument is also inapplicable to South Carolina and Texas. As to Texas, EPA approved only an abbreviated, but not full, CAIR SIP that allowed Texas to allocate allowances. 72 Fed. Reg. 41,453 (July 30, 2007) (JA03348). Thus, Texas continues to be subject to the CAIR FIP, which the Court remanded to EPA. For South Carolina, EPA did approve a full CAIR SIP, but only *after* the decision in North Carolina, and such approval cannot reasonably be construed as a determination that South Carolina's SIP revision had corrected the problem. FIP TSD at 10 (JA03176). Rather, it merely allowed South Carolina to implement CAIR requirements during the interim period allowed by this Court's remand of CAIR.

For States subject to the ozone-season NO_x requirements, which concern the 1997 ozone NAAQS that was at issue in CAIR, only Alabama, Arkansas, Florida, Georgia, Kentucky, Illinois, Mississippi, New York, and Virginia had full CAIR SIPs approved prior to the decision in North Carolina. The remaining States either had only an abbreviated SIP approved or had a full SIP approved after North Carolina. FIP TSD (JA03167-78). In neither case can EPA's action reasonably be construed as a determination that the submitted SIP corrected the deficiencies that lead EPA to issue the CAIR FIP.

However, even for the States that had full CAIR SIP approvals prior to North Carolina, Petitioners' argument fails because the statute states that EPA's obligation to promulgate a FIP is terminated only if "the State corrects the deficiency, *and* the Administrator approves the plan or plan revision." 42 U.S.C. §7410(c)(1) (emphasis added). EPA's obligation to promulgate a FIP is terminated only if *both* prongs of the statute are met, i.e., the deficiency is corrected *and* a SIP is approved. While in these cases EPA did approve a SIP, North Carolina made clear that those SIPs did not correct the deficiencies EPA had found in making its findings of failure to submit. Because the deficiency has not been corrected, EPA's obligation to issue FIPs for those States has not been eliminated.

Petitioners do not address the statutory requirement that the deficiency be corrected. Rather, they focus on an EPA statement in the preamble correcting the previously issued SIP approvals, asserting that EPA has retroactively disapproved the CAIR SIPs. This argument misrepresents EPA's action. EPA has not disapproved the CAIR SIPs. They remain in effect to administer the CAIR allowance programs to the extent they remain applicable. Rather, EPA corrected those previous approvals:

to rescind any statements that the SIP submissions either satisfy or relieve the state of the obligation to submit a SIP to satisfy the requirements of section 7410(a)(2)(D)(i)(I) with respect to the 1997 ozone and/or 1997 PM_{2.5} NAAQS or any statements that EPA's approval of the SIP submissions either relieve EPA of the obligation to promulgate a FIP or remove EPA's authority to promulgate a FIP.

76 Fed. Reg. at 48,220. Section 7410(k)(6) explicitly gives EPA the authority to make this correction, and it is reasonable and necessary in light of North Carolina. Moreover, even without the correction, North Carolina made clear that the CAIR SIPs did not correct the identified deficiencies and thus that EPA's obligation to promulgate FIPs has not been terminated.

Moreover, Petitioners' claims concerning the correction lack merit. First, the correction is not based on the Transport Rule (State Br. 26), but rather on the Court's decision in North Carolina. While the Court on reconsideration did not vacate CAIR, its opinion leaves no doubt that the Court found that CAIR had not addressed the States' obligations to address interstate transport. Petitioners' claim that the correction is inconsistent with §7410(k)(5) (State Br. 27-28) ignores the fact that prior to issuing CAIR, EPA had found that each State had failed to submit a SIP to address interstate transport. EPA attempted to address that deficiency by promulgating the CAIR FIPs, some of which were superseded by SIPs. However, North Carolina made clear that neither the FIPs nor the subsequent SIPs were sufficient to correct the deficiency identified in the findings of failure to submit. Consequently, EPA's obligation to issue a FIP had not been met. Finally, Petitioners' challenge to EPA's invocation of the good-cause exception (State Br. 28-29) is a non-sequitur. EPA did not claim that North Carolina altered the requirements for modifying a SIP approval, but rather that North Carolina gave

EPA no discretion in determining the need for modification, thus making notice and comment moot.²⁹

III. EPA PROPERLY ADDRESSED INTERFERENCE WITH MAINTENANCE

Petitioners' challenge to how EPA addressed interference with maintenance in the Transport Rule is based on a fundamental misreading of North Carolina. State Br. 37-42. In CAIR, EPA did not utilize the interference-with-maintenance prong of §7410(a)(2)(D)(i)(I) to separately identify upwind sources that interfere with maintenance in downwind States, but rather used it only to justify continuing regulation of sources that had significantly contributed to nonattainment in an area that subsequently achieved attainment. North Carolina, 531 F.3d at 910. The Court held that this approach was inconsistent with the Act, and that EPA must give "independent effect" to the interference-with-maintenance prong, i.e., must determine whether sources in an upwind State interfere with maintenance in a downwind State *independent* of whether those sources had significantly contributed to nonattainment in that downwind State. Id.

Nowhere, in North Carolina did the Court "require[] EPA to implement the 'interference with maintenance' language in section 110(a)(2)(D)(i)(I) in a manner

²⁹ Intervenor's assertion that the FIPs create reliability concerns (Interv. Br. 27) is meritless because allowances are freely tradeable within a State. A SIP would only create a different initial distribution of allowances within the State.

distinct from its implementation of the provision's 'contribute significantly' language." State Br. 38. Rather, the Court held only that EPA must require regulation of upwind sources that either significantly contribute to nonattainment or interfere with maintenance.

In the Transport Rule, EPA did *exactly* what North Carolina instructed it to do. EPA identified areas that are projected to meet the NAAQS but, based on historic variability in air quality and meteorological conditions, will remain at risk of going back into nonattainment due, at least in part, to emissions from upwind States. EPA then assessed through modeling whether sources in other States could interfere with maintenance in those areas using the same screening criteria used to identify States that could significantly contribute to nonattainment in other States. Nothing in North Carolina addressed whether EPA may use the same screening criteria to identify areas that interfere with maintenance that it uses to identify areas that significantly contribute to nonattainment or whether EPA may require the same level of control in such areas. Petitioners are simply wrong that EPA's approach to maintenance areas is inconsistent with North Carolina.

Petitioners' claim that EPA's treatment of maintenance receptors is inconsistent with the Act likely has been waived by failure to comment.³⁰ 42

³⁰ Although the volume of comments received on the rule makes definitive statements difficult, EPA is not aware of any comments making the claims Petitioners raise here.

U.S.C. §7607(d)(7)(B). However, even if not waived, it lacks merit because it ignores both that the areas EPA identified as maintenance receptors are at high risk for nonattainment and that the effect of interstate transport on maintenance receptors' ability to remain in attainment is no different from its effect on nonattainment areas' ability to come into attainment. There is no apparent basis on which EPA could have designed different remedies for emissions that interfere with maintenance and those that significantly contribute to nonattainment.

In determining which States to include in the Transport Rule because they have the potential to interfere with maintenance in other States, EPA first identified areas that are predicted to be in attainment with the relevant NAAQS, but which, based on historical data, are at risk of violating the NAAQS due to variability in emissions and meteorological conditions. 76 Fed. Reg. at 48,227-29. EPA then used air quality modeling to determine whether any other State was linked to that maintenance receptor using the same screening criterion it used to identify States linked to nonattainment receptors, i.e., one percent of the applicable NAAQS. Sources in States that exceed that threshold are subject to the same level of control as sources in States linked to nonattainment receptors.

While the Act imposes different requirements on attainment, nonattainment, and maintenance areas³¹ for control of *in-state* sources, it does not address how EPA should determine what sources interfere with maintenance in another State or the appropriate control level for such sources. Given that the maintenance receptors are areas projected to just meet the NAAQS, but remain at high risk of exceeding it, EPA reasonably used the same threshold to determine linkages that it used for nonattainment areas. Petitioners have articulated no reason why EPA should use a different threshold for States connected to an area just below the NAAQS than for those just above.

Similarly, the use of a common cost threshold to determine the level of control for linked States does not undermine the Act's requirement that areas with more severe pollution problems impose more stringent local controls. Because both maintenance and nonattainment receptors will receive the same level of benefit from upwind controls, areas with more severe problems will still have to do more to achieve the NAAQS.

Petitioners' argument (State Br. 39-40) that EPA's approach is inconsistent with section 7505a, which requires maintenance area plans, is also meritless. Nonattainment areas also have plans. Id. §7502. Thus, that maintenance areas

³¹ Maintenance areas have been redesignated from nonattainment to attainment.

require a plan does not distinguish them from nonattainment areas. Furthermore, Congress also required upwind States to control their emissions that significantly contribute to nonattainment or that interfere with maintenance in other States. In developing nonattainment and maintenance plans, States may and do rely on federally-required control measures within the State and in other States in determining the remaining controls needed to achieve or maintain attainment.

Petitioners' assertions concerning the Allegan, Michigan receptor (State Br. 40) are not properly before the Court because no State is regulated under the original Transport Rule due solely to linkages to that receptor.³² Furthermore, it is simply not true that EPA approved the redesignation of the area based on a finding that attainment would be achieved and maintained solely through implementation of controls on local sources. To the contrary, 96 percent of the ozone at the Allegan monitor is from out-of-state emissions. 76 Fed. Reg. at 80,766. EPA's redesignation decision, which pre-dated the final Transport Rule modeling, was based primarily on controls imposed by federal programs on out-of-state sources, including the NO_x SIP Call. See 75 Fed. Reg. 42,018, 42,025-26 (July 20, 2010) (JA03460-61). Thus, Allegan is an example of an area whose air quality is almost

³² The Supplemental Rule brings Iowa, Oklahoma, and Wisconsin into the Transport Rule ozone program, and makes a significant contribution determination for Kansas, solely based on linkages to Allegan. 76 Fed. Reg. 80,760. That rule is not before the Court in this case.

totally dependent on controlling emissions from other States, and the Transport Rule modeling demonstrates that it is at risk of nonattainment due to transported emissions. Indeed, recent monitoring data shows that, even with CAIR in place, Allegan continues to experience high ozone days. 76 Fed. Reg. at 80,768.

Finally, Petitioners' attempt to extrapolate from Allegan to claim that EPA is imposing significant burdens on upwind States while maintenance plans demand "nothing" (State Br. 41) is specious. Allegan is an extremely unusual circumstance, i.e., a rural county that was in nonattainment solely due to pollutant transport from other areas. The maintenance receptors used in the Transport Rule are generally urban areas that have achieved attainment through the imposition of significant local controls. See 76 Fed. Reg. at 48,241-46. Indeed, all the States in which maintenance receptors are located (except Connecticut) are also subject to the Rule, and thus are subject to at least as stringent requirements as other upwind States (and generally have been subject to more stringent requirements). The maintenance receptors in Connecticut are in an area that was in nonattainment and is now a maintenance area, and sources in this State also had to implement the more stringent nonattainment area controls. Thus, the Transport Rule does not excuse these areas from controlling their own sources, but rather implements the statutory mandate that upwind States control those emissions that interfere with maintenance in other States.

IV. EPA’S USE OF IPM TO ESTABLISH STATE EMISSIONS BUDGETS IS RATIONAL AND SUPPORTED BY THE RECORD

The Integrated Planning Model (“IPM”) is an economic model, widely used throughout private industry and the public sector to forecast how the power sector produces electricity at least cost while meeting energy demand, reliability constraints, and environmental requirements. This Court has previously recognized the use of IPM as a reasonable methodology for this purpose, Appalachian Power, 249 F.3d at 1052-53, and EPA properly relied on it to establish State emissions budgets here.

