ORAL ARGUMENT SCHEDULED FOR FEBRUARY 25, 2015

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

CORRECTED BRIEF FOR RESPONDENTS

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DATED: January 16, 2015

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

EME HOMER CITY GENERATION, L.P., Petitioner, v. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, et al., Respondents.	)	No. 11-1302 (and consolidated cases)

RESPONDENTS' CERTIFICATE OF COUNSEL

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

(A) Parties and Amici

(i) Parties, Intervenors, 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.

(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 Court issued a previous opinion in this case in *EME Homer City Generation, L.P. v. EPA*, 696 F.3d 7 (D.C. Cir. 2012). The Supreme Court granted petitions for a writ of certiorari and, in *EPA v. EME Homer City Generation, L.P.*, 134 S. Ct. 1584 (2014), reversed this Court's judgment and remanded the cases for further proceedings.

This Court severed certain issues concerning the Rule's electronic data reporting requirements, which were placed in *Utility Air Regulatory Group v. EPA*, No. 12-1043, which is being held in abeyance.

Review of three EPA regulations that supplement or modify the rule under review are pending in this Court in *Public Service Co. v. EPA*, No. 12-1023 and consolidated cases; *Wisconsin Public Service Corp. v. EPA*, No. 12-1163 and consolidated cases; and *Utility Air Regulatory Group v. EPA*, No. 12-1346 and consolidated cases.

Respectfully submitted,

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DATED: January 16, 2015

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GLOSSARY

CAA	Clean Air Act, 42 U.S.C. §7401 et seq.
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
Good Neighbor Provision	42 U.S.C. § 7410(a)(2)(D)(i)(I)
IPM	Integrated Planning Model
NAAQS	National Ambient Air Quality Standard
NOx	Nitrogen Oxides
$PM_{2.5}$	Fine Particulate Matter
RTC	Response to Comments Document
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
TSD	Technical Support Document
$\mu g/m^3$	Micrograms per cubic meter

JURISDICTION

This Court has jurisdiction under 42 U.S.C. § 7607(b) to hear these challenges to the United States Environmental Protection Agency's ("EPA's") Cross-State Air Pollution Rule, 76 Fed. Reg. 48,208 (Aug. 8, 2011) ("Transport Rule" or "Rule").

STATUTES AND REGULATIONS

The pertinent statutes and regulations are set forth in Industry Petitioners' addendum.

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). The Transport Rule constitutes EPA's response to *North Carolina v. EPA*, 531 F.3d 896, 929 (D.C. Cir. 2008), in which the Court ordered EPA to replace "from the ground up" a prior regulation governing interstate transport of pollutants, the Clean Air Interstate Rule ("CAIR"). This case presents the following issues:

1. Did EPA lawfully promulgate Transport Rule FIPs for States with approved CAIR SIPs?

2. Did EPA act consistently with the CAA in signing Transport Rule FIPs for certain States after signature, but before publication, of SIP disapprovals?

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 reasonably determine that a State's obligation to control emissions that contribute significantly to nonattainment in other States includes areas that are projected to be in nonattainment but have not been formally designated nonattainment?

5. Did EPA provide interested parties with adequate notice and opportunity to comment on the Transport Rule?

6. Did EPA rely on reasonable assumptions and methodologies in its modeling of air quality impacts and for State emission budgets?

7. Does the Transport Rule establish emission budgets no more stringent than necessary for downwind areas to attain and maintain the relevant NAAQS?

STATEMENT OF THE CASE

This case is on remand from *Environmental Protection Agency v. EME Homer City Generation, L.P.*, 134 S.Ct. 1584 (2014). The background of the case is described in that opinion.

The Transport Rule addresses the complex and enduring problem of interstate transport of emissions of nitrogen oxides ("NOx") and sulfur dioxide ("SO_2") that affect the ability of some States to attain and maintain the National Ambient Air Quality Standards ("NAAQS") for ozone and fine particulate matter ("$PM_{2.5}$"). Ozone and $PM_{2.5}$ cause serious health effects, including asthma, bronchitis, heart attacks, and death. The CAA "Good Neighbor Provision," 42 U.S.C. § 7410(a)(2)(D)(i)(I), requires States to prohibit emissions that will contribute significantly to nonattainment or interfere with maintenance of attainment in other States. If EPA finds that a State fails to submit the required measures or disapproves a State's submission, EPA is required to promulgate a FIP within two years. *Id*. § 7410(c)(1). EPA determined that the Transport Rule is necessary for downwind attainment and maintenance of the NAAQS and will result in dramatic health benefits for over 240 million people in the eastern United States.

The Transport Rule represents EPA's response to the Court's holding in *North Carolina* that CAIR had to be replaced "from the ground up." 531 F.3d at

929-30. It identifies those States with emissions projected to significantly contribute to ozone or $PM_{2.5}$ nonattainment or maintenance problems in other States, establishes trading programs with emission budgets for covered electric generating units ("EGUs") in each such State, and promulgates FIPs to achieve the necessary reductions. 76 Fed. Reg. at 48,209-16.

Petitions for review of the Transport Rule were filed, and this Court first stayed and then vacated the Rule. *EME Homer City Generation, L.P. v. EPA*, 696 F.3d 7 (D.C. Cir. 2012). Although Petitioners raised numerous issues, the panel addressed only two. First, the Court held that EPA's methodology for determining the amount by which upwind States must reduce their emissions, which is based in part on emission reductions attainable through the use of highly cost-effective controls, did not adequately ensure that no upwind State would be required to eliminate more than its significant contribution to downwind States. The Court found that the statute created three "red lines" that limited EPA's authority: no State could be required to eliminate more than its own significant contribution to a downwind nonattainment area, each State's required reductions must be proportional to its contribution to a downwind State, and reductions required of upwind States in the aggregate cannot be more than required for the downwind State to attain the NAAQS. *Id*. at 19-22. Second, the Court held that EPA could not promulgate a FIP regarding interstate transport requirements until EPA

determined the amount of reductions a State requires to eliminate its significant contribution to other States, and provided the State with an opportunity to implement those reductions through a SIP. *Id.* at 37.

The Supreme Court reversed on both issues. The Court held, applying *Chevron U.S.A., Inc. v. NRDC*, 467 U.S. 837 (1984), that section 7410(a)(2)(D)(i)(I) is ambiguous, and thus that Congress delegated EPA authority to determine what constitutes significant contribution to nonattainment or interference with maintenance. 134 S.Ct. at 1603-04. The Supreme Court specifically rejected this Court's holding that the statute imposed a requirement of proportionality based on air quality impacts, instead finding that "[t]he Agency has chosen, sensibly in our view, to reduce the amount easier, i.e., less costly, to eradicate, and nothing in the text of the Good Neighbor Provision precludes that choice." *Id.* at 1604-06, 1606-07.

With regard to other bright lines defined by this Court, the Supreme Court agreed with this Court only to the extent that "[i]f EPA requires an upwind State to reduce emissions by more than the amount necessary to achieve attainment in *every* downwind State to which it is linked, the Agency will have overstepped its authority," and that EPA cannot demand reductions that would drive an upwind State's contribution to every downwind State to which it is linked below the point that constitutes a significant contribution. *Id*. at 1608.

The Court, however, held that the mere *possibility* of such over-control was not sufficient to justify vacatur of the Rule. *Id*. The Court emphasized that "over-control" with regard to one upwind-to-downwind-state linkage may be incidental to reductions necessary to achieve attainment elsewhere. Specifically, the Court stated that "the Good Neighbor Provision seeks attainment in *every* downwind State" and that "exceeding attainment in any one State cannot rank as 'over-control' unless unnecessary to achieving attainment in *any* downwind State. Only reductions unnecessary to downwind attainment *anywhere* fall outside the Agency's statutory authority." *Id*. at 1609.

The Supreme Court further held that "while EPA has a statutory duty to avoid over-control, the Agency also has a statutory obligation to avoid 'under-control,'" and that "a degree of imprecision is inevitable in tackling the problem of interstate pollution." *Id*. Consequently, some amount of over-control "would not be surprising" and "EPA must have leeway in fulfilling its statutory mandate." *Id*.

In reversing this Court's holding on EPA's FIP authority, the Supreme Court held that section 7410(c)(1) is unambiguous and that "once EPA has found a SIP inadequate, the Agency has a statutory duty to issue a FIP 'at any time' within two years." *Id*. at 1600. The Court held that "[n]othing in the Act differentiates the Good Neighbor Provision from the several other matters a State must address in its

SIP," and therefore that EPA had statutory authority to issue the Transport Rule FIPs. *Id*. at 1601.