Lacking any basis to challenge IPM itself, Petitioners unsuccessfully attempt to challenge EPA’s assumptions with regard to two narrow issues: localized transmission constraints and cogeneration units. As shown below, EPA fully explained and adequately supported its assumptions with respect to both issues. Petitioners’ additional claim that the model predictions are inconsistent with so-called “real-world data” also fails. IPM’s predictions are entirely consistent with the relevant underlying data upon which EPA relied. Thus, Petitioners fail to overcome the “extreme deference” due EPA on review of its use of computer models, such as IPM. See West Virginia v. EPA, 362 F.3d at 868.

A. EPA Reasonably Addressed Transmission Constraints in Establishing State Budgets and Allocating Allowances to Individual Sources.

Industry Petitioners argue that EPA's use of IPM to establish State emissions budgets is flawed because, in their view, it ignores unit-level transmission constraints that might require a specific unit to run even though it may be uneconomic to do so, and thus, IPM incorrectly predicts that such "uneconomic" units do not run. Indus. Br. 47-49. Petitioners' argument is flawed from the start because it incorrectly assumes that IPM aggregates unit-level data to produce state-level projections. In fact, IPM simulates the operation of representative "model plants" to "make[] it possible to obtain state-level results directly from IPM outputs." Documentation for EPA Base Case v.4.10—Using the IPM ("IPM Base Case Documentation"), EPA-HQ-OAR-2009-0491-0309, at 4–5 (JA02375).³³ In contrast, a post-processing parsing tool must be used to get unit-level data from IPM outputs. *Id.* at 2–5 (JA02343). EPA reasonably determined that IPM is an appropriate tool to project *State*-level budgets, notwithstanding that

³³ Specifically, IPM "combine[s] existing units with similar characteristics into 'model plants' ... [to] make[] the model manageable while capturing the essential characteristics of the generating units." *Id.*

the detailed design does not capture every conceivable constraint affecting every single *unit* within the system.³⁴

Contrary to Petitioners' argument, IPM projections for the Transport Rule explicitly take into account constraints on electricity transmission among 32 regions in the United States, informed by planning studies conducted by the North American Electric Reliability Corporation ("NERC"), an entity that is federally mandated to ensure electric system reliability. See IPM Base Case Documentation at 2–10, 3–1 (JA02348, 02354). IPM's 32 modeling regions are constructed to capture, directly within the model, significant limitations of the existing grid to deliver least-cost electricity under various scenarios. Id. EPA's Resource Adequacy and Reliability analysis based on IPM demonstrated that, even with projected shutdown of certain uneconomic units, more than sufficient capacity will remain in service in each region to meet electric generation demands. EPA-HQ-OAR-2009-0491-4455 at 3 (JA02920) (projecting less than one-half of one percent reduction in operational capacity nationwide in 2014, measured against a projected 25% weighted average reserve margin in the base case).³⁵

³⁴ Commenters, including Petitioner Entergy, largely supported the use of IPM to develop *State* budgets, while opposing its use to establish *unit* level allocations. Compare RTC at 2141, with RTC at 1314 (JA02091, 02049).

³⁵ The Court should disregard entirely attacks on IPM and EPA's resource adequacy analysis in the Consolidated Brief of Intervenor San Miguel Cooperative, Inc. and Amici Industrial Energy Consumers of America, et al. ("Intervenor/Amici

EPA recognized that this approach would not capture all local transmission constraints that may potentially lead to variations in unit-level operations compared to IPM projections. However, EPA reasonably determined that it was unnecessary to make system-wide adjustments to the model to account for constraints affecting individual units because any discrepancies between projected and actual unit-level generation are statistically likely to negate themselves when aggregated to the State level. Primary RTC at 2107-08 (JA02089-90).

Additionally, EPA did not make adjustments to IPM to address more localized transmission constraints because such constraints are frequently treated as confidential business information and thus rarely made publicly available. IPM Documentation Supplement, EPA-HQ-OAR-2009-0491-4385 at 52 (JA02820). The generalized criticisms offered in comments that IPM does not account for localized constraints did not provide EPA with sufficient information to

Brief”), ECF No. 1358441, Feb. 14, 2012. Intervenor/Amici’s arguments rely almost exclusively on post-hoc analyses of EPA’s modeling results that are outside the administrative record and irrelevant to the Court’s review. 42 U.S.C. §7607(d). Furthermore, a recent outside assessment by NERC confirmed EPA’s conclusion that the Rule has little, if any, impact on anticipated or potential reserve margins. See 2011 Long Term Reliability Assessment, NERC (Nov. 2011) (JA03973-4040), available at http://www.nerc.com/files/2011%20LTRA_Final.pdf. Compare *id.* at 152, Table 37: 2013 Reference Case (JA04016) (showing reserve margins in the absence of any EPA rules) with *id.* at 153, Table 38: 2013 Moderate Case Results (JA04017) (showing reserve margins in 2013 with EPA rules).

incorporate them into the model.³⁶ See, e.g., Primary RTC at 1314 and 1318 (JA02049, 02052).

Nonetheless, EPA did not simply ignore localized transmission constraints. In response to comments, EPA changed its methodology for allocating allowances to individual units to rely on historic data rather than IPM projections. Primary RTC at 2106-07 (JA02088-89). These historic data necessarily reflect specific unit-level behavior that may be driven by local transmission constraints and other operational needs of the grid, meaning that unit-level allowance allocations in the Transport Rule account for the historic response of these units to maintain electric reliability. By switching to a historic-data-based methodology for allocating allowances, “the degree to which any discrepancy between a unit’s actual future operation and its projected future operation would impact the unit’s allocation is greatly diminished.” Primary RTC at 2107 (JA02089). Furthermore, these unit-level allowance allocations in no way constrain a unit’s future operations under the Transport Rule, given the compliance flexibility of allowance trading.

Petitioners, in fact, completely ignore the inherent flexibility provided under the Rule. While IPM may predict that a particular unit may not run because it would not be economic for it to do so, the Rule does not impose specific emissions

³⁶ As discussed below, EPA’s Revisions Rule revised some State budgets based on unit-specific information that was provided to EPA *after* the Final Transport Rule was issued.

reductions requirements on individual sources, and sources have a variety of compliance options, including control installation, fuel switching, efficiency improvements, dispatch changes, and allowance purchases. Primary RTC at 2108 (JA02090). EPA reasonably concluded that this flexibility provides ample opportunity for “coordination with regional entities and among utilities to permit these local issues to be resolved in the normal course of business.” Primary RTC at 1505 (JA02064).

Petitioners fail to dispute EPA’s explanation or offer any other specific basis (other than to say it is “incorrect”) to conclude that EPA’s determination that IPM is accurate at the state level is arbitrary. State Br. 47. Given the deference due EPA’s technical judgments regarding the application of complex models to resolve such intractable issues as interstate air pollution, Petitioners must do more than simply disagree with EPA’s rationale. EPA’s application of IPM to establish State budgets is adequately supported and entitled to deference.

B. EPA Made Appropriate Adjustments to IPM to Account for Cogeneration Emissions.

Petitioners’ argument that EPA relied on flawed assumptions regarding operation of cogeneration units (i.e., units that produce for consumption both steam and electricity) also is unavailing. See Ind. Br. 49-50. Based on comments on the proposed rule, EPA agreed that IPM did not fully account for emissions from the steam-generating operations of cogeneration facilities. EPA reasonably addressed

this limitation in the modeling for the final Rule by applying a multiplier to the electricity generating emissions so that they more accurately capture the total emissions from these facilities. IPM Documentation Supplement at 2 (JA02770).

Petitioners utterly fail to explain why, in their view, this adjustment was arbitrary. Notably, data in the record reflect that cogeneration units comprise only about six percent (59.596 GW) of the total generating capacity covered by IPM (1051.885 GW). Compare id. at 4–34 (column 5) (JA2772-2802), with EPA-HQ-OAR-2009-0491-4418 (Summary, cell C58) (JA02857). For EPA to throw out the entire model based on how the model treats these few facilities, as Petitioners suggest, rather than reasonably adjusting the model’s assumptions, as EPA did, would be entirely unreasonable and without support. EPA’s adjustment to IPM to address the model’s treatment of cogeneration facilities is entitled to deference. West Virginia, 362 F.3d at 871 (“we must defer to the agency’s decision on how to balance the cost and complexity of a more elaborate model against the oversimplification of a simpler model”) (citation omitted).

C. EPA’s Modeling Results Appropriately Reflect Real-World Data Available to EPA During the Rulemaking.

Petitioners incorrectly argue that IPM is divorced from reality based on the model’s prediction that 2012 base case emissions (i.e., without CAIR or the Transport Rule) are lower than some States’ actual 2010 emissions. See Indus. Br. 50-51. However, facts in the record explain the predicted decline in emissions.

For example, EPA updated IPM to incorporate rapidly-developing low-cost natural gas supplies, which have recently begun displacing electricity generated by coal with electricity generated by more efficient and lower-emitting gas-fired plants. 75 Fed. Reg. at 53,614. As a result, IPM predicted lower emissions in 2012 in some States than existed in 2010. Similarly, IPM's 2012 predictions reflect additional emissions reductions resulting from consent decrees and state rules taking effect after 2010, including a new Illinois rule, leading to predictable post-2010 decreases in base case projections. IPM Base Case Documentation, App. 3-2.2 (JA02366); see also 76 Fed. Reg. at 48,251.

EPA's IPM projections for Louisiana's 2012 base case emissions and Texas's 2012 NO_x budget also are supported by the data available to EPA during the rulemaking. As to Louisiana, IPM projected that certain high-emitting steam generation units would be uneconomic to operate, see EPA-HQ-OAR-2009-0491-4420 (JA02859) (units that are not projected to operate have a "0" in column T), leading to a predictable decrease in state-wide emissions in the 2012 base case. Following the final Transport Rule, Louisiana stakeholders offered new information demonstrating these high-emitting units were likely to operate in a noneconomic fashion in the near-term due to specific local constraints, and EPA revised the State's budgets accordingly in the Revisions Rule. See 77 Fed. Reg. at 10,328; see also 77 Fed. at Reg. 10,344 (making additional revisions). Likewise,

the emissions reductions reflected in IPM's projected Texas 2012 budget reflect that IPM projected significant emissions reductions in Texas's 2012 base case emissions based on factual assumptions indicating emissions would be reduced, such as the planned installation of controls at some units. See, e.g., EPA-HQ-OAR-2009-0491-4266 (lines 12-13, 29-30) (JA02740) (showing EPA expected two plants to install FGD in 2012). EPA later adjusted Texas's SO₂ budget based on new information pertaining to EPA's IPM assumptions provided *after* the Transport Rule was issued, showing, among other things, that installation of the planned controls that EPA's IPM projections had relied upon had been cancelled. 77 Fed. Reg. at 10,326-27 (citing 76 Fed. Reg. 63,860, 63,864 (Oct. 14, 2011)).

The reductions in Louisiana's base case emissions and Texas's 2012 budget projected by IPM were entirely consistent with input assumptions that would generate emissions reductions. That EPA revised these State budgets (and others) in response to information provided *after* the rulemaking does not render EPA's use of IPM to establish state budgets invalid or otherwise demonstrate a flaw in the model. In other words, the revisions were not due to a flaw in the model, but rather were due to the absence of data States and utilities elected not to submit during the comment period. Regardless, EPA's corrections to Louisiana and Texas's budgets appear to render moot any argument that EPA's application of the model to these States remains in error.

V. EPA's AIR QUALITY MODELING RELIABLY IDENTIFIED AREAS THAT WOULD HAVE ATTAINMENT OR MAINTENANCE ISSUES IN 2012 WITHOUT CAIR

EPA considered appropriate data and applied sophisticated air quality modeling to identify those downwind areas (or “receptors”) that, in the absence of mandated reductions, likely would fail to attain the NAAQS or would have difficulty maintaining the NAAQS in 2012. Petitioners raise several challenges to EPA’s process for identifying these areas. All of their claims lack merit because they incorrectly describe EPA’s approach and the data that EPA considered, cherry-pick unrepresentative data points, proffer irrelevant apples-to-oranges comparisons using extra-record information, and draw incorrect conclusions about the current and projected air quality situation at the sites in question.

A. EPA Reasonably Identified Areas for Possible Inclusion in the Transport Rule.

In developing the Transport Rule, EPA first had to determine which areas of the eastern United States were expected to experience problems in 2012 attaining or maintaining the NAAQS and, thus, should be covered by the Rule. EPA could not identify these areas based only on recent air quality monitoring data, as such data necessarily would reflect temporary emission reductions that were mandated by CAIR, the regulation invalidated in North Carolina that EPA was required to replace completely. Such data would reveal nothing about whether CAIR *needed* to be replaced to aid particular areas. Fundamentally, EPA had to project (i.e.,

model) the anticipated air quality at receptor sites in the eastern United States to determine which ones would have NAAQS attainment or maintenance issues without the benefit of CAIR emissions reductions and which could be excluded from further consideration. 76 Fed. Reg. at 48,223-24.

Before EPA could project future air quality at the receptor sites, it needed an appropriate starting point, or baseline, using monitored air quality data. EPA selected 2005 as the base year primarily because, among other things, 2005 is the last year for which data unaffected by CAIR emissions reductions were available. Id. at 48,229-30.³⁷ In order to account for the variability in air quality data and also to minimize the potential impact of CAIR-induced emissions reductions on the analysis, EPA considered air quality data over a *five-year period*, from 2003-2007, and applied a weighted average of the monitored design values³⁸ for those years. This effectively favored 2005, the middle year of the period. Id. at 48,230.

³⁷ The contention (Ind. Br. 44) that using 2005 as the base year biased the results due to meteorological conditions in 2005 misses the mark. EPA modeling guidance favors using years, like 2005, that are conducive to the formation of ozone and PM_{2.5} to avoid underestimating future concentrations. 76 Fed. Reg. at 48,230; EPA-HQ-OAR-2009-0491-4340 at 142-43, 147 (JA02756-57, 61). Petitioners also misleadingly suggest (Ind. Br. 44) that in the Transport Rule preamble EPA called 2005's meteorology "atypical," while the true source of the quote (buried in a footnote) is a document outside the administrative record that addresses a limited, specific aspect of 2005's meteorology. In any event, as discussed *infra*, EPA did not rely solely on 2005 meteorology data.

³⁸ The "design value" describes the air quality status of a given area relative to the level of the NAAQS and converts raw ambient measurements (generally, a

EPA used a state-of-the-science photochemical model -- Comprehensive Air Quality Model with Extensions ("CAMx") -- to project 2012 "no-CAIR" base case design values for PM_{2.5} and ozone at each receptor site by applying the model to the measured design values for several three-year periods of ambient monitoring data from 2003-2007 (2003-2005; 2004-2006; 2005-2007). Id. at 48,233. EPA validated the model's performance (i.e., benchmarked it against real world conditions) by comparing the model's 2005 air quality projections with the measured air quality data from 2005, Air Quality TSD, App. A, A-2 (JA02479), and found that the 2005 CAMx projections "closely replicate[d]" actual air quality data from the same time period. Id. at A-7 to A-8 (JA02484-85); see ATK Launch Sys., Inc. v. EPA, 2012 WL 593097, at *6 (D.C. Cir. Feb. 24, 2012) (upholding EPA's "reasonable steps" to confirm CAA modeling with "on-the-ground data").

EPA identified the receptor sites to be addressed in the Transport Rule based on its 2012 no-CAIR base case projections and applied the same approach to project air quality design values for two additional scenarios: a 2014 base case that anticipated air quality in the absence of CAIR and the Transport Rule and a 2014 remedy (or control) case that anticipated air quality assuming the Transport Rule is in effect. 76 Fed. Reg. at 48,229. EPA used the results from these 2014 scenarios

three-year average of certain maximum measured concentrations) to a form pertinent for assessing NAAQS attainment. 76 Fed. Reg. at 48,233-36.

to quantify the Rule's anticipated emissions reductions and ecological and health benefits. Id.

Inputs to the CAMx model included: emissions inventories that EPA developed for all of the above-described scenarios; meteorology data from 2005; and estimates of intercontinental transport. Air Quality TSD at 6 (JA02414). The emissions inventory data captured changes in EGU, non-EGU, and mobile source emissions that occurred or would occur between 2005 and 2012. 76 Fed. Reg. at 48,225. The EGU inventories (developed using IPM) accounted for emissions reductions that resulted, or by 2012 would result, from legally enforceable, non-CAIR requirements such as Title V permits, consent decrees, state rules and other federal regulations. Id. at 48,224-25, 48,230.

Once EPA projected 2012 design values for the receptor sites in the Transport Rule region, the results were evaluated to identify areas likely to have NAAQS attainment or maintenance problems in 2012. If the weighted average of the 2012 projected design values exceeded the relevant NAAQS threshold, EPA identified that receptor site as a "nonattainment site" (i.e., a site projected to be in nonattainment in 2012 without CAIR). Id. at 48,233. If only a site's maximum projected design value exceeded the relevant NAAQS threshold, EPA deemed that site a "maintenance site" (i.e., a site expected to be in attainment but which would have difficulty maintaining without CAIR). Id. The receptor sites that EPA

identified as either “nonattainment” or “maintenance” in 2012 for the NAAQS addressed by the Transport Rule comprise the downwind receptor sites that EPA used to evaluate upwind state contributions of NO_x and SO₂.³⁹ See supra at 17-18 (discussing significant contribution analysis).

B. EPA’s Modeling Is Entitled to Deference, Must Be Sustained As It Bears a Rational Relationship to Actual Conditions, and Was Conducted in Light of this Court’s Guidance in Michigan and North Carolina.

As this Court has so often noted, when “petitioners claim that [a] study is methodologically flawed; [and] the agency responds that it is not[,]...a reviewing court ‘must be at its most deferential.’” American Iron & Steel Inst. v. EPA, 115 F.3d 979, 1006 (D.C. Cir. 1997) (citation omitted). EPA was not required to conduct the “perfect study,” and EPA’s Transport Rule modeling to determine downwind receptors of concern must be upheld unless it bears “no rational relationship to the reality it purports to represent.” Id. at 1004. A model’s purpose is to simplify reality, and “[t]o invalidate a model simply because it does not perfectly fit every data point ‘would be to defeat the purpose of using a model.’” Appalachian Power Co. v. EPA, 135 F.3d 791, 805 (D.C. Cir. 1998) (citation omitted).

³⁹ There are 73 such receptors: for annual PM_{2.5}, 12 nonattainment and four maintenance; for 24-hour PM_{2.5}, 20 and 21 receptors, respectively; and for ozone, seven and nine receptors, respectively. 76 Fed. Reg. at 48,233-36.

This Court's decisions in Michigan and North Carolina upheld EPA's use of modeling to help determine which upwind States should be included in the NOx SIP Call and CAIR. See Michigan, 213 F.3d at 673-74 (noting that petitioners' challenges to modeling with CAMx failed to show a "material likelihood of serious error"); North Carolina, 531 F.3d at 913-14. Moreover, in remanding CAIR to EPA, this Court unequivocally directed EPA to *replace* CAIR, not merely to supplement it. See 76 Fed. Reg. at 48,223; see also North Carolina, 531 F.3d at 929-30 (directing EPA to "redo its analysis from the ground up"). Consequently, to analyze what controls are needed for the Transport Rule, it would have contravened this Court's direction in North Carolina for EPA to use raw data or modeled results that assume that emission reductions mandated solely by CAIR would recur indefinitely, as Petitioners urge. EPA's use of a no-CAIR baseline in developing the Transport Rule merely implements this Court's clear directive. See 76 Fed. Reg. at 48,223-24.

C. EPA's Air Quality Modeling Appropriately Excluded the Impact of CAIR Emissions Reductions.

EPA's air quality modeling for the Transport Rule is well-constructed, validated against monitored air quality data, anchored by several years of monitored air quality data, and complies with this Court's directions. Industry Petitioners' central claim is that EPA's modeling is somehow questionable because recent air quality monitoring data for some receptor sites indicates that those sites

have air quality within the relevant NAAQS, even though EPA projected that those sites would have attainment or maintenance problems in 2012. Ind. Br. 37-42.

Before addressing the numerous flaws in Petitioners' reasoning, the Court should not even review these arguments because no commenter presented analysis to EPA using the 2008-2010 measured design values to question the accuracy of EPA's modeling. Those data are not in the administrative record, were not considered by EPA, and are not part of the record for judicial review. See 42 U.S.C. §7607(d)(7).

If the Court considers these arguments, they are fatally flawed because the extra-record monitoring data that Petitioners find so compelling necessarily reflect the substantial air quality improvements resulting from CAIR. Because CAIR was invalidated in North Carolina, and because the very point of the Transport Rule is to fully *replace* (not just supplement) CAIR, EPA's modeling effort was expressly designed to ascertain air quality conditions in 2012 *without* CAIR. Thus, using CAIR-impacted data to validate EPA's model would not only be an irrelevant apples-to-oranges comparison, it would be at cross purposes with North Carolina.⁴⁰ Petitioners offer no solution to reconcile this conflict.

EPA also presented sound practical and technical reasons why, in replacing CAIR from the "bottom up" as directed by this Court, it would have been

⁴⁰ For these reasons, EPA explained that it would have been inappropriate to apply the "modeled + monitored" approach used for CAIR, 76 Fed. Reg. at 48,230, that Petitioners contend EPA should have applied here. Ind. Br. 37.

imprudent to base the model on recent, CAIR-impacted air quality data. Because CAIR will be terminated and replaced with the Transport Rule, its emission reductions are only temporary. CAIR also qualitatively differs from other measures (such as the NO_x SIP Call, consent decrees, etc.), whose mandated emissions reductions are locked in, and which EPA *did* account for in its modeling. 76 Fed. Reg. at 48,223-24. Had EPA not eliminated CAIR-induced reductions from its 2012 projections, and assumed (erroneously) that CAIR would remain in effect in 2012, a State that had been subject to CAIR emission limits would evade Transport Rule reductions and be free to ramp back up to its pre-CAIR emission levels. *Id.* at 48,224. That result could send matters back to square one, as downwind areas currently in attainment according to the 2008-2010 design values *due to CAIR emissions reductions* would later be faced with attainment or maintenance problems caused by upwind States emitting NO_x and SO₂ at pre-CAIR levels.

Petitioners also err by suggesting that EPA “ignored” more recent monitoring data. Ind. Br. 37. In fact, EPA reviewed and considered the ambient design values for the 2007-2009 period (the most recent *final* data that were available for review before the Transport Rule’s promulgation) as well as preliminary 2010 ambient data. 76 Fed. Reg. at 48,231. EPA found that to the extent a downward trend in ambient concentrations could be observed in that data,

it largely could be explained by temporary factors such as CAIR-induced emission reductions and reduced emissions resulting from the severe economic recession. The results were also influenced by extremely low concentrations of ozone and PM_{2.5} in 2009 due to meteorological variability. Id. The extra-record design values for the 2008-2010 period that Petitioners cite suffer from the same problems. Thus, EPA did not “ignore” such data; rather, EPA reviewed them and made a well-reasoned judgment that they were not appropriate for its modeling effort.