STANDARD OF REVIEW

The applicable standard of review is contained in 42 U.S.C. § 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." 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 "whether the [agency's] decision was 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 (1983) (citation omitted). Particular deference is given to an agency with regard to technical matters within its area of expertise. *Baltimore Gas & Elec. Co. v. NRDC*, 462 U.S. 87, 103 (1983); *West Virginia v. EPA*, 362 F.3d 861, 867-68 (D.C. Cir. 2004).

Judicial deference also extends to an agency's interpretation of a statute it administers. *Chevron*, 467 at 842-45. Under *Chevron* step one, if Congress has "directly spoken to the precise question at issue," that intent must be given effect. *Id.* 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

EPA properly fulfilled its obligation to issue the Transport Rule FIPs. First, the claim that EPA's approval of SIPs allowing some States to implement CAIR abrogated EPA's authority to promulgate the Transport Rule FIPs is meritless. 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). While EPA approved SIPs for some States, this Court's decision in *North Carolina* meant that those SIPs had not corrected the underlying deficiency, i.e., the States' failure to promulgate adequate SIPs to address interstate transport. Because CAIR was invalid *ab initio*, EPA continued to have the obligation to promulgate FIPs to address interstate transport.

Second, Petitioners' claim that EPA disapproved SIP submissions for the 2006 $PM_{2.5}$ NAAQS after promulgation of the Transport Rule FIPs is based on a fallacious comparison of the *signature* date of the Transport Rule to the *publication* date of the SIP disapprovals. Appropriately comparing the like dates demonstrates that all SIP disapprovals occurred before promulgation of the Transport Rule FIPs.

Petitioners' claim that it was improper for EPA to apply the same control strategy to areas that "interfere with maintenance" and those that "contribute significantly to nonattainment," is based on a fundamental misreading of *North Carolina*. There the Court found CAIR deficient because it did not give independent effect to the "interfere with maintenance" requirement as a basis for including upwind States in the Rule, but did not otherwise specify the control strategy EPA should apply to States that became subject to the rule for that reason. 531 F.3d at 910. Furthermore, the Supreme Court in *EME Homer City* explicitly held that the CAA delegates to EPA authority to define "interfere with maintenance," and that nothing in the statute "provides the criteria by which EPA is meant to apportion responsibility," 134 S.Ct. at 1604 n.18. EPA therefore acted reasonably, and consistently with this Court's and the Supreme Court's guidance, in treating interference with maintenance as an independent basis for potential inclusion of upwind States in the Transport Rule, and then applying the same control strategy to States that interfere with maintenance and those that contribute to nonattainment.

Nothing in the statute limits upwind States' responsibility to address interstate transport to areas in downwind States that have been formally designated nonattainment, and EPA reasonably based its linkages on whether areas were projected to be in nonattainment, regardless of designation.

EPA provided ample notice and opportunity to comment on the methodology it used to determine linkages and State budgets. The changes in linkages and budgets between the proposed and final rules were the result of applying that methodology to the updated data presented to the Agency in comments. Thus, the final rule represents a logical outgrowth of the proposal.

EPA's air quality modeling reasonably excluded air quality data reflecting emission reductions resulting from CAIR—a rule this Court ordered EPA to replace in *North Carolina*. EPA's air quality model was, however, anchored with several years of monitored ambient air quality data and verified against actual monitored air quality data. Petitioners fail to show that EPA's modeling was unreliable.

EPA's model for setting emission budgets relied on reasonable assumptions related to transmission constraints and co-generation sources. Petitioners fail to show that EPA's assumptions were wrong or otherwise produced results that are inconsistent with real-world data.

Finally, the record shows that the Transport Rule requires covered upwind States to reduce emissions only as necessary for downwind States to attain and maintain the relevant NAAQS, consistent with the Supreme Court's holdings in *EME Homer City*. EPA selected reasonable uniform cost thresholds that efficiently and equitably allocate emission reduction responsibilities among

upwind States. Further, EPA followed the statute and this Court's directive in *North Carolina* by requiring emission reductions starting in 2012, and reasonably based those requirements on projected downwind air quality in 2012.

ARGUMENT

I. EPA'S ERRONEOUS APPROVAL OF CAIR SIPS DID NOT ELIMINATE ITS OBLIGATION TO ISSUE THE TRANSPORT RULE FIPS.

The claim that EPA's approval of SIPs allowing States to implement CAIR foreclosed EPA from promulgating the Transport Rule FIPs lacks merit. State Br. 5-16. The CAA 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 this case, *North Carolina* makes clear that the CAIR SIPs did not correct the deficiencies EPA identified in finding that States had not met their interstate transport obligations, and EPA's approval of those SIPs was in error to the extent that EPA had determined that those obligations had been met by CAIR. Accordingly, EPA's FIP obligation had not been meet, and EPA properly corrected the CAIR SIP approvals.

Petitioners attempt to avoid this result by arguing that the decision in *North Carolina* identified a deficiency other than the one that triggered EPA's FIP obligation. State Br. 14-15. That is not the case. The deficiency that triggered

EPA's FIP obligation was States' failure to adequately address interstate transport requirements. The CAIR SIPs were based solely on the analysis and the remedy provided by CAIR, which this Court in *North Carolina* held was unlawful. "A judicial construction of a statute is an authoritative statement of what the statute meant before as well as after the decision of the case giving rise to that construction." *Rivers v. Roadway Express, Inc.*, 511 U.S. 298, 312-13 (1994). Accordingly, the decision in *North Carolina* meant that CAIR SIP approvals were erroneous when issued to the extent they concluded that the deficiency had been remedied. Thus, the deficiency that existed when EPA made the failure to submit findings and SIP disapprovals had not been corrected, and EPA's obligation to issue a FIP was not extinguished.

This fact also distinguishes this case from the situation addressed in Judge Kavanaugh's dissent in *Texas v. EPA*, 726 F.3d 180 (D.C. Cir. 2013), upon which State Petitioners rely. *See* State Br. 9-11. In *Texas*, Judge Kavanaugh opined that the SIP at issue was not deficient either when originally approved or at the time of the error correction. 726 F.3d at 204. In contrast, the *North Carolina* Court determined that CAIR was invalid *ab initio*. Thus, the CAIR SIPs were erroneous when approved to the extent they purported to meet the State's interstate transport obligations. More significantly, EPA's action here is supported by the holding of

the majority in *Texas* that an improper SIP approval cannot override a statutory requirement. *Id*. at 195.

EPA's alleged "nullification" of the CAIR SIPs (State Br. 9-14), is a red herring because EPA did no such thing. All approved CAIR SIPs remained in effect after *North Carolina* to allow individual States to continue implementing CAIR and allocating allowances until CAIR was replaced. EPA corrected its previous SIP approvals only:

> 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 the corrections merely make explicit what was implicit in this Court's decision in *North Carolina*. Even if EPA had not explicitly corrected the CAIR SIP approvals, this Court had made clear that the CAIR SIPs did not correct the identified deficiencies, from which it necessarily follows that EPA's obligation to promulgate FIPs had not been terminated. It would make little sense if EPA's authorization of a State to implement a regulatory program that a court subsequently finds to be unlawful were to immunize that State from being subject to the consequences of the court's decision.

That EPA continued to approve CAIR SIPs after the decision in *North Carolina* undercuts, rather than supports, Petitioners' argument. Because it was indisputable at that time that those SIPs did not correct the deficiency that triggered EPA's FIP obligation, the only possible purpose of approving the CAIR SIPs was to implement the CAIR trading programs until CAIR was replaced (as required by *North Carolina*). Thus, those SIP approvals could not reasonably be understood as a determination that the States' interstate transport obligations had been met.

Petitioners' claim that EPA's interpretation of section 7410(k)(6) abrogates the section 7410(k)(5) SIP call provision (State Br. 12-13) lacks merit. Section 7410(k)(5) applies where a SIP approval was correct when made but subsequent facts or regulatory developments require a change in the SIP. For example, EPA utilized that provision when it determined that modeling performed for the Transport Rule demonstrated that the previously approved transport SIP for Kansas, which was not based on CAIR, was no longer adequate. 76 Fed. Reg. 763 (Jan. 6, 2011). Section 7410(k)(6) is utilized where, as here, there was an error in the SIP approval that requires correction. Furthermore, even if EPA could have issued SIP calls for the States to correct the CAIR SIPs, nothing in the statute required EPA to do so instead of correcting those erroneous SIP approvals.

Petitioners' claim that section 7410(k)(6) precludes EPA's invocation of the "good cause" exception (State Br. 13-14) also fails. The CAIR SIP approvals and

corrections were both promulgated "in the same manner" using administrative rulemaking, and use of the good cause exception to notice and comment where appropriate is always an option in such rulemaking. EPA's invocation of the exception was reasonable because *North Carolina* gave EPA no discretion in determining the need for modification, thus making notice and comment unnecessary.