Finally, EPA’s model is anchored by design values covering multiple periods from five years of ambient data (2003-2005, 2004-2006, 2005-2007) and, thus, is more representative of long-term conditions and more fully examines attainment and maintenance issues than the data Petitioners cite, which spans only three years (2008-2010). Id. at 48,232.

While it may be welcome news that the 2008-2010 design values at these receptor sites show some measure of NAAQS attainment (Ind. Br. 38-39), those results are tenuous and fleeting because they are attributable to CAIR-induced emission reductions that will not recur unless CAIR is replaced by the Transport Rule. Were EPA to base its model on such data (by pretending that such reductions would continue without legal compulsion), the Transport Rule would be much weaker because there would be fewer receptor sites, fewer regulated States,

and, consequently, higher NO_x and SO₂ emissions. The interstate transport of NO_x and SO₂ would slide back toward pre-CAIR levels, air quality at the receptor sites would deteriorate, and those areas that Petitioners tout as presently attaining would again be faced with attainment or maintenance problems. EPA's approach of using a no-CAIR 2012 base case to identify receptor sites of concern was a reasonable way to avoid this predictable dilemma and fulfill the CAA requirement that States address interstate transport.

D. EPA's Projections Are Not Inconsistent With Current Air Quality Data.

Petitioners point to allegedly anomalous results at various receptor sites; however, these examples are yet more apples-to-oranges comparisons that demonstrate nothing. We have already explained why it is not "implausible" (Ind. Br. 38), but rather anticipated, that a given monitored design value that is influenced by CAIR reductions would show better air quality than EPA's no-CAIR 2012 base case.⁴¹ That is the point – without CAIR-induced reductions, air quality

⁴¹ Petitioners' example of the Madison County, Illinois receptor (Ind. Br. 39-40) is inapposite for the additional reason that, even if emissions from Texas EGUs are expected to decrease post-2010 irrespective of the Transport Rule, that is no reason to exclude Madison because multiple States contribute to nonattainment there. 76 Fed. Reg. at 48,241, 48,243 (tables showing PM_{2.5} linkages for receptor 171191007). Petitioners also err by suggesting that EPA determined that a local steel mill is the cause of attainment or maintenance issues at this receptor site. Ind. Br. 43. EPA expressly disclaimed making any judgments about the "underlying causes of monitored values." 76 Fed. Reg. 29,652, 29,653 (May 23, 2011).

at most sites would be much worse. Nor is there any significance to the assertion that recent monitored air quality at some sites is better than EPA projects air quality would be in 2014 after the Transport Rule is implemented. Such a result speaks only to the great degree to which CAIR-induced emissions reductions likely have improved air quality at these sites. Again, EPA's model is expressly designed to back out CAIR's air quality impacts on these sites, while taking account of other legally-mandated reductions.

The relevant, apples-to-apples comparison that Petitioners ignore is whether the projected remedy case design values for 2014 (i.e., reflecting Transport Rule reductions) show better air quality than the 2012 base case design values. They consistently do. For example, Petitioners cite Fulton, Georgia (Ind. Br. 40), where the 2008-2010 measured design value is within the annual PM_{2.5} NAAQS at 11.4 µg/m³. That number shoots up to a NAAQS-exceeding 15.07 µg/m³ in 2012 after the model backs out air quality improvements attributable to CAIR. Air Quality TSD at B-39 (JA02584). By 2014, with the Transport Rule in place, EPA projects that air quality will improve to 12.99 µg/m³ and be within the NAAQS limit. Id. Thus, the trend in modeling is just as anticipated.⁴² Even if Petitioners' suggested

⁴² The trend is the same for Petitioners' other purported anomalies, Wayne, Michigan (Air Quality TSD, App. B, at B-48 (JA02593)); Jefferson, Alabama (id. at B-64 (JA02609)), and Allegan, Michigan (id. at B-16 (JA02561)). Petitioners go even further afield by plucking a phrase from an unrelated proposed rule preamble to suggest that EPA concedes that CAMx yields anomalous results. Ind.

comparison were pertinent (which it is not), they miss the forest for the trees as well over half of the Rule's nonattainment and maintenance receptors are projected to have better air quality in 2014 after the Transport Rule is implemented than the measured 2008-2010 design values that Petitioners cite.⁴³

E. EPA's Model Accounts for All Appropriate, Non-CAIR Causes of Emissions Reductions.

Petitioners next grasp in vain for examples of a technical error or oversight in *how* EPA carried out its modeling. Ind. Br. 42-44. Petitioners discuss two EPA regulations that they wrongly allege would result in "substantial reductions in NO_x and SO₂" and should have been accounted for in the model. Ind. Br. 42. The first, EPA's 2009 coal preparation plant new source performance standard, has no bearing on this Rule because it applies NO_x and SO₂ limits only to new (not existing) thermal dryers, and EPA concluded that no new thermal dryers would be constructed. 74 Fed. Reg. 51,950, 51,975 (Oct. 8, 2009). Thus, no SO₂ or NO_x

Br. 41. The passage they cite concerns the application of CAMx to model visibility issues in a proposed regional haze regulation, 76 Fed. Reg. 82,219, 82,228 (Dec. 30, 2011), which obviously has no relevance to the NAAQS addressed by the Transport Rule.

⁴³ Specifically, this is so for 56% (39 of 70) of the Transport Rule nonattainment and maintenance receptors for which 2008-2010 data are available and 75% (eight of 12) of the Rule's annual PM_{2.5} nonattainment receptors. Compare Air Quality TSD, App. B (JA02549-637) (values in column entitled "2014 Remedy Average Values" for the Transport Rule receptors (see n.39 supra)) with 2008-2010 design values cited by Petitioners ("PM_{2.5} Design Value Spreadsheet," (http://www.epa.gov/airtrends/pdfs/PM25_DesignValues_20082010_FinalRevised.xlsx)).

reductions were anticipated. Id. The second, the asphalt processing NESHAP, does not even regulate SO₂ or NO_x and, thus, could not result in “substantial reductions” of those pollutants. Further, that standard merely “lock[ed] in” existing, post-1990 emissions reductions, 74 Fed. Reg. 63,236, 63,257 (Dec. 2, 2009), and would not achieve new emissions reductions relevant to the Transport Rule modeling.⁴⁴

Finally, for the reasons discussed supra at 57-58, issues concerning EPA’s projections for the Allegan, Michigan receptor (Ind. Br. 41, n.26) are improperly raised and, in any case, do not call into question the efficacy of the model. Projecting that Allegan will likely have maintenance problems due to upwind contributions is reasonable considering, *inter alia*, that 96% of the ozone at the Allegan receptor site comes from out-of-state emissions. 76 Fed. Reg. at 80,766.⁴⁵

⁴⁴ Citing industry comments, Petitioners also vaguely argue that EPA “ignored in its modeling” a “number of” consent decrees and EPA rulemakings that they contend result in relevant emission reductions. Ind. Br. 43. However, EPA responded to these comments and explained that consent decrees and regulations were considered in the final emissions inventory, as appropriate. Emissions Inventory RTC, EPA-HQ-OAR-2009-0491-4398, at 3, 7-8, 11, 13, 16-17, 32 (JA01490, 1494-95, 1498, 1500, 1503-04, 19); see also IPM Documentation Supplement, Add. B (JA02835-841). Petitioners fail to explain which, if any, of the items mentioned in these comments EPA failed to address or the significance of any such failure.

⁴⁵ Petitioners assert that EPA failed to consider the effects of a Louisiana SIP on Allegan’s air quality (Ind. Br. 43); however, EPA did not link Louisiana with the Allegan receptor. In any case, EPA considered the regulation in question and

F. EPA's Well-Supported Projections of Attainment and Maintenance Issues in the Absence of CAIR Support the Transport Rule's 2012 and 2014 Requirements.

Ostensibly a challenge to EPA's modeling, Petitioners' final argument asserts, incredibly, that the current and projected ozone and PM_{2.5} attainment picture is so encouraging that the Transport Rule is wholly unnecessary. Ind. Br. 47. This argument is completely undone by the fact that it is made possible *only* by the fact that years of emissions reductions mandated by CAIR have significantly reduced interstate transport and improved air quality in many parts of the region. While Petitioners argue that there is no problem to be addressed, the current data and EPA's modeling actually show that without CAIR things would be *much* worse and that interstate transport regulation works. Petitioners' conclusion also blithely ignores the depth and complexity of the problem that Congress acknowledged by enacting §7410(a)(2)(D)(i)(I) (see supra at 6-7) and this Court's direction that an EPA interstate transport regulation must give effect to the "interfere with maintenance" prong to "protect[] ... downwind areas that, despite EPA's predictions, still find themselves struggling to meet NAAQS due to upwind interference." North Carolina, 531 F.3d at 910-11. Indeed, this Court found the problem of interstate transport urgent enough that, on rehearing in North

included it in its modeling. IPM Documentation Supplement, Add. B. at 69 (JA02837).

Carolina, it remanded rather than vacated CAIR to “preserve the environmental values covered by CAIR.” 550 F.3d at 1178.

Petitioners offer no evidence to upset EPA’s conclusion here, “as ...in developing the CAIR, that it would be difficult if not impossible for many nonattainment areas to reach attainment through local measures alone, and EPA finds no [post-CAIR] information to alter this conclusion.” 75 Fed. Reg. at 45,226. By setting budgets for 2012 and 2014, the Transport Rule prevents backsliding and recognizes that “considerable benefits to air quality and public health that have been achieved must be ensured going forward.” Id. at 45,227. The Act expressly acknowledges this objective by providing that revisions to SIPs may not “interfere with any applicable requirement concerning attainment and reasonable further progress.” 42 U.S.C. §7410(l).⁴⁶

Moreover, as is abundantly clear in the record (for the many reasons discussed above), EPA identified the “attainment” and “maintenance” receptor sites of concern for the Transport Rule based solely on the design values in the 2012 no-CAIR base case. 76 Fed. Reg. at 48,223-24. EPA did not make *any* decisions about Transport Rule applicability based on the design values it projected

⁴⁶ “Reasonable further progress” is “annual incremental reductions in emissions of the relevant air pollutant as are required...or may reasonably be required by the Administrator for the purpose of ensuring attainment of the applicable [NAAQS] by the applicable date.” 42 U.S.C. §7501(1).

in the 2014 no-CAIR base case. *Id.* at 48,229. Thus, Petitioners' claim that EPA has no "basis" to apply the Transport Rule *to any State* in 2014 based on EPA's air quality projections in the 2014 no-CAIR base case (Ind. Br. 45) completely misapprehends EPA's decision process. Further, nothing in the Act requires EPA to continually re-visit and re-assess the Rule's applicability based on new data as Petitioners' argument suggests. Such an outcome would lead to confusion, complicate States' planning, undermine regulatory certainty, and unduly subject the regulation of interstate transport to the variability inherent in NO_x and SO₂ emissions (e.g., due to meteorology or economic conditions). EPA reasonably determined the Rule's applicability based on a single point in time, 2012, the year that the Transport Rule would replace CAIR.

In any case, the fact that *some* nonattainment receptor sites are *projected* to have air quality within the relevant NAAQS limits in 2014 without CAIR or the Transport Rule hardly suggests that emission budgets in 2014 are wholly unnecessary or that the program must terminate in 2013. To begin with, Petitioners exaggerate the number of areas whose status as receptors would change if EPA had used the 2014 base case modeling to revisit the applicability decisions made for 2012.⁴⁷ Petitioners also ignore the critical fact that for many of the sites

⁴⁷ Petitioners' statement that nine of the 16 annual PM_{2.5} sites are projected to be in attainment in the 2014 base case (Ind. Br. 45 n.28) both misleads and exaggerates. The 16 annual PM_{2.5} sites comprise 12 "nonattainment" sites and four

projected to be nonattainment in 2012, but that are projected to be within the relevant NAAQS limits in 2014 without CAIR or the Transport Rule, their projected air quality would still qualify them as “maintenance-only” sites under EPA’s methodology even if the 2014 base case data were used (because their maximum, as opposed to average, design value in 2014 would still exceed the NAAQS).⁴⁸

In short, even if additional attainment were to occur by 2014 as projected, the 2014 base case analysis shows that well over half of the sites covered by the Transport Rule will need help from the Rule in 2014 (and beyond) to attain or maintain the NAAQS. For example, for Jefferson, Alabama (receptor 010732003), EPA projected it would be a “nonattainment” site in 2012 (average design value of

“maintenance-only” sites. 76 Fed. Reg. at 48,233-34 (Tables V.C-1 and -2). *Only two* annual PM_{2.5} nonattainment sites would switch to attainment in 2014, three nonattainment sites would have improved air quality sufficient only to switch from “nonattainment” to “maintenance-only” sites, while all four “maintenance-only” sites are projected to reach attainment in 2014. Air Quality TSD, App. B, at B-35 to B-63 (JA02580-608). This last result is not surprising, as the 2012 maintenance-only sites had better projected air quality from the outset.

⁴⁸ Specifically, 42 of 73 such sites (57%) would struggle with attainment or maintenance in 2014 without the Transport Rule. Of the 16 nonattainment and maintenance sites for annual PM_{2.5}, seven remain nonattainment and three switch from nonattainment to maintenance. Air Quality TSD, App. B, at B-35 to B-63 (JA02580-608). For the 41 daily PM_{2.5} sites, 10 remain nonattainment, four switch from nonattainment to maintenance, and eight remain maintenance. *Id.* at B-64 to B-92 (JA02609-37). For the 16 ozone sites, four remain nonattainment, three switch from nonattainment to maintenance, and three remain as maintenance receptors. *Id.* at B-4 to B-34 (JA02549-79).

15.16 $\mu\text{g}/\text{m}^3$), but the 2014 base case projects the site to be just barely within the NAAQS limits (average design value of 14.69 $\mu\text{g}/\text{m}^3$). Air Quality TSD at B-35 (JA02580). What Petitioners neglect to point out is that Jefferson would *still* qualify as a “maintenance” receptor in the 2014 base case because its projected *maximum* design value (15.16 $\mu\text{g}/\text{m}^3$) would exceed the NAAQS limit. Id. In other words, this site and many, many others would still need help from the Transport Rule to *maintain* the NAAQS. This is more than sufficient basis to apply the Transport Rule in 2014 and furthers the objective of giving “independent effect” to the interference with maintenance prong as this Court directed. North Carolina, 531 F.3d at 910.

Petitioners offer equally weak tea in arguing that there is no “basis” to apply the Rule in 2012. Ind. Br. 46. Again, they posit that because some areas are projected to be in attainment by 2014 without CAIR, and because some areas have NAAQS attainment deadlines in 2014 and beyond, there is no rationale for Transport Rule budgets in 2012. Id. This blinkered perspective is untenable. EPA had to design a coherent and manageable program to address the deep and complex problem of interstate transport. EPA could not reasonably be required to craft requirements so precise that they will take effect just in the “nick of time” to help areas comply with the NAAQS as Petitioners urge.

In any case, this Court expressly directed EPA to harmonize the requirements of any rule governing interstate transport with the applicable NAAQS attainment deadlines. North Carolina, 531 F.3d at 911-12. That is what EPA did. 76 Fed. Reg. at 48,214, 48,277-79; see infra Part VI (discussing Transport Rule compliance deadlines). This Court also admonished EPA to replace CAIR expeditiously. North Carolina, 550 F.3d at 1178. As discussed in Part VI.A below, it is simply undeniable that emissions reductions beginning in 2012 will help States with attainment deadlines in June 2013, December 2014, and beyond, 76 Fed. Reg. at 48,277-78, irrespective of whether some reductions occur earlier than a particular State requires.

VI. THE TRANSPORT RULE REASONABLY ESTABLISHES REQUIREMENTS THAT TAKE EFFECT IN 2012 AND 2014

Industry Petitioners assert that the Transport Rule's compliance deadlines are arbitrary and capricious, offering the well-worn complaint that they need *still more time* than they have already had to deal with their longstanding contributions to downwind nonattainment. However, the law and facts surrounding the Transport Rule preclude such further delay. As explained below, EPA reasonably set 2012 and 2014 compliance deadlines in light of long-neglected statutory deadlines for States to address adequately downwind attainment and maintenance issues. EPA also acted consistent with this Court's explicit directive in North Carolina to craft a rule that hews closely to the CAA attainment deadlines and

eliminates significant contribution to downwind problems as “expeditious[ly] as practicable.” The Rule gives sources multiple compliance options and a cushion for variability, and its robust record reflects careful consideration of what sources would be able to do by 2012 or 2014.

A. EPA Was Required to Set Expeditious Compliance Deadlines Aligned with NAAQS Attainment Deadlines.

Claiming that some Transport Rule emissions reductions will have to take effect “almost immediately” (Ind. Br. 56), Industry Petitioners attempt in vain to project an air of surprise and a resultant inability to prepare for the Rule’s requirements. What they ignore is that the Transport Rule is EPA’s response to the well-known and long-running failure of States to comply with §7410(a)(2)(D)(i)(I) and to develop SIPs that “contain adequate provisions” to address significant contribution to downwind attainment. See supra at 5-9. This provision imposes an affirmative, self-executing obligation on upwind States to address emissions significantly contributing to nonattainment or interfering with maintenance in downwind States, irrespective of EPA action defining a State’s significant contribution. Thus, when EPA promulgated the NAAQS addressed by the Transport Rule – in 1997 and 2006 – States were *automatically* required to submit to EPA SIP revisions to address implementation of the revised NAAQS, including the requirement of §7410(a)(2)(D)(i)(I). 42 U.S.C. §7410(a)(1).

If knowledge of the States' general failure over many years to develop robust SIPs addressing the interstate transport of emissions did not sufficiently alert the industry that emissions would have to be reduced, this Court's North Carolina decisions in 2008 eliminated any doubt as to whether EPA would develop a stringent interstate transport rule with an expeditious compliance schedule. In North Carolina, this Court struck down as too slow CAIR's 2015 compliance deadline for a second phase of requirements for States to eliminate their significant contribution to downwind nonattainment of the 1997 PM_{2.5} NAAQS, finding that EPA had "ignored its statutory mandate" and "did not make any effort to harmonize CAIR's Phase Two [2015] deadline...with the [2010] attainment deadlines [for the] for downwind areas." 531 F.3d at 912 (citing 42 U.S.C. §7410(a)(2)(D)(i)).

The Court ordered EPA to set compliance deadlines consistent with "the deadlines for attainment of NAAQS." Id. at 913. Putting an even finer point on it, EPA was charged with promulgating a rule that is "as expeditious as practicable" in eliminating downwind maintenance problems. Id. at 912. The Court further ordered that CAIR remain in place only "temporarily" while EPA fixed the rule and advised that its forbearance would not be "indefinite." 550 F.3d at 1178. As a result, even those States that believed they had addressed their downwind issues through SIP revisions pursuant to the NO_x SIP Call or CAIR were on notice that

their existing SIPs did not resolve the interstate transport deficiency and that they may need to do more.⁴⁹

Alignment with the NAAQS and achieving at least some emissions reductions in 2012 is not an inconsequential exercise.⁵⁰ Rather, as EPA explained relative to the 8-hour ozone NAAQS, some areas that have been designated “serious” ozone nonattainment areas have a June 2013 attainment deadline and they *need* the NO_x reductions that the Transport Rule requires in 2012 to attain the NAAQS; areas that fail to attain will be re-classified as “severe” and be subject to additional requirements. 76 Fed. Reg. at 48,277-78. The 2012 emissions reductions (as well as those in 2014) are vitally important even if States have secured extensions beyond 2014 to attain the standard. While the CAA allows for extensions of attainment deadlines, §7502(a)(2)(A) provides that areas designated

⁴⁹ It cannot plausibly be said that the Transport Rule “penalizes” (Ind. Br. 56) sources that ignored such clear signs on the regulatory horizon -- none clearer than North Carolina striking down unlimited allowance trading -- and made the economic decision to purchase allowances rather than invest in pollution controls that inevitably would be necessary.

⁵⁰ Nor was it a surprise, irrespective of whether the budgets changed somewhat between the proposed and final rules. See Ind. Br. 57. EPA explicitly advised in the preamble to the proposed rule that “*all* states linked to downwind PM_{2.5} nonattainment...and maintenance problems should, *by 2012*, remove all NO_x emissions that can be reduced for \$500/ton *in 2012*.” 75 Fed. Reg. at 45,282 (emphasis added). Prudent sources were thus put on notice that they should begin to evaluate what they would need to do if the rule required *every* covered source to reduce NO_x emissions in that fashion.

nonattainment must come into attainment “as expeditiously as practicable,” irrespective of any extensions.⁵¹

Emissions reductions in 2012 are also important for nonattainment areas that failed to meet the April 2010 deadline for attaining the 1997 PM_{2.5} NAAQS “as expeditiously as practicable,” regardless of whether those areas received an extension until April 2015. 76 Fed. Reg. at 48,277. Obviously, Transport Rule emissions reductions in 2014 will be vital to helping areas meet the April 2015 deadline for the 1997 PM_{2.5} NAAQS (where reductions will be required in 2014 to make the necessary demonstration in 2015); the December 2014 deadline for the 2006 PM_{2.5} NAAQS; and the various deadlines between June 2011 and June 2019 for the 1997 ozone NAAQS. *Id.* at 48,277-78.⁵²

B. The Transport Rule’s Compliance Framework Gives Sources Flexibility and Multiple Compliance Options.

Numerous aspects of the Transport Rule’s structure and compliance scheme make compliance in 2012 and 2014 feasible. A key feature of the Rule is that required emissions reductions are phased, with relatively modest reductions in

⁵¹ It is, thus, immaterial to what degree *other* EPA regulations establishing a trading program (e.g., CAIR) may have provided a longer lead time. *Ind. Br.* 56. What matters here is that EPA established deadlines for the Transport Rule that accord with the law and lead to downwind attainment “as expeditiously as practicable.” 42 U.S.C. §7502(a)(2)(A).

⁵² We addressed other aspects of the importance of aligning the Transport Rule’s requirements with the NAAQS attainment deadlines *supra* at 86.

2012 followed by a more stringent phase of SO₂ reductions in 2014. 76 Fed. Reg. at 48,278-79. The more modest reductions for 2012 recognize that elaborate, post-combustion controls (e.g., scrubbers) could not be installed in time for the 2012/2013 compliance period. *Id.* at 48,280. As to *how* the reductions for 2012 are achieved, Petitioners scarcely mention that the Transport Rule “allow[s] source owners to choose among several compliance options,” including:

installing controls, changing fuels, reducing utilization, buying allowances, or any combination of these actions. Interstate trading with assurance provisions provides additional regulatory flexibility that promotes the power sector’s ability to operate as an integrated, interstate system and to provide electric reliability.

Id. at 48,272. Robust and transparent allowance markets developed successfully following other EPA allowance trading programs (the NO_x SIP Call, CAIR, and the Acid Rain program), and Transport Rule allowance markets began developing after the Rule was promulgated. 77 Fed. Reg. at 10,331.