Finally, even if Petitioners' claim had any merit, it applies only to a small portion of the Transport Rule. It is irrelevant to the annual NOx and SO_2 requirements because for all States subject to those requirements, other than South Carolina and Texas, EPA either made a finding of failure to submit or disapproved a SIP for the 2006 $PM_{2.5}$ NAAQS, which CAIR, and therefore the CAIR SIPs, did not address (CAIR addressed only the 1997 $PM_{2.5}$ NAAQS). FIP TSD (JA03167-78). Thus, the same annual budgets will apply in those States regardless of what the Court decides about the CAIR SIPs. As to Texas, EPA approved only an abbreviated CAIR SIP that allowed Texas to allocate allowances. 72 Fed. Reg. 41,453 (July 30, 2007).[1] Thus, Texas continued to be subject to the CAIR FIP, which the Court remanded to EPA. For South Carolina, EPA approved a full CAIR SIP, but only *after* the decision in *North Carolina;* therefore, it cannot

[1] An abbreviated SIP allowed States to alter specified aspects of CAIR, but did not constitute approval of an interstate transport SIP.

reasonably be construed as a determination that South Carolina's SIP revision had corrected the problem. FIP TSD at 10 (JA03176).

For States subject to the ozone-season NOx requirements, most either had only an abbreviated SIP approved or had a full SIP approved after *North Carolina*, neither of which can be reasonably construed as meeting the States' transport obligations. FIP TSD (JA03167-78). Only Alabama, Arkansas, Florida, Kentucky, Illinois, Mississippi, New York, and Virginia had full CAIR SIPs approved prior to the decision in *North Carolina*. Even if the Court were to find that the full CAIR SIPs terminated EPA's FIP obligation in the eight ozone-season states, there is no basis to vacate the Rule, but rather remand to EPA would be appropriate as was done upon rehearing in *North Carolina*. 550 F.3d 1176 (D.C. Cir. 2008). Nothing about this issue affects EPA's findings as to which States are obligated to make emission reductions or the level of needed reductions. Rather it affects only the mechanism, i.e., SIP Call or FIP, EPA must use to impose them.[2]

[2] Further, if the Court were to determine that vacatur was appropriate for these States, there is no reason the program should not continue in the remaining States, while EPA conducts a SIP Call. *See Michigan v. EPA*, 213 F.3d 663, 681-85 (D.C. Cir. 2000) (vacating NOx SIP call only as to three states).

II. EPA DISAPPROVED THE 2006 $PM_{2.5}$ SIP SUBMISSIONS BEFORE PROMULGATING THE TRANSPORT RULE FIPS.

The claim that EPA disapproved SIP submissions for the 2006 $PM_{2.5}$ NAAQS after promulgation of the Transport Rule FIPs (State Br. 31-33, Pets. Ints. Br. 9-14) relies on a fallacious comparison of the *signature* date of the Transport Rule to the *publication* date of the SIP disapprovals. This issue was neither raised in comments nor in the original briefs, and thus has been waived. 42 U.S.C. § 7607(d)(7)(B). Moreover, this claim is little more than an exercise in sophistry. Appropriately comparing like dates demonstrates that all SIP disapprovals occurred before promulgation of the Transport Rule FIPs. For example, the Kansas disapproval cited by Petitioners was signed June 28, 2011 (76 Fed. Reg. 43,143, 43,149 (July 20, 2011)), more than a week before the July 6, 2011 signature date of the Transport Rule FIPs (76 Fed. Reg. at 48,353). In fact, all of the cited SIP disapprovals were signed prior to the Transport Rule signature date. FIP TSD (JA3167-78). Similarly, all the cited disapprovals were published July 20, 2011, weeks before the August 8, 2011 Transport Rule publication date. Thus, the SIP disapprovals were undeniably made before promulgation of the FIPs, consistent with section 7410(c)(1).

The argument that EPA was required to give the States notice of the SIP disapprovals and an opportunity to correct them before issuing, or even before proposing, FIPs simply rehashes arguments the Supreme Court squarely rejected,

and thus lacks merit. 134 S.Ct. at 1600. Moreover, EPA promulgated the SIP disapprovals and the Transport Rule pursuant to notice and comment rulemaking, and States had notice that EPA intended to disapprove their SIPs and promulgate FIPs, and the opportunity to comment.[3]

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. 16-19. In CAIR, EPA only utilized the interfere-with-maintenance prong of section 7410(a)(2)(D)(i)(I) to justify continuing regulation of sources that had significantly contributed to nonattainment in an area that would subsequently achieve attainment. *North Carolina*, 531 F.3d at 910. The Court held that this approach contravened the Act, and that EPA must give "independent effect" to the interfere-with-maintenance prong, i.e., that EPA must determine whether sources in an upwind State will interfere with maintenance in a downwind State *independently* of whether those sources will significantly contribute to nonattainment in that State. *Id*.

[3] While the Ohio, Georgia, and Kansas SIP disapprovals were challenged, the Ohio and Georgia cases have been voluntarily dismissed. *Ohio v. EPA*, 11-3988 (6th Cir.), Nov. 26, 2014; *Georgia v. EPA*, 11-1427 (D.C. Cir.), Nov. 25, 2014.

In the Transport Rule, EPA did *exactly* what *North Carolina* instructed it to do. In determining which States have the potential to interfere with maintenance in other States, EPA first identified "maintenance receptors," which are areas that are predicted to be in future attainment, 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 determined which States were linked to that receptor based on the Rule's screening criteria, i.e., one percent of the applicable NAAQS, and applied cost thresholds to develop emission budgets aimed at assuring maintenance. *Id.* at 48,211. Thus, for each State subject to the Transport Rule because of a linkage to a maintenance receptor, EPA determined that it contributes a significant amount of pollutants to an area at risk for going back into nonattainment. *Id.* Nothing in *North Carolina* addressed whether EPA may use the same screening criteria and cost thresholds to regulate sources in States that interfere with maintenance that it uses to regulate sources in States that significantly contribute to nonattainment.

The Supreme Court explicitly held that the CAA authorizes EPA to determine the meaning of "interfere with maintenance" and that nothing in the Good Neighbor Provision "provides the criteria by which EPA is meant to apportion responsibility." 134 S.Ct. at 1604 n.18. EPA's approach is a reasonable interpretation of the statute. The maintenance receptors EPA identified are at high

risk for nonattainment and 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 and thereafter maintain the standard. As all areas must ultimately maintain the standard, there is no statutory basis for the contention that EPA must design different remedies for emissions that interfere with maintenance and those that significantly contribute to nonattainment.

Petitioners do not address EPA's rationale or identify any way it is inconsistent with the statute.[4] Rather, they simply assert that interference with maintenance is limited to cases where upwind States' emissions increase beyond those considered in a downwind area's attainment or maintenance plan. State Br. 16-21. First, this argument is waived as it was never raised in comments. 42 U.S.C. § 7607(d)(7)(B). If not waived, as applied to the Transport Rule, this argument fails because existing attainment and maintenance plans rely on CAIR, which must be replaced.

Furthermore, Petitioners' argument upends the statutory process for SIP development. Area designations occur two to three years after promulgation of a new or revised NAAQS. 42 U.S.C. § 7407(d)(1)(B)(i). State SIP submissions,

[4] Petitioners' reliance on this Court's prior opinion (State Br. 19) is misplaced both because that opinion has been reversed and because it is not inconsistent with EPA's approach, which only regulates sources in upwind States that contribute significant amounts to areas at risk of returning to nonattainment in the near future.

including under the Good Neighbor Provision, are also due three years after promulgation of a new or revised NAAQS. *Id*. § 7410(a)(1). Attainment plans are not due until 18 months to four years after designation, depending on the pollutant (with maintenance plans being later developed only at *redesignation*). 42 U.S.C. §§ 7511a, 7513a. Thus, the interfere-with-maintenance aspect of a State's Good Neighbor obligations cannot depend on what other States have considered in their attainment or maintenance plans, since pursuant to the statutory design, such plans likely will not yet have been developed.

Petitioners' claim that controls on upwind States must be included in an area's maintenance plan as a contingency measure before they can be required of an upwind State is absurd. State Br. 17-18. Contingency measures are regulatory actions that the State in which the maintenance area is located must take if air quality targets are not met. 42 U.S.C. § 7505a(d). That State, however, cannot control emissions originating in another State, and thus interstate transport controls could never be included as contingency measures.