Any alleged compliance stresses are further eased, at least in part, by the fact that the Transport Rule adds to each State’s annual budget a sizable “variability limit” to account for the inherent variability of power generation and the related impact on emissions (18% for annual NO_x and SO₂; 21% for ozone-season NO_x). 76 Fed. Reg. at 48,267. The combination of the budget plus this variability limit creates an “assurance level” that is the true measure of State compliance. *Id.* at 48,268-70.

It bears emphasis that, by 2010, many States were *already* meeting their 2012 budgets.⁵³ The notion that required reductions cannot be achieved in time is belied by the fact that many sources need only operate existing controls that EPA assumed would be turned off in the base case, or operate those controls more efficiently, to achieve necessary reductions. *Id.* at 48,279-80; Regulatory Impact Analysis, EPA-HQ-OAR-2009-0491-4547, at 256 (JA03193). Moreover, Petitioners' practical concerns about compliance in 2012 have been eliminated by EPA's recent Revisions Rule, which delayed the effective date of the Transport Rule assurance penalty provisions until January 2014 to help smooth the transition from CAIR to the Transport Rule and to further develop a Transport Rule allowance trading market. 77 Fed. Reg. at 10,326. The Revisions Rule also increased the annual NO_x, ozone-season NO_x, and/or annual SO₂ budgets for several States (*see id.* at 10,325) and, thus, eased the alleged compliance burden for those States and their electricity generators. With these forthcoming changes,

⁵³ Specifically, in 2010, nine States had emissions below their 2012 SO₂ budgets, and five States had emissions below their annual NO_x and ozone-season NO_x budgets. Many more States were barely over their budgets, yet still were below their 2012 assurance levels. Fourteen States were below their 2012 SO₂ assurance levels, and 17 and 12 had emissions below their annual NO_x and ozone-season NO_x assurance levels, respectively. *Compare* reported emissions data in columns AC, AL, and BK in "Underlying Data" tab in EPA-HQ-OAR-2009-0491-4519 (JA03061-154) *with* 76 Fed. Reg. at 48,269-70.

Petitioners can hardly be heard to complain that compliance is hindered by the fact that the Rule is “still in flux.” Ind. Br. 57.⁵⁴

C. The Emissions Reductions Required for 2012 and 2014 Are Practicable.

Petitioners offer a handful of practical reasons in contending that compliance in 2012, and even as late as 2014, is not feasible. Each argument either disregards the basis of EPA’s determination or is premised on a factual inaccuracy. For instance, the objection that compliance in 2012 will be impossible due to the time required to retrofit for low-NOx burners (“LNBs”) is simply incorrect and an exaggeration. Ind. Br. 53-54. To begin with, EPA stated that installation of LNBs and other simple NOx controls mechanisms “are *not required* for compliance purposes under the final Transport Rule remedy.” 76 Fed. Reg. at 48,280 (emphasis added). Indeed, the Rule gives sources the flexibility to choose from a variety of simple NOx control options, of which installing LNBs is but one.⁵⁵ Moreover, information provided to EPA in comments showed that LNBs projected

⁵⁴ For instance, Petitioner We Energies stated that its motion for a partial stay was “protective” and that a stay would be unnecessary if EPA were to finalize the Revisions Rule as to Michigan, i.e., delaying until 2014 the assurance penalty provision effective date and increasing Michigan’s 2012 and 2014 annual NOx budget by 5,228 tons. ECF No. 1339374 at 4. EPA finalized those aspects of the proposed rule, 77 Fed. Reg. at 10,326, and, thus, eliminated We Energies’ and other Petitioners’ 2012 compliance deadline issues.

⁵⁵ Others include: operating existing NOx controls year round, enhancing existing controls, shifting power generation to lower emitting units, overfire air, and installing selective non-catalytic reduction. 76 Fed. Reg. at 48,280.

at significant emitters had already been installed or would be installed by 2012.⁵⁶

In any case, EPA provided specific examples of LNBs having been installed in six months and explained that sources could, instead, use the other NO_x controls mentioned above or purchase allowances. Id. at 48,281.

Petitioners' claims concerning the alleged infeasibility of installing controls to meet the 2014 budgets (selective catalytic reduction ("SCR") for NO_x; flue gas desulfurization ("FGD"), known as scrubbers, for SO₂) are similarly faulty. As to installing SCR by 2014 (see Ind. Br. 54 n.45), EPA stated expressly that it did *not* base State budgets on *any* Transport Rule-driven SCR retrofits. 76 Fed. Reg. at 48,279 (Table VII.C.2-1 showing "0" new SCR retrofits). This fact alone disposes of Petitioners' SCR complaints.

Petitioners are just as selective with the facts concerning EPA's assumptions about scrubber/FGD retrofits that *could* be employed to meet the 2014 SO₂ budgets. For instance, they ignore EPA analysis showing that Group 1 States could comply with their 2014 SO₂ budgets without the benefit of *any* scrubber retrofits at covered units and EPA's finding that "they [FGD retrofits] are by no

⁵⁶ See, e.g., EPA-HQ-OAR-2009-0491-2711 at 6 (JA00902). It is worth noting that EPA's assumptions about LNBs would have little effect on compliance, as EPA projected that annual reductions from simpler NO_x controls (including LNBs) would be only 28,000 tons (0.82% of total 2012 annual NO_x budgets) and seasonal NO_x reductions would be only 14,000 tons (2.8% of total ozone-season NO_x budgets). 76 Fed. Reg. at 48,280-81.

means required, nor is Transport Rule compliance jeopardized by their absence.”

76 Fed. Reg. at 48,282-83.⁵⁷ Even if scrubber retrofits were necessary, far from conceding Petitioners’ point on retrofits and schedules (Ind. Br. 56), EPA disputed the analysis presented in comments and explained at length why its own assumptions were reasonable and supported by the record. *Id.* at 48,281-83; Engineering Feasibility RTC at 4-10 (JA02116-22).⁵⁸ In short, EPA found several examples of FGD retrofit projects that had been executed within 30 months. 76 Fed. Reg. at 48,283. Furthermore, prior experience implementing the NO_x SIP Call and CAIR has revealed a mature sector furnishing these retrofits (that could execute projects quickly) and that such retrofits are characterized by substantial planning *before* EPA promulgates new regulations. *Id.* Thus, EPA’s well-considered judgment about implementation timelines is anchored in observed experience and the track records of two similar regulations.⁵⁹ These are fact-based

⁵⁷ EPA’s analysis found that sources would instead retrofit with dry sorbent injection technology, use more sub-bituminous coal, or dispatch larger amounts of natural gas-fired generation. *Id.*

⁵⁸ What Petitioners call a “conceded error” on this point (Ind. Br. 56) is a complete irrelevancy that concerns EPA’s analysis of the time needed for an SCR retrofit at a particular four-unit power plant in New Mexico. 76 Fed. Reg. 52,388, 52,408 (Aug. 22, 2011). EPA’s action approving a FIP for New Mexico is totally unrelated to the Transport Rule, post-dates it, and, in any case, documents several SCR retrofits taking between 13 and 30 months, while also noting that the project at issue was complex and would take longer than average. *Id.*

⁵⁹ Petitioners reason that regulated entities cannot be expected to make any preparations before a rule is promulgated. Ind. Br. 57. Thus, it should make little

expectations, not wishful thinking presuming industry clairvoyance as Petitioners contend. Ind. Br. 57.

In light of the foregoing, not only were the scope and timing of the Transport Rule's reductions easy to anticipate, it is equally clear that EPA reasonably determined, based on a robust record, that sources could achieve the necessary reductions within the Rule's deadlines. Combined with EPA's separate evaluation of reliability and resource adequacy (discussed supra at 60-64), it is clear that Petitioners' half-hearted and recycled reliability arguments (Ind. Br. 55-56) also lack merit.

difference for compliance purposes whether the State budgets changed between the proposed and final rule. In any case, Petitioners do not explain the significance of this fact for compliance purposes and improperly cite an extra-record Office of Management and Budget ("OMB") document. 42 U.S.C. §7607(d)(7)(A) (enumerating materials to be included in the record for judicial review); see also Sierra Club v. Costle, 657 F.2d 298, 405 n.519 (D.C. Cir. 1981) (in reviewing CAA regulation, court is "not to concern itself with who in the Executive Branch advised whom about which policies to pursue").

VII. EPA PROVIDED ADEQUATE NOTICE OF AND OPPORTUNITY TO COMMENT ON KEY ELEMENTS OF THE TRANSPORT RULE

State Petitioners argue that EPA failed to give adequate notice of certain elements of the Transport Rule because of updates made between the proposed and final rules. State Br. 42-55. Petitioners' arguments fail. As an initial matter, Petitioners are statutorily barred from objecting to the Rule on the grounds that EPA should have provided additional opportunities to comment on the Rule in light of updates to EPA's modeling platforms and underlying data and assumptions. The CAA provides that "only an objection to a rule or procedure which was raised with reasonable specificity during the period for public comment ... may be raised during judicial review." 42 U.S.C. §7607(d)(7)(B). To the extent Petitioners claim it was impracticable to raise these procedural objections to the final rule during the comment period, Section 7607(d) requires them to raise their criticisms to EPA in a petition for administrative reconsideration before bringing them to the Court. *Id.*⁶⁰ Approximately 62 petitions for administrative reconsideration are currently pending before EPA. In the absence of a decision by

⁶⁰ See Appalachian Power Co. v. EPA, 249 F.3d 1032, 1065 (D.C. Cir. 2001); Appalachian Power Co. v. EPA, 135 F.3d 791, 799 n.14 (D.C. Cir. 1998); and NRDC v. Thomas, 805 F.2d 410, 437-38 (D.C. Cir. 1986).

EPA denying a petition for reconsideration, judicial review of any claims raised solely in such administrative petitions is premature.⁶¹

Should the Court decide to reach Petitioners' notice arguments at this time, it should reject them. "EPA undoubtedly has the authority to promulgate a final rule that differs in some particulars from its proposed rule," as long as the final rule is a "logical outgrowth" of the proposal. City of Waukesha v. EPA, 320 F.3d 228, 245 (D.C. Cir. 2003) (citations omitted). Where, as here, an agency provides ample notice of the criteria and methodology it intends to use, the fact that it might reach a different conclusion after applying those well-noticed criteria and methods to new and better data generated during the rulemaking does not create a notice defect, even if the resulting rule has different or significant consequences. See Am. Coke & Coal Chems. Inst. v. EPA, 452 F.3d 930, 938-41 (D.C. Cir. 2006); Ne. Md. Waste Disposal Auth. v. EPA, 358 F.3d 936, 951-52 (D.C. Cir. 2004).

⁶¹ This Court's orders providing for extremely expeditious consideration of this case, and rejecting Petitioners' proposal to bifurcate briefing, seems to pre-suppose that the Court will not review issues raised solely in the reconsideration petitions. While Petitioners advocated an extended briefing schedule that provided for a second round of briefing to occur after EPA acted on the pending petitions, EPA proposed an expedited briefing schedule consistent with the Court's stated timetable for oral argument that recognized that Petitioners had a right to seek judicial review of EPA's final decisions regarding the pending reconsideration petitions. EPA's Proposed Briefing Format and Schedule, ECF No. 1353024 at 9-10 (Jan. 17, 2012).

In this case, EPA provided numerous opportunities for comment on the relevant criteria, assumptions, methodologies and data to ensure that the Rule is fully consistent with Michigan and North Carolina and is based on the best available data and modeling platforms. In the proposal, EPA thoroughly explained its proposed methodologies, assumptions, data, and legal interpretations. 75 Fed. Reg. 45,210 (Aug. 2, 2010). Where EPA determined updates of critical elements were necessary – e.g., to ensure that modeling platforms reflected recent changes in factors affecting the power sector – EPA issued multiple notices of data availability (“NODAs”) identifying the new information available in the docket and providing additional opportunities for comment. 75 Fed. Reg. 53,613 (Sept. 1, 2010) (“IPM NODA”); 75 Fed. Reg. 66,055 (Oct. 27, 2010) (“Emissions Inventory NODA”); 76 Fed. Reg. 1109 (Jan. 7, 2011) (“Allocations NODA”).

The changes in the final Rule result largely from these updates and from information provided in the over 3,800 unique comments received. Moreover, where the modeling results raised new issues not previously noticed for public comment, EPA did not take final action, but instead provided yet *another* opportunity for comment. See 76 Fed. Reg. 40,662 (July 11, 2011). Given the significant opportunities provided for comment on all aspects of the Rule, Petitioners’ notice claims lack merit.

A. EPA Provided Notice and Opportunity to Comment on its Budget Methodology, Model Updates, and Updated Data, and the Final Emissions Budgets Are a Logical Outgrowth of the Proposal.

EPA's basic approach and methodology for calculating each State's emissions budgets did not change between the proposed and final rules. At proposal, EPA explained that each State's budget would represent the emissions from covered EGUs in the State after elimination of all emissions that could be reduced at a specific cost threshold. 75 Fed. Reg. at 45,290. Each State budget for the relevant pollutant reflects the projected "base case" emissions (i.e., emissions in the absence of this Rule) minus the emission reductions after implementation of controls available at the relevant cost threshold (i.e., the State's significant contribution).

Petitioners argue incorrectly that EPA gave inadequate notice because it made "undisclosed" revisions to its models and data inputs. However, EPA disclosed the updates to the IPM and relevant data in two NODAs, which explained the changes, pointed to detailed documentation of the changes in the docket, and requested comment on the changes. 75 Fed. Reg. 53,613; 75 Fed. Reg. 66,055. Importantly, the IPM NODA explicitly stated, "[c]hanges from the [IPM] projections relied on in the proposed rule, from using an updated model," could change "emissions projections used ... to determine the amount of emissions that represent significant contribution," which in turn affect State budgets. 75 Fed.

Reg. at 53,614. Additionally, the Allocations NODA emphasized that “the final State budgets may differ from the proposed budgets because EPA is still in the process of updating its emissions inventories and modeling in response to public comments.” 76 Fed. Reg. at 1114. Thus, Petitioners had ample notice and opportunity to comment on changes to the models and data inputs and were apprised of their significance.⁶²

Contrary to Petitioners’ argument, parties need not have replicated EPA’s modeling to recognize that the final emissions budgets might be lower (even substantially lower) than the proposed budgets.⁶³ For example, as explained in the Rule, “the lower [NO_x] emission reductions observed at \$500/ton in this final rulemaking [as compared to the proposal] are due to a lower starting point in updated base case EGU NO_x emission levels.” 76 Fed. Reg. at 48,251. In other words, it is not that the final Rule’s IPM modeling is “dramatically more

⁶² Petitioners cite an OMB document (State Br. 44) that compiles interagency comments on a predecisional draft rule. As discussed supra n.59, this document is not part of the record for judicial review. Moreover, the document fails to bolster Petitioners’ notice claims because Petitioners could have anticipated the changes.

⁶³ The Court should disregard Petitioners’ reliance on several extra-record declarations attached to previously filed stay motions. See State Br. 45. These materials are outside of the administrative record and therefore irrelevant to the Court’s review. 42 U.S.C. §7607(d)(7)(A). Moreover, subjective opinions regarding the complexity of EPA’s modeling have no bearing on the question whether EPA’s proposed rule and subsequent NODAs provide adequate notice of the data and methodology upon which EPA relied to make its decision.

stringent,” as Petitioners argue.⁶⁴ Rather, the final emissions budgets are lower than the proposed budgets because the starting point for calculating the budgets, the base case, is lower as a result of updated data used in IPM—data that were presented to the public for comment in the NODAs.

Petitioners reasonably should have anticipated that updates to the IPM and the data inputs would result in lower emissions budgets based on the information in the NODAs. As EPA explained in the Rule, the lower EGU NO_x emissions base case flows from “a combination of modeling updates, including lower natural gas prices, reduced electricity demand, newly-modeled consent decrees and state rules, and updated NO_x rates to reflect 2009 emissions data.” 76 Fed. Reg. at 48,251. These modeling updates were noticed in the IPM NODA, and thus Petitioners had adequate opportunity to comment on them and whether they would result in more accurate IPM projections. See 75 Fed. Reg. at 53,614-15.

Moreover, the NODA explicitly stated that the modeling updates could impact the final Rule by changing cost and emission projections used to determine a State’s significant contribution, id. at 53,614, which determines the budgets. EPA’s reasonable reliance on the use of the more accurate “base case” projections

⁶⁴ In fact, the final NO_x budgets are less stringent than the proposed NO_x budgets because the emissions reductions they require from the base case are “not as pronounced” as the reductions in the proposal. 76 Fed. Reg. at 48,251; compare id. (Table VI.B-1), with 75 Fed. Reg. at 45,275 (Table IV.D-1).

and updated cost and emissions projections cannot give rise to a notice problem, particularly where, as here, Petitioners were explicitly put on notice that the resulting budgets might change and the data updates that resulted in the changes were presented for public comment. Additionally, numerous commenters advocated EPA updating IPM to reflect more recent data for gas prices, energy demand, and emissions reductions, undermining Petitioners' contention that EPA's explanation conflicts with actual conditions in petitioning States. See, e.g., Primary RTC at 604-05 (JA01913-14) (lower natural gas prices); id. at 2148-49 (JA02094-95) (consent decrees and state rules); id. at 2029 (JA02087) (lower NO_x rates). Moreover, Petitioners cite no evidence to show that EPA's assumptions were wrong.⁶⁵

State Petitioners had ample opportunity to submit any relevant data in response to the proposed rule and IPM NODA. Indeed, many States provided extensive comments demonstrating that emissions in their State were lower than EPA had initially projected. E.g., Primary RTC at 504, 1165 (JA01813, 02048). States (and sources in those States) submitted these comments in the hope that

⁶⁵ Again, State Petitioners improperly rely on an affidavit attached to a stay motion (State Br. 47), which is outside of the record for judicial review and should be disregarded by the Court. 42 U.S.C. §7607(d)(7). Regardless, the cited affidavit does not support Petitioners' argument; rather, it shows that Nebraska EGUs reduced their NO_x emissions by 19.2% between 2009 and 2010, which is consistent with the kind of updates EPA was making to NO_x data input into IPM.

these revised assumptions would demonstrate that the State did not significantly contribute to nonattainment or interfere with maintenance in another State.⁶⁶ It was not unforeseeable that these comments would result in lowering the State's "base case" emissions. Nor would it take clairvoyance to anticipate that the State's budget (i.e., its "base case" emissions minus all reductions available at the appropriate cost threshold) also might be lower.

Indeed, the most extreme example cited by Petitioners, the 51 percent change in Florida's ozone-season NO_x budget (State Br. 49), was entirely foreseeable. EPA stated it intended to use 2009 emissions rates, 75 Fed. Reg. 53,614, and the 2009 data reported by Florida sources was placed in the docket and noticed for comment in the Allocations NODA, 76 Fed. Reg. at 1111. Simple math shows that Florida's 2009 emissions rates were 47% lower than the 2007 rates EPA had used in the proposal.⁶⁷ Given that lower emissions budgets were a foreseeable consequence of EPA's solicitation of comment on the emissions data

⁶⁶ At least one State, Louisiana, even commented that the final state emissions budgets "may differ from the proposed budgets because EPA is still in the process of updating its emissions inventories and modeling in response to public comments, including comments on the [IPM]." Primary RTC at 2575 (JA02107).

⁶⁷ Specifically, Florida's 2009 and 2007 emission rates can be calculated by dividing the sum of all Florida units' ozone-season emissions in the relevant year by the sum of all of those units' ozone-season heat input in that year. See EPA-HQ-OAR-2009-0491-3875 ("Option 2 Underlying Data" tab) (JA02388-93).

underlying the budgets, EPA's notice was adequate even though parties may not have been able to precisely predict the result. See Am. Coke, 452 F.3d at 940.

Moreover, Petitioners are not prejudiced as a result of updates to the models and final budgets in light of EPA's February 7, 2012, actions revising aspects of some State budgets, as well as new unit set-asides for some States, and making other technical revisions to State budgets. 77 Fed. Reg. 10,324 (Feb. 21, 2012); 77 Fed. Reg. 10,342 (Feb. 21, 2012). These revisions address many of the alleged "errors" of concern to particular States and utilities and render any notice defects harmless. Petitioners thus cannot show any material defect in the notice or opportunities to comment provided by EPA that meets the stringent standard for alleged procedural errors established by the §7607(d)(8) (court may invalidate a rule for procedural errors only if the errors were "so serious" and of "such central relevance" that "there is a substantial likelihood that the rule would have been significantly changed if such errors had not been made").

B. Petitioners Had Ample Notice of the Basis for EPA's Conclusion That They Should be Included in the Rule.

Petitioners also fail to show that EPA gave inadequate notice of modeling and data updates affecting upwind-to-downwind linkages used as part of EPA's process for determining which States significantly contribute to nonattainment or interfere with maintenance in downwind States. EPA gave ample notice of its basic methodology, described supra at 17, which remained constant from the

proposed to final rule. See 75 Fed. Reg. at 45,253-270; 76 Fed. Reg. at 48,236-246.

EPA also provided notice of updated emissions data used in CAMx through two NODAs. Together, the IPM and Emissions Inventory NODAs identified updates to IPM and related data inputs that affected projected EGU and non-EGU emissions that are inputs to the CAMx modeling. 75 Fed. Reg. at 53,614-15; 75 Fed. Reg. at 66,056-57. EPA specifically noted that the IPM updates could “[c]hang[e] emission projections that were used to determine which downwind areas have air quality concerns ... and ... which States contribute to those problems.” 75 Fed. Reg. at 53,614. State Petitioners thus had ample opportunity to comment on the relevant model updates and had notice that the linkages in the final Rule might change as a result of these updates.

In response to comments urging EPA to use the most up-to-date modeling platform available, EPA also updated the CAMx from version 5.20 to version 5.30. 76 Fed. Reg. at 48,229; Primary RTC at 389 (JA01698). State Petitioners fail to demonstrate that this routine update to a slightly newer version of the model significantly impacted the model results. Thus, the change is a logical outgrowth of the proposal and comments on the Rule.

In any event, Petitioners were not prejudiced by the use of an updated model and updated data inputs. In fact, notwithstanding the shifts in linkages related to

the updates, all States included in the final Rule maintained, for each pollutant, at least one linkage in common with the linkages in the proposal.⁶⁸ Thus, the record flatly contradicts Petitioners' argument (State Br. 51) that the final Rule linkages are "entirely different" from those proposed. Compare 75 Fed. Reg. at 45,269 (Tables IV.C-20 & 21) with 76 Fed. Reg. at 48,245 (Tables V.D-8 & 9); compare 75 Fed. Reg. at 45,257-60, 45,262-67 (Tables IV.C.-14, 15, 17 & 18) with 76 Fed. Reg. at 48,240-243 (Table V.D-2, 3, 5 & 6). A State need only be linked to one downwind receptor with nonattainment or maintenance problems to be included in the Rule for a particular pollutant, and Petitioners had notice and opportunity to comment on those linkages. Comment on the newly identified linkages in the final Rule would not have changed the outcome.