Finally, the example of Allegan County, Michigan undercuts, rather than supports, Petitioners' argument. Allegan's attainment status is due almost entirely to the control of transported pollutants—96 percent of the ozone at the Allegan monitor is from out-of-state emissions. 76 Fed. Reg. 80,760, 80,766 (Dec. 27, 2011). EPA's redesignation decision, which pre-dated the final Transport Rule

modeling, was based primarily on reductions imposed by federal programs on out-of-state sources, namely the NOx SIP Call. *See* 75 Fed. Reg. 42,018, 42,025-26 (July 20, 2010). EPA specifically relied on the continued control of emissions from upwind sources for maintenance. *Id*. at 42,028. Indeed, recent monitoring data shows that, even with CAIR in place, Allegan continues to experience high ozone days. 76 Fed. Reg. at 80,768. Accordingly, EPA's determination that Allegan is at risk of returning to nonattainment without the controls required by the Transport Rule is reasonable.[5]

IV. PETITIONERS' CLAIMS CONCERNING AREAS NOT DESIGNATED NONATTAINMENT ARE NOT PROPERLY BEFORE THE COURT AND ARE MERITLESS.

Petitioners' claim that, in determining which States contribute significantly to nonattainment in other States, EPA improperly considered linkages between upwind States and downwind areas that either were not formally designated at the time the Rule was promulgated or were redesignated to attainment after the Rule was promulgated (State Br. 26-28) is not properly before the Court.[6]

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[5] The complaint (State Br. 21-23; Pets. Ints. Br. 20-22) that required emission reductions are limited to EGUs is waived because it was not previously raised in comments or briefing, and, in any event, ignores EPA's rationale that reductions from other sources are not as cost-effective. 76 Fed. Reg. at 48,249/1.

[6] EPA understands Petitioners' argument to be limited to the nonattainment prong of section 7410(a)(2)(D)(i)(I). If, however, Petitioners extend it to the interference with maintenance prong, it is similarly meritless. Furthermore, it is unreasonable

The claim regarding areas never designated nonattainment was not raised in comments or in Petitioners' earlier briefs. Accordingly, it is waived. 42 U.S.C. § 7607(d)(7)(B). Moreover, the claim is meaningless because every State that Petitioners claim is affected by this issue (State Br. 27) is subject to the annual NOx and SO_2 requirements of the Rule because of linkages to one or more nonattainment or maintenance areas other than Madison and Cook, Illinois, and Marion, Indiana. 76 Fed. Reg. at 48,241-44 (Tables V.D-2, V.D-3, V.D-5, and V.D-6). Thus, these States would be subject to the same requirements even if the Court were to hold that the Madison, Cook, and Marion linkages were inappropriate. Accordingly, any decision on this claim will have no effect.

Even if properly before the Court, Petitioners' claim is without merit because nothing in the Act limits States' obligations under section 7410(a)(2)(D)(i)(I) to downwind areas that have been formally designated nonattainment. To the contrary, section 7410(a)(2)(D)(i)(I) requires States to prohibit emissions that "*will* contribute significantly to nonattainment in . . . any other State." 42 U.S.C. § 7410(a)(2)(D)(i)(I) (emphasis added). The future tense demonstrates that Congress intended this requirement to be forward-looking and

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to think that Congress intended to require upwind States to control emissions that might cause a State that had formerly been in nonattainment to return to nonattainment, but not to control emissions that might force a State into nonattainment in the first instance.

apply to areas that will be in nonattainment regardless of formal designation. An area with air quality that is projected to exceed the NAAQS would be in nonattainment, and thus not meeting public health-based standards, regardless of whether it has been formally designated as a nonattainment area. Because designations occur within the same timeframe in which States are required to develop the good neighbor portions of their SIPs, *supra* at 20-21, an upwind State cannot be relieved of its obligation to address transport merely because of a lack of formal designation.

Petitioners' argument concerning redesignations that occurred after the Rule's promulgation is also not properly before the Court because judicial review is limited to the record before EPA at the time the action was taken. 42 U.S.C. § 7607(d)(7)(A). If Petitioners believe that events occurring after promulgation justify revising the Rule, their remedy is to petition EPA for rulemaking pursuant to section 7607(d)(7)(B), or if they believe such events constitute newly-arising grounds for a judicial challenge, present that issue to EPA. *RSR Corp. v. EPA*, 102 F.3d 1266, 1270 (D.C. Cir. 1997); *Oljato Chapter of the Navajo Tribe v. Train*, 515 F.2d 654, 666 (D.C. Cir. 1975). The Rule requires the same level of control of States linked to nonattainment and maintenance receptors because EPA is charged with assuring that all areas maintain the NAAQS. Thus, even if a redesignation

means that EPA identifies an area as a maintenance, rather than a nonattainment, receptor, the level of control required for linked upwind States remains the same.

Finally, Petitioners' claim that redesignation *per se* means that controls on transport are no longer needed is meritless because those cited redesignations are premised on emission reductions achieved through the NOx SIP Call and/or CAIR, which the Transport Rule replaces. *See*, *e.g.*, 21-22, *supra*. Furthermore, Petitioners' claim that any required reductions over the level of emissions that existed at the time of redesignation constitutes over-control (State Br. 28 n.2) is not only extra-record, but also inconsistent with the Supreme Court's holding that EPA is not required to base the amount of required emission reductions on air quality factors alone, but may apportion responsibility among States using uniform cost thresholds. 134 S.Ct. at 1607.

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

State Petitioners and Intervenors 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. 28-31; Pets. Ints. Br. 22-28. As an initial matter, Petitioners are statutorily barred from objecting to the Rule on the grounds that EPA should have provided additional opportunities for comment. The CAA provides that "[o]nly 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 argue 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.*; *see Utility Air Regulatory Group v. EPA ("UARG")*, 744 F.3d 741, 746-47 (D.C. Cir. 2014). Approximately 60 petitions for administrative reconsideration are currently pending before EPA. Until EPA denies a petition for reconsideration, judicial review of claims raised solely in such administrative petitions is premature.[7]

Even if the Court were to reach Petitioners' claims, they should be rejected. Although Petitioners make vague allegations that EPA's methodology for the Rule changed between proposal and final, the only specific allegation they make is that EPA introduced the concept of "emissions leakage" with regard to Arkansas, Indiana, Louisiana, Maryland, and Mississippi in the final rule. State Br. 30. This allegation lacks any factual basis. First, 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. Because of the

[7] If a party believes that EPA has unreasonably delayed in addressing the petitions, its remedy is a separate district court action under 42 U.S.C. § 7604(a), but no such actions have been filed to date.

possible effects of "emissions leakage" on these States, to determine whether emission reductions were available in these States at $500 per ton, EPA considered both modeling showing what would happen if these States were excluded from the program and modeling showing the result if the States were included in the program at $500 per ton. 76 Fed. Reg. at 48,263. More to the point, EPA's discussion in the proposal whether to include some States in the Rule based on projected emissions increases due to projected shifts in generation between covered and non-covered 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.

Petitioners' other assertions, that changes in the number of States covered by the Rule and levels of State budgets between proposal and final demonstrate that EPA's approach changed, are baseless. EPA's methodology did not change. The changes in the Rule flow from applying that methodology, in some cases using updated models, to the data that was submitted to the Agency. As this court has stated, "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, EPA provides ample notice of the criteria and methodology it intends to use, the mere fact that it reaches a different

conclusion after applying those criteria and methods to data generated during the rulemaking does not create a notice defect. *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).

EPA provided numerous opportunities for comment. The proposal laid out EPA's methodology in detail. 75 Fed. Reg. 45,210 (Aug. 2, 2010). EPA also issued multiple notices of data availability identifying new information available in the docket and providing additional opportunities for comment. 75 Fed. Reg. 53,613 (Sept. 1, 2010); 75 Fed. Reg. 66,055 (Oct. 27, 2010); 76 Fed. Reg. 1109 (Jan. 7, 2011).

The changes in the final Rule resulted largely from these updates and from information provided in the over 3,800 unique comments. For example, the reductions in Ohio's emission budgets cited by Petitioners (State Br. 28-29) resulted from comments demonstrating that controls either had been installed or were being installed on a number of Ohio facilities. Declaration of Sam Napolitano, ECF No. 1345210-1, at pages 15-16 of 112. Thus, the changed budgets grew out of applying EPA's existing methodology to new data submitted to EPA, not any change in methodology.

Moreover, where the modeling results raised new issues not previously noticed for 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 for comment on all aspects of the Rule, the notice claims lack merit.

The specific claims regarding Texas are equally meritless. 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 1997 $PM_{2.5}$ NAAQS. 75 Fed. Reg. at 45,284/1. EPA noted that application of its air quality assessment tool indicated that implementing the Rule as proposed could sufficiently increase emissions in Texas to put the State over the significant contribution threshold. *Id.* EPA's Air Quality Modeling Technical Support Document identified what EPA believed at the time of proposal were Texas' contributions to downwind receptors and shows that its highest contribution, to Madison County, Illinois, JA02145, was 0.13 micrograms per cubic meter ("$\mu g/m^{3}$")—just below the 0.15 $\mu g/m^{3}$ significant contribution threshold. *Id.* at 45,283/2-3. Thus, interested parties had clear notice that EPA was considering whether Texas should be included in the Transport Rule and that any changes to Texas' estimated emissions as a result of information submitted in comments might put Texas over the significant contribution threshold for Madison County.

That is, in fact, exactly what happened. Texas, among many others, submitted comments in response to the proposal as well as in response to the subsequent Notices of Data Availability. *See* Primary Response to Comments at 559-61, 2632-34 (JA01868-70, 02108-10); Emissions Inventory Response to Comments at 30-31 (JA01517-18). Texas' comments provided data showing that plants in Texas already were using higher sulfur coals than EPA had assumed in the proposal. *See* Primary Response to Comments at 561 (JA01870); *see also id.* at 554, 558, 2481, and 2832 (JA01863, 01867, 02105, 02112). Once EPA updated its emission projections, 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 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 Notices of Data Availability. 76 Fed. Reg. at 48,214.

Finally, Petitioners' claims concerning the level of Texas's budgets (State Br. 29) are moot because EPA revised (increased) those budgets in subsequent rules for which it provided separate notice and comment. 77 Fed. Reg. 34,830 (June 12, 2012); 77 Fed. Reg. 10,324 (Feb. 21, 2012).

VI. EPA PROVIDED A COMPLETE ANALYTIC DEFENSE OF ITS AIR QUALITY MODELING.

Petitioners' argument that EPA ignored real-world air quality data in making air quality projections for the Transport Rule is factually inaccurate and boils down to a disagreement with EPA's methodology. Petitioners' sole criticism of EPA's air quality modeling is that EPA did not rely on the most recent ambient data (from 2008-2010 or 2007-2009) to "verify" the model's projections. EPA's modeling relied on 2003-2007 data for good reason: more recent data reflected emission reductions from CAIR—the rule that the Court ordered EPA to replace "from the ground up." Thus, in the Transport Rule, EPA had to determine what areas would be in or at risk of nonattainment due to transported pollutants if emission reductions resulting from CAIR were eliminated, and then determine what controls were needed in what States to eliminate them. Petitioners' mere disagreement with EPA's approach is insufficient to overcome the extreme deference due EPA's selection and implementation of scientific models. *West Virginia*, 362 F.3d at 868.

A. EPA's Methodology Reasonably Excluded Air Quality Data Reflecting Emission Reductions Resulting from CAIR.

In developing the Transport Rule, EPA used the Comprehensive Air Quality Model with Extensions ("CAMx") to make air quality projections that it then used to identify areas in downwind States (receptors) that would not attain or maintain the NAAQS, estimate upwind States' contributions to those problems, and analyze

the extent of upwind emission reductions needed to ameliorate the downwind States' attainment and maintenance problems. In this effort, EPA could not identify downwind receptors or project future air quality using more recent air quality monitoring data (i.e., 2008-2010 or 2007-2009) because such data reflected emission reductions resulting from CAIR. 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. Thus, the Transport Rule must provide sufficient emission reductions to eliminate significant contribution to nonattainment or maintenance problems without reliance on CAIR. 76 Fed. Reg. at 48,223.

Had EPA not eliminated CAIR-induced reductions from its 2012 projections, and assumed that CAIR would remain in effect in 2012, by using post-CAIR air quality as the modeling baseline, the Rule would not achieve that goal. 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[8]

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

due to CAIR emissions reduction would later be faced with attainment or maintenance problems caused by upwind States emitting NOx and SO_2 at pre-CAIR levels.

B. EPA Anchored its Model with Several Years of Real-World Data and Verified the Results.

Contrary to Petitioners' argument, EPA used real-world *monitored* ambient air quality both as the basis for its modeling and to confirm the validity of its projections. Each of the projected emission scenarios was based on monitored data. EPA projected 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) that EPA concluded would be least affected by CAIR emission reductions. *Id.* at 48,229-30, 48,233. EPA then 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. *Id*. at 48,229. EPA used the 2012 no-CAIR base case to identify the "nonattainment" or "maintenance" receptors for each relevant NAAQS to evaluate upwind State contributions of NOx and SO_2. EPA used the results from the 2014 scenarios to quantify the Rule's anticipated emission reductions and ecological and health benefits. 76 Fed. Reg. at 48,229; JA298.

EPA validated the model's performance (i.e., benchmarked it against real-world conditions) by comparing the model's 2005 air quality projections, based on the same types of input data it used in the Rule, with the actual measured air quality data from 2005. Air Quality TSD, App. A, A-2 (JA02479). This method for validating the model is consistent with EPA modeling guidance[9] and was recognized as one of two methods to validate a model by the court in *NRDC v. Jackson*, 650 F.3d 662, 666 (7th Cir. 2011) (discussing validation by "retrodiction," i.e., using the model to predict past events). EPA 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). Thus, the record refutes Petitioners' contentions (Indus. Br. 17) that EPA relied exclusively on air quality modeling and failed to test the model's predictions. *See ATK Launch Sys., Inc. v. EPA*, 669 F.3d 330, 339 (D.C. Cir. 2012) (upholding EPA's "reasonable steps" to confirm CAA modeling with "on-the-ground data").

[9] Guidance on the Use of Models and Other Analyses for Demonstrating Attainment of Air Quality Goals for Ozone, $PM_{2.5}$, and Regional Haze, at 190, available at http://www.epa.gov/ttn/scram/guidance/guide/final-03-pm-rh-guidance.pdf.

C. The Design Values that Petitioners Rely on Reflect CAIR Emission Reductions and Therefore Do Not Provide a Meaningful Benchmark for Assessing the Model's Validity.

Also meritless is Petitioners' claim that comparisons of EPA's modeling results with air quality data from 2008-2010 and 2007-2009 demonstrate that EPA's air quality modeling is unreliable. Indus. Br. 18-21. As an initial matter, the Court should not even consider Petitioners' arguments based on 2008-2010 data (including 2010 design values) because no commenter presented analysis to EPA using the 2008-2010 measured design values to question the accuracy of EPA's modeling, and thus Petitioners are statutorily barred from raising the argument in a petition for review. 42 U.S.C. § 7607(d)(7)(B); *See UARG*, 744 F.3d at 746. Furthermore, those data are not in the administrative record, were not considered by EPA, and are not part of the record for judicial review. *See id.* § 7607(d)(7)(A).

If the Court considers Petitioners' arguments, they should be rejected because Petitioners' preferred air quality data, among other things, reflect CAIR emission reductions and therefore provide no meaningful benchmark to evaluate EPA's modeling effort. Fundamentally, Petitioners' argument that EPA's modeling predictions are wrong relies on the erroneous assumption that the Transport Rule is meant to require upwind States to make emission reductions

from pre-Rule emission levels. *See* Indus. Br. 18.[10] While Petitioners may have preferred a rule based on then-current air quality and an assessment of whether CAIR sufficiently addressed downwind nonattainment and maintenance problems, that was not EPA's task. Because the Court invalidated CAIR in *North Carolina*, and because the very point of the Transport Rule is to fully *replace* CAIR, EPA's modeling effort for the Rule was expressly designed to ascertain air quality conditions in 2012 *without* CAIR.

Using 2010 CAIR-impacted data to validate EPA's model would not only be at cross-purposes with *North Carolina*, it would lead to an irrelevant, unscientific apples-to-oranges comparison of EPA's projected no-CAIR results with actual air quality conditions that reflect CAIR controls.[11] While it may be welcome news that the 2008-2010 design values at these receptor sites show some measure of NAAQS attainment (Indus. Br. 18), those results are attributable to CAIR-induced emission reductions that will not recur unless CAIR is replaced by the Transport Rule. EPA's approach of using a no-CAIR 2012 base case to identify receptor

[10] The preamble pages Petitioners cite (Indus. Br. 18) in support of their argument, in fact, show projected nonattainment and maintenance problems derived from projections based on pre-CAIR design values, and thus do not support Petitioners' characterization of the Rule. 76 Fed. Reg. at 48,233-36, 48,255; JA2546–699.

[11] 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.

sites was a reasonable way to address this dilemma and fulfill the CAA requirement that States address interstate transport. *Am. Iron & Steel Inst. v. EPA*, 115 F.3d 979, 1005 (D.C. Cir. 1997) (EPA's model must be upheld unless it bears "no rational relationship to the reality it purports to represent").[12]

Accordingly, Petitioners' misleading comparisons of 2010 design values to EPA's 2014 remedy-case projections at a limited subset of downwind receptors deserve no weight. *See* Indus. Br. 19. Petitioners' assertion that its comparisons based on 2010 data show that EPA's projections are "directionally wrong" is based on nothing but conjecture. Petitioners wrongly assume that because the Transport Rule requires greater emission reductions in the aggregate than CAIR, air quality should be better everywhere under the Transport Rule than under CAIR. However, the Transport Rule differs in fundamental ways from CAIR, and consequently results in a different distribution of emission reductions, and thus of downwind air quality values.

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[12] For essentially the same reasons, Louisiana's assertion (State Br. 25-26 n.1) that it should have been excluded from the Rule because its 2010 NOx emissions fall below the 1% threshold used for identifying covered upwind States lacks merit. The Court should not even reach Louisiana's argument because (1) it comes in a footnote; and (2) relies on extra-record evidence attached to Louisiana's motion for stay pending judicial review. In any event, the 2010 emissions data that Louisiana relies upon reflect emission levels under CAIR. Had Louisiana been left out of the Transport Rule based on these purported 2010 emission levels, nothing would ensure that emissions would not increase in CAIR's absence.

While the Transport Rule requires greater reductions than CAIR in some States, some Transport Rule State budgets are larger than CAIR State budgets.[13] Moreover, in response to *North Carolina*, the Transport Rule's assurance provisions and restrictions on emissions trading dictate to a much greater degree than CAIR the location of emission reductions, allowing less geographic shifting of emissions. *See* 76 Fed. Reg. at 48,294, 48,319-21, 48,303. Additionally, the air quality data that Petitioners cite reflect that, in response to CAIR and due to other factors, sources reduced emissions more quickly and more extensively than EPA had predicted. CAIR 2009 Emission Compliance and Market Analysis Report (JA2394). Sources began to reduce emissions before reductions became mandatory in 2009, emitting 21% below the total CAIR budgets provided for both ozone season NOx and annual NOx programs. *Id.* (JA2399). Petitioners' wholly unsupported assumption also ignores the natural fluctuation in the observed data due to meteorology and year-to-year emissions variations due to economic and other factors, 76 Fed. Reg. at 48,231, and stands in sharp contrast to EPA's reasoned explanation in the record.

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[13] For example, Alabama's SO_2 budgets for 2012 and 2014 are 216,033 and 213,258 tons, respectively, compared to CAIR SO_2 budgets for 2010 and 2015 of 157,582 and 110,307 tons, and Iowa's SO_2 budgets for 2012 and 2014 are 107,085 and 75,184 tons, respectively, compared to CAIR SO_2 budgets for 2010 and 2015 of 64,095 and 44,866 tons, respectively. 76 Fed. Reg. at 48,261-62; 40 C.F.R. § 51.124(e)(2).

The relevant comparison 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 (i.e., without either CAIR or the Transport Rule). They consistently do. For example, Petitioners cite Wayne, Michigan (Indus. Br. 20), where the 2008-2010 measured design value is within the annual $PM_{2.5}$ NAAQS at 12.3 $\mu g/m^3$. That number increases to a NAAQS-exceeding 15.73 $\mu g/m^3$ in 2012 after the model backs out air quality improvements attributable to CAIR. Air Quality TSD, App. B, at B-48 (JA02593). By 2014, after the Transport Rule's implementation, EPA projected that air quality would improve to 13.59 $\mu g/m^3$, within the NAAQS limit. *Id.* Thus, the trend in modeling is just as anticipated.[14] The trend is the same for Petitioners' other purported anomalies: Fulton, Georgia; Jefferson, Alabama; and Allegan, Michigan. Air Quality TSD at B-39, B-64, B-16 (JA02584, JA02609, JA02561).

Petitioners further err by suggesting that EPA "ignored" more recent monitoring data. Indus. Br. 21-22. In fact, EPA reviewed and considered the ambient design values for the 2007-2009 period and preliminary 2010 ambient

[14] 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. Indus. Br. 23 n.23. 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.

data. 76 Fed. Reg. at 48,231. EPA found that to the extent a downward trend in ambient concentrations could be observed, it largely could be explained by CAIR-induced emission reductions and temporary factors such as reduced emissions resulting from the severe economic recession and extremely low concentrations of ozone and $PM_{2.5}$ in 2009 due to meteorological variability. *Id.* The extra-record design values for 2008-2010 that Petitioners cite suffer from the same problems. In sum, the record shows that EPA did not "ignore" more recent data and Petitioners identify no "[u]nexplained contradictions" (Indus. Br. 24) in EPA's results.

VII. EPA's MODEL FOR SETTING STATE EMISSION BUDGETS RELIES ON REASONABLE ASSUMPTIONS AND COMPORTS WITH UNDERLYING DATA.

In establishing the Rule's emission budgets, EPA used the Integrated Planning Model ("IPM"), an economic model widely used throughout private industry and the government 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 reasonable for this purpose, *Appalachian Power*, 249 F.3d at 1052-53, and EPA's use of it here is fully supported by the record.

Industry Petitioners unsuccessfully attempt to challenge the model'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 also fail to show that the model predictions are inconsistent with so-called "real-world" data. In sum, Petitioners cannot overcome the "extreme deference" due EPA on review of its use of computer models, such as IPM. *See West Virginia*, 362 F.3d at 868.

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

Industry Petitioners argue that EPA's use of IPM to establish State emission budgets is flawed because it allegedly ignores unit-level transmission constraints that might require a specific unit to run even though it may be uneconomic to do so. Indus. Br. 24-25. EPA reasonably determined that IPM is an appropriate tool to project *State*-level budgets, notwithstanding that the detailed design does not capture every conceivable constraint affecting every single *unit* within the system. As this Court has observed, 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).

IPM projections for the Transport Rule adequately take into account constraints on electricity transmission. The IPM assumed transmission constraints among 32 regions in the United States, informed by planning studies conducted by the North American Electric Reliability Corporation, an entity federally mandated

to ensure electric system reliability. *See* IPM Base Case Documentation at 2–10, 3–1 (JA02348, 02354). IPM's 32 modeling regions were 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 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).

EPA recognized that its model may not capture all local transmission constraints that may lead to variations in unit-level operations compared to IPM projections. However, EPA reasonably determined that making system-wide adjustments to the model to account for unit-level constraints was unnecessary 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). Petitioners' unsupported assertion (Indus. Br. 25) that EPA's determination is incorrect fails.

EPA had several reasons for not adjusting IPM to address more localized transmission constraints affecting individual units. Because such constraints are frequently treated as confidential business information, EPA lacked comprehensive information on so-called "must-run" units, and adjusting the model for constraints

on only those units identified by comments would lead to inconsistency in the model. IPM Documentation Supplement, EPA-HQ-OAR-2009-0491-4385 at 52 (JA02820). EPA also explained that there was no technical basis for defining the extent of operation of "must-run" units or the duration for the "must-run" designation for a unit. IPM Documentation Supplement, at 52 (JA02820). Commenters' generalized criticisms that IPM omits localized constraints did not provide sufficient detail to incorporate them into the model. *See, e.g.*, Primary RTC at 1314, 1318 (JA02049, 02052). However, where unit-specific information about "must-run" designations was provided to EPA *after* the Final Transport Rule was issued, EPA reasonably accounted for these constraints by revising some State budgets in the Revisions Rule. In light of EPA's reasoned explanation, the Court should defer to EPA's judgment about "how to balance the cost and complexity of a more elaborate model against the oversimplification of a simpler model." *West Virginia*, 362 F.3d at 868 (citation omitted).

By contrast, EPA determined that localized transmission constraints might have a greater impact on unit allocations and therefore 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).[15] These historic data reflect specific unit-level behavior that may be driven by local transmission constraints and other operational needs of the grid, meaning that the Rule's allowance allocations 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).

Finally, Petitioners ignore the inherent flexibility provided under the Rule. While IPM may predict that a unit may not run, the Rule does not impose specific emission reductions requirements on individual sources, and sources have a variety of compliance options, including installing controls, 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).

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[15] Commenters, including Petitioner Entergy, largely supported the use of IPM to develop *State* budgets, while opposing its use to establish *unit*-level allowance allocations. *See* Entergy Comments (JA1310-13).

B. EPA Appropriately Adjusted IPM to Account for Cogeneration Emissions.

Petitioners' argument (Indus. Br. 26) 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. In response to comments, EPA reviewed the model's representation of cogeneration units, adjusted the heat rate assumptions to better reflect the dispatch of cogeneration units, and applied a multiplier to the electricity generating emissions so that they more accurately captured the total emissions from these facilities. IPM Documentation Supplement at 2 (JA02770). Petitioners utterly fail to explain why these adjustments were not a reasonable means of addressing the limitations noted by commenters.[16]

Notably, cogeneration units comprise only about six percent (59.596 gig watt) of the total generating capacity covered by IPM (1051.885 gig watt). *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 model because of its treatment of these few facilities, rather than reasonably adjust the model's assumptions, as EPA did, would be entirely unreasonable. EPA's approach is

[16] The only record evidence Petitioners cite concerns a single unit (Indus. Br. 26 (citing JA604, 830)) and EPA later adjusted the State's budgets to account for these unique circumstances. 77 Fed. Reg. at 34,842. Thus, the issue is moot. In any event, that EPA subsequently made unit-level adjustments to address unique circumstances does not demonstrate a flawed model.

reasonable and entitled to deference. *West Virginia*, 362 F.3d at 871 (citation omitted).

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

Petitioners incorrectly argue that IPM's predictions are inaccurate because the model's predictions of 2012 base-case emissions (i.e., without CAIR or the Transport Rule) are lower than some States' actual 2010 emissions. *See* Indus. Br. 27. Facts in the record explain the predicted decline in emissions. For instance, EPA updated IPM to incorporate rapidly-developing low-cost natural gas supplies, which increasingly cause electricity generated by coal to be displaced 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.

As to Illinois in particular, IPM's 2012 predictions reflect additional emission reductions resulting from consent decrees and State rules taking effect after 2010 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. Similarly, IPM projected that certain high-emitting steam generation units in Louisiana 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. [17] In short, EPA's model results comport with the underlying data and should be upheld.

VIII. THE TRANSPORT RULE'S EMISSION BUDGETS ARE NECESSARY FOR DOWNWIND AREAS TO ATTAIN AND MAINTAIN THE NAAQS.

Petitioners' argument that the Transport Rule "over-controls" upwind States is based on their unduly restrictive reading of the Supreme Court's opinion in *EME Homer City* and suffers from numerous other flaws. First, the Supreme Court did not hold that the Transport Rule unlawfully over-controls any upwind State that is linked solely to locations that would attain and maintain the relevant NAAQS with lesser upwind emission reductions. Indus. Br. 6. The Supreme Court made clear that "[o]nly reductions unnecessary to downwind nonattainment *anywhere* fall outside the Agency's statutory authority." *EME Homer City*, 134 S.Ct. at 1609 (citations omitted). Further, the Supreme Court recognized that EPA must have "leeway" to balance its duty to avoid "over-control" against its "statutory

[17] Following the final Transport Rule, EPA considered new information demonstrating that these high-emitting units were likely to operate in a noneconomic fashion in the near-term due to specific local constraints, and revised the State's budgets accordingly. *See* 77 Fed. Reg. at 10,328; *see also* 77 Fed. Reg. 10,342, 10,344 (Feb. 21, 2012) (making additional revisions). Thus, this issue is moot. Further, EPA's revisions to Louisiana's budget (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.

obligation to avoid 'under-control,' i.e., to maximize achievement of attainment downwind." *Id.*

The Transport Rule requires covered States to reduce emissions only as necessary for downwind areas to attain and maintain applicable NAAQS, consistent with *EME Homer City*. After identifying States whose contribution to downwind nonattainment and maintenance problems exceeded threshold levels, 76 Fed. Reg. at 48,224-46, EPA identified the emissions that a State could eliminate after application of ascending cost thresholds of emission reductions. *Id.* at 48,248-249. EPA then used air quality modeling to determine "significant cost-thresholds," i.e., "point[s] … where a noticeable change occurred in downwind air quality, such as a point where large upwind emission reductions become available because a certain type of emissions control strategy becomes cost-effective." *Id.* Finally, EPA used the assembled information to create State emission budgets, representing the amount of pollution an upwind State would produce if all pollution controls at the chosen cost threshold were implemented. *Id.* at 48,249. Thus, EPA established State emission budgets at levels that were both feasible from the upwind States' perspective and closely tailored to the air quality of the downwind areas to which they were linked.

Second, Petitioners' contention that EPA's approach was flawed because it failed to consider lower cost thresholds or account for projections of downwind

States' improving air quality (Indus. Br. 7-8; *see also* State Br. 25) is itself fundamentally flawed. Petitioners' view that EPA should have selected lower cost thresholds for certain States merely rehashes their challenge to uniform cost thresholds, rejected by the Supreme Court in *EME Homer City*, 134 S.Ct. at 1607, and thus Petitioners' related claims that the Rule "over-controls" Texas, Alabama, Georgia, and South Carolina also fail. *See infra* part VIII.A. Petitioners' argument that the Transport Rule over-controls because some downwind areas would eventually attain without good-neighbor controls contravenes the Good Neighbor Provision itself, the CAA's mandate that NAAQS attainment deadlines be achieved "as expeditiously as practicable," and this Court's directive in *North Carolina*, and therefore does not establish over-control of certain States with regard to ozone. *See infra* part VIII.B.

A. EPA's Approach to Setting Emission budgets Used Appropriate Cost Thresholds Carefully Tailored to Downwind Air Quality Results.

EPA provided a thorough and reasoned analysis for the cost thresholds it selected, and nothing in the statute or the Supreme Court's decision in *EME Homer City* requires EPA to assure that each upwind State's significant contributions are extinguished at the lowest possible cost. 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 [NAAQS covered by the Rule]." 76 Fed. Reg. at 48,256.

With respect to ozone-season NOx, EPA selected the $500 per ton cost threshold because it represented the minimum level that would secure "a significant amount of lowest-cost NOx emission reductions from EGUs, largely accruing from the installation of combustion controls, such as low-NOx burners, and constitutes a reasonable cost level for operation of existing NOx controls such as SCRs." *Id.* at 48,257; *see also id.* at 48,251-52 (similar discussion for SO_2 and annual NOx, respectively). As EPA explained in the proposal, its analysis indicated that very few additional NOx reductions would occur at cost thresholds below $500 per ton. 75 Fed. Reg. at 45,276. In contrast, for SO_2, EPA split the States subject to the Rule into two groups, depending on the severity of the downwind nonattainment or maintenance problem to which each State was linked. 76 Fed. Reg. at 48,264. This was based on data showing that for one group of States (Group 2), all nonattainment and maintenance problems were resolved at $500/ton, but for another group of States (Group 1), significant air quality problems remained at $500/ton; for these States, EPA identified a $2,300/ton threshold as the point at which most, but not all, nonattainment and maintenance problems were solved. *Id*. at 48,257-59 (JA326-28).

In fact, EPA took steps in the Rule to base significant contribution determinations on changes in downwind air quality on a State-by-State and receptor-by-receptor basis. Unlike earlier rules, where EPA set cost thresholds solely 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. Contrary to Petitioners' contention that EPA failed to consider lower cost thresholds (Indus. Br. 7), the proposed rule includes tables showing the emission reductions available at various marginal costs per ton (75 Fed. Reg. at 45,275-276 (Tables IV-D-1 and IV-D-2)), and tables showing the number of areas that would continue to have nonattainment or maintenance problems at each cost threshold (*id.* at 45,280 (Tables IV-D-3 and IV-D-4)). These tables support EPA's conclusion that lower cost thresholds would not have achieved the emission reductions necessary to achieve attainment and maintenance in downwind States collectively.

In essence, Petitioners argue that EPA was not permitted under the statute to establish uniform cost thresholds, but rather was required to identify the cost

threshold precisely tailored to each State's contribution. This argument is merely a variant of Petitioners' unsuccessful challenge to the cost-effectiveness approach resoundingly rejected by the Supreme Court in *EME Homer City*. The Supreme Court explicitly endorsed EPA's method of allocating emissions reduction responsibilities as not only consistent with the statute, but an "efficient and equitable solution to the allocation problem" of the Good Neighbor Provision. *EME Homer City*, 134 S.Ct. at 1607. Adoption of Petitioners' view that EPA should apply different cost thresholds to different states would undermine the efficiency and cost-effectiveness of the Rule. It also is inconsistent with EPA's determination in the Rule that some uniformity was required for allowance trading. *See* 76 Fed. Reg. at 48,214. For example, had EPA set a lower cost threshold for a single State like Texas, as Petitioners urge below, Texas sources would be unable to comply with the Rule by purchasing allowances from other Group 2 States. EPA reasonably opted to create two larger groups of States, after determining "that the cost per ton needed to resolve downwind air quality problems varied only to a limited extent among states within group 1 and among states within group 2." 75 Fed. Reg. at 45,282; 76 Fed. Reg. at 48,263-264. Petitioners' rehash of their objection to a cost-effectiveness approach thus fails.

1. Better-than-Minimum Air Quality at Receptors Linked to Texas Is Merely Incidental to Reductions Needed to Bring Other Areas into Attainment.

Industry and State Petitioners' contention that the Transport Rule requires Texas to reduce emissions more than necessary to bring downwind areas into attainment with $PM_{2.5}$ and ozone NAAQS fails. The record demonstrates that any alleged "over-control" of Texas's emissions with regard to the $PM_{2.5}$ NAAQS is merely incidental to reductions necessary to attainment and maintenance in other areas and therefore entirely consistent with the Supreme Court's decision in *EME Homer City*.

As to $PM_{2.5}$, Petitioners erroneously argue that the rule "over-controls" Texas because the only receptor to which Texas is linked for $PM_{2.5}$, Madison, Illinois, was projected to achieve $PM_{2.5}$ design values better than the NAAQS after implementation of the Transport Rule's budgets. Indus. Br. 10. That the Rule achieves better-than-minimum results at the Madison receptor is not per se evidence of impermissible "over-control." "[E]xceeding attainment in one State cannot rank as 'over-control' unless unnecessary to achieving attainment in *any* downwind State." *EME Homer City*, 134 S.Ct. 1609. The Madison receptor has multiple upwind contributors in addition to Texas, and these other States also contribute to numerous other downwind receptors. What Petitioners dub "over-control" at Madison reflects incidental benefits flowing from emission

reductions by other upwind States that are necessary to avoid under-control at these other receptors.

Specifically, the design values at the Madison, Illinois receptor reflect contributions from Illinois itself and nine upwind States. Air Quality TSD at D-7 to D-8, JA02706-07 (showing contributions in excess of the 1% threshold from Illinois, Indiana, Iowa, Kentucky, Michigan, Missouri, Ohio, Tennessee, Texas, and Wisconsin). Every State linked to the Madison receptor, except Texas and the home State of Illinois, also contributes to numerous other downwind receptors. *See Id.* at E-2 to E-3, JA02715-16 (nearly all linked States each contribute to annual $PM_{2.5}$ nonattainment in seven to 12 additional downwind areas). Every other State linked to the Madison receptor except Texas is also an SO_2 Group 1 State, and is therefore required to make more stringent SO_2 emission reductions to help these other downwind receptors attain or maintain the NAAQS. 76 Fed. Reg. at 48,213, JA282. The better-than-minimum results reflected in the projected 2014 design values for the Madison receptor flow from the more stringent SO_2 emission reductions required of the Group 1 States to achieve attainment elsewhere. Because the projected remedy-case 2014 design values at Madison are incidental to

reductions necessary to bring other receptors into attainment, they do not rank as "over-control." *EME Homer City*, 134 S.Ct. at 1608-09.[18]

Excluding Texas from the Transport Rule or imposing less stringent emission budgets, as Petitioners argue (State Br. 25; Indus. Br. 10), because other States' emission reductions have the incidental benefit of pushing Madison's air quality below the NAAQS, would be inequitable and contrary to the rationale underlying uniform cost thresholds. In *EME Homer City*, 134 S.Ct. at 1607, the Supreme Court expressly endorsed the notion that the Rule's uniform cost thresholds would "subject to stricter regulation those States that have done relatively less in the past to control their pollution," and prevent such States from "free riding on their neighbors' efforts to reduce pollution." Texas has emission reductions available at $500 per ton because it has thus far avoided implementing pollution controls of the kind other States have already installed. Texas should not

[18] Indeed, even the more stringent emission reductions required of Group 1 states do not completely resolve nonattainment and maintenance issues at every downwind receptor. For example, the Allegheny, Pennsylvania receptor (420030064) does not attain at the $2,300/ton threshold (*see* JA2962), and several of the upwind states linked to Madison are also linked to that receptor. 76 Fed. Reg. at 48,242-43. Lowering the emission reductions required of the upwind states would put Allegheny even farther from its attainment goal. EPA "must have leeway in fulfilling its statutory mandate" to balance under-control and over-control. *EME Homer City*, 134 S.Ct. at 1609. Petitioners have not shown that the balance EPA struck in the Transport Rule is unreasonable or beyond its statutory authority.

be permitted to free-ride the emission reductions other States have already made and will continue to make.[19]

Petitioners' attempt (Indus. Br. 10-11) to bolster their "over-control" argument by once again comparing air quality under CAIR to Transport Rule modeling projections is irrelevant and misleading. Petitioners here repeat the fallacy that attainment by an area under CAIR shows that the Transport Rule is in fact overly stringent. Indus. Br. 11. This argument fails because it relies on the erroneous assumption that the Transport Rule's emission budgets are more stringent than CAIR for every State. As already noted, this assumption is simply not accurate; the relative "stringency" of the Transport Rule compared to CAIR is due in part to its restrictions on the trading and use of emission allowances. *See supra* 35-38.

Texas is a perfect example. Texas's Transport Rule budgets plus its assurance levels for $PM_{2.5}$ do not depart significantly from its CAIR emission budgets. *Compare* 76 Fed. Reg. at 48,269 (287,866 tons per year SO_2 and 157,642

[19] Petitioners' argument that the Rule over-controls Texas because EPA's 2014 base case modeling projections reflect design values only slightly above the $PM_{2.5}$ NAAQS also fails. Because the St. Louis nonattainment area, where the Madison receptor is located, had a 2010 attainment date for 1997 $PM_{2.5}$ NAAQS, which was met, 77 Fed. Reg. at 38,183, it was reasonable for Texas to be subject to Transport Rule emission reductions beginning in 2012 in order to maintain regardless of projected air quality in 2014.

tons per year NOx), *with* 40 C.F.R. § 51.123(e)(2), § 51.124(e)(2) (224,662-320,946 tons per year SO_2 and 150,845-181,014 tons per year NOx). Texas's actual emissions under CAIR (*see*, *e.g.*, Indus. Br. 11 n.7) were higher than its CAIR budgets because CAIR permitted unlimited reliance on purchased out-of-state emissions allowances—a fundamental flaw *North Carolina* required EPA to fix.

In accordance with *North Carolina*, in projecting which areas would have problems with nonattainment or maintenance, EPA appropriately and deliberately did not consider the effects of CAIR reductions, nor did EPA attempt to simply build upon emission reductions required by CAIR. Petitioners' contention that the "lawfulness" of the Transport Rule should be judged based on the success of CAIR, a rule declared illegal by this Court, therefore lacks merit.

For similar reasons, Petitioners' argument that the Transport Rule "over-controls" Texas with regard to the ozone NAAQS lacks merit. Indus. Br. 12-13. Texas's argument rests on the fact that the two receptors linked to Texas for ozone—Allegan, Michigan, and East Baton Rouge, Louisiana—attained the relevant NAAQS under CAIR. As discussed above, this alone does not prove over-control. EPA's modeling showed that in the absence of CAIR the Allegan and East Baton Rouge receptors would have nonattainment and maintenance problems with regard to ozone. 76 Fed. Reg. at 48,236. As Texas emissions

contributed to those projected nonattainment and maintenance problems, Texas was properly subject to the Transport Rule's NOx emission budgets. *Id.* at 48,246. Had EPA excluded Texas and other States from the Transport Rule because downwind States to which they were linked attained NAAQS under CAIR emission budgets, nothing would prevent those excluded States from increasing emissions above CAIR levels, and downwind areas currently in attainment due to CAIR emission reductions would later be faced with attainment or maintenance problems. Thus, air quality levels at downwind receptors that may have achieved NAAQS under CAIR do not establish "over-control" of upwind States to which those receptors are linked.

2. EPA's Cost Thresholds Do Not Result in "Over-Control" of Alabama, Georgia, or South Carolina Sources for $PM_{2.5}$.

Industry Petitioners' "over-control" challenge to the Transport Rule's $PM_{2.5}$ budgets for Alabama, Georgia, and South Carolina should be disregarded because it depends entirely on their erroneous argument that EPA should have considered lower cost thresholds in setting certain emission budgets. As discussed *supra* 49-52, EPA's use of uniform cost thresholds to allocate emission reductions responsibilities under the Rule is consistent with the Good Neighbor Provision and the Supreme Court's decision in *EME Homer City*, 134 S.Ct. at 1607, and reflects the minimum reductions