C. EPA Gave Notice that It Was Considering Including Texas in the Rule for PM_{2.5}.

Texas and other interested parties reasonably should have anticipated that EPA was considering including Texas in the final Rule for PM_{2.5}, in addition to ozone, because EPA told them precisely that. At proposal, EPA announced that Texas would be covered by the Rule for the ozone NAAQS and explicitly requested comment on whether Texas should be included in the final Rule for the

⁶⁸ For six States that did not have a common linkage for ozone, EPA declined to take final action and, instead, provided an additional opportunity to comment on linkages to ozone receptors identified for the first time in the final Rule. 76 Fed. Reg. at 40,662.

1997 PM_{2.5} NAAQS. 75 Fed. Reg. at 45,284. EPA stated that it was considering including Texas in the Rule for PM_{2.5} based on the impact of Texas emissions on areas in another State or States having difficulty attaining or maintaining the 1997 PM_{2.5} NAAQS. Id. Data in the docket identified Madison County, Illinois, as the area with PM_{2.5} attainment difficulties most impacted by Texas emissions.⁶⁹ These statements advised Petitioners that Texas's inclusion in the final Rule was among the issues that would be considered in the rulemaking; thus, EPA's ultimate decision to include Texas is a logical outgrowth of EPA's proposal. Ne. Md. Waste Disposal Auth., 358 F.3d at 952.

Once again, State Petitioners erroneously assert that EPA "concealed" its methodology. In fact, EPA provided extensive notice and opportunity to comment on the methodology, assumptions, and data it used to determine which States would be included in the Rule. 75 Fed. Reg. at 45,234-70. While EPA's analyses at proposal did not indicate that Texas emissions were significantly contributing to downwind nonattainment of the PM_{2.5} NAAQS, EPA specifically noted that if left unregulated Texas emissions might do so. Id. at 45,284. EPA's modeling for the proposal clearly showed that Texas' contribution to downwind nonattainment of

⁶⁹ The proposed Air Quality TSD shows Texas's contribution to Madison County, Illinois is 0.13 µg/m³ and identifies that Texas's largest downwind nonattainment contribution is 0.13 µg/m³. EPA-HQ-OAR-2009-0491-0047, App. D at D-9–D-10 (JA02145-46) (table).

the annual PM_{2.5} NAAQS in Madison County, Illinois, was just below the applicable threshold. EPA noted its concern that increased use of higher sulfur coals in Texas EGUs if Texas were not subject to the final Rule for PM_{2.5} might materially increase Texas' contribution to downwind PM_{2.5} nonattainment, and solicited "comment on whether Texas should be included in the program as a group 2 state" for PM_{2.5} contributions. Id.

Texas, among many others, submitted comments in response to the proposal as well as in response to EPA's NODAs. See Primary RTC at 559-61, 2632-34 (JA01868-70, 02108-10); Emissions Inventory RTC at 30-31 (JA01517-18). Texas's own comments provided data showing that plants in Texas already were using higher sulfur coals than EPA had assumed in the proposal. See Primary RTC at 561 (JA01870) (comments from TCEQ); see also id. at 554, 558, 2481, and 2832 (JA01863, 01867, 02105, 02112) (comments from Texas utilities). Once EPA updated its emission projections taking the corrected information into account, Texas's contributions to nonattainment of the annual PM_{2.5} NAAQS in Madison County rose from just under to just above the applicable thresholds for inclusion in the Transport Rule. Thus, Texas's inclusion in the Rule was due to applying corrected and updated data (*based in part on Texas's own comments*) to the approach and methodology announced in the proposal and the NODAs, of which all parties had ample notice and opportunity to comment. 76 Fed. Reg. at

48,214. Therefore, the concerns EPA noted in the proposal regarding higher sulfur coals in Texas were not only relevant, but were directly related to Texas's inclusion in the final Rule.

Given the above, the States' argument that EPA deprived Texas stakeholders of the opportunity to comment on the Madison County monitor (State Br. 52) rings hollow. The proposal made clear that Texas's contribution to nonattainment in Madison County is very close to the applicable significant contribution threshold. Neither Texas nor others needed "telepathy" to anticipate that data showing an increased contribution to Madison County's SO₂ and NO_x pollution could push Texas over the "significant contribution" threshold. In fact, Sierra Club commented on *precisely* that fact, noting that if emissions increased, Texas would be above the threshold and should be included in the Rule. Primary RTC at 328 (JA01637). Thus, Texas had ample opportunity and incentive to comment on Texas's linkage for PM_{2.5} to Madison County. If Texas truly had concerns regarding its modeled contributions to Madison County or Madison County's attainment status, but decided not to present them in comments during the rulemaking, such a decision must be regarded as Texas's strategic choice, not a failure of notice.⁷⁰

⁷⁰ Although the States raise these as purely procedural issues, the substance of the argument regarding Madison County is wrong. Contrary to their argument (State Br. 52), Madison County's attainment status has not changed. The notice

Similarly, the States cannot claim that the lack of illustrative emissions budgets for Texas in the proposed rule deprived Texas and others of the opportunity to comment on EPA's *methodology* for identifying each State's significant contribution and establishing budgets. EPA provided detailed notice and opportunity to comment on its methodology for determining "significant contribution" and calculating state emissions budgets. 75 Fed. Reg. at 45,270-274, 45,290-291; Proposal State Budgets TSD, EPA-HQ-OAR-2009-0491-0057 (JA02277-92); Proposal Significant Contribution TSD, EPA-HQ-OAR-2009-0491-0048 (JA02163-276). EPA also made available the data on which such budgets would be based for all States – *including Texas*. EPA-HQ-OAR-2009-0491-0074 (database reflecting detailed unit-level data for State budgets, unit allocations, and unit emissions rates) (JA02293-305).⁷¹

That the final Rule contains budgets for Texas while the proposal does not is not, *ipso facto*, evidence of a notice defect. Rather, Texas must identify specific

cited by the States is not a redesignation, but rather a "clean data determination," which indicates that the most recent monitoring data is within the relevant NAAQS limits and "is not equivalent to re-designating the area to attainment." 76 Fed. Reg. 29,652 (May 23, 2011).

⁷¹ Significantly, Petitioner Luminant presented materials to OMB that estimated a "potential" Texas SO₂ budget of 304,977 tons, calculated based on a data file cited as "BA DetailedData.xls," EPA-HQ-OAR-2009-0491-0074. Luminant Powerpoint, EPA-HQ-OAR-2009-0491-4124 at 6 n.3 and 7 n.4 (JA03473, 74). Luminant's calculated budget was within 200 tons of EPA's calculations.

defects in notice that were of “such central relevance” that “there is a substantial likelihood that the rule would have been significantly changed if such errors had not been made.” 42 U.S.C. §7607(d)(8). The absence of specific Texas budgets did not prevent Texas or any other party from commenting on EPA’s methodology for determining “significant contribution” or raising any of the issues in part II of the States’ argument, which relate to EPA’s general methodology and are irrelevant to the notice issue with regard to Texas’s particular emissions budget. See, e.g., Primary RTC at 274-732 (JA01583-2041) (comments on “significant contribution” methodology from Texas and others). In short, EPA satisfied its notice obligations with regard to Texas.

D. Other Changes to the Final Budgets Cited by Petitioners Are Logical Outgrowths of the Proposal.

The States’ claim that EPA changed its methodology for determining the level of emission reductions as applied to Louisiana, Mississippi, Arkansas, Indiana and Maryland between the proposed and final rules (State Br. 54), also is incorrect. EPA applied the same methodology to these States that it applied to others, i.e., it determined what emission reductions were available within each State at specific cost thresholds. The possible effects of “emissions leakage” on these States made it necessary to consider modeling showing what would happen if these States were excluded from the program, in addition to a comparison against “base case” modeling, to determine whether emission reductions were available in

these States at \$500 per ton. 76 Fed. Reg. at 48,263. EPA's analysis showed such reductions were available. Id.

Further, Petitioners' contention that "the concept of 'emissions leakages' did not appear in the proposed rule" (State Br. 54) is incorrect. EPA's discussion of whether some States should be included in the Rule based on emissions increases due to shifting generation when the cost of generation increases in nearby States gave notice that EPA considered emissions leakage to be an important concern, notwithstanding that EPA did not use this specific terminology in the proposal. 75 Fed. Reg. at 45,284.

Likewise, Petitioners' argument that the methodology used to calculate certain NO_x and Group 2 State SO₂ budgets was not a logical outgrowth of the proposal lacks merit. First, petitioners mischaracterize the Rule as including "two phases" for NO_x and Group 2 SO₂ programs. Unlike the Group 1 SO₂ program (which includes a 2012 phase requiring reductions available at \$500/ton and a 2014 phase requiring reductions available at \$2300/ton), the NO_x and Group 2 SO₂ programs only require reductions available at \$500/ton. That the emissions remaining after such reductions are achieved differ somewhat between 2012 and 2014, does not convert the programs into "two phases."

Further, in the proposal, EPA did not commit to having identical budgets for 2012 and 2014, but instead emphasized that the budgets for NO_x and Group 2 SO₂

States should represent emissions remaining after implementation of all controls available at \$500/ton. Id. at 45,274-92. The approach EPA used to calculate all 2012 and 2014 budgets in the final Rule was presented for comment in the proposal, 75 Fed. Reg. 45,290, in connection with the Group 1 SO₂ program, and EPA's decision in the Rule to extend this approach to the NO_x and Group 2 SO₂ programs was a logical outgrowth of the proposal. It was responsive to comments and driven by the importance of ensuring that budgets accurately represent emissions from covered EGUs in each State, following elimination of significant contribution. See Primary RTC at 603-45 (JA01912-54). In the proposal, EPA developed all NO_x and Group 2 SO₂ budgets by manually adjusting "base case" IPM projections and recent emissions data to estimate the level of emissions remaining after all reductions available at specific cost thresholds were achieved. Id. at 45,290-91. In the final Rule, recognizing that the updates to IPM had significantly improved its accuracy, EPA based the NO_x and Group 2 SO₂ budgets on these IPM projections – just as it did for the Group 1 2014 SO₂ budgets in the proposed and final rules. 76 Fed. Reg. at 48,260-261.

In any event, the differences in most States' 2014 NO_x and Group 2 SO₂ budgets are relatively minor and, therefore, Petitioners can show no prejudice as a result of any alleged defect in notice. Id. at 48,269-270 (Tables VI.F-1, VI.F-2, & VI.F-3). One possible exception is Georgia's final SO₂ and NO_x budgets. Id.

(Tables VI.F-1 & VI.F-2). However, EPA revised Georgia's budgets in the Direct Final Revisions Rule, thus correcting any alleged defects in that State's budgets.

In the absence of any demonstrated prejudice, Petitioners cannot satisfy the CAA's stringent standard for alleged procedural errors. 42 U.S.C. §7607(d)(8).

CONCLUSION

For all of the foregoing reasons, these consolidated petitions for review of the Transport Rule should be denied in their entirety and the Court's December 30, 2011, stay of the Transport Rule lifted.

Respectfully submitted,

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DATED: March 16, 2012

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing final Brief for Respondents was served, this 16th day of March, 2011, on all registered counsel, through the Court's CM/ECF system.

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CERTIFICATE OF COMPLIANCE WITH WORD LIMITATION

Pursuant to Federal Rule of Appellate Procedure 32(a)(7)(C), I hereby certify that the foregoing Brief of Respondent EPA contains 27,779 words as counted by the Microsoft Office Word 2007 word processing system, and thus complies with the applicable word limitation.

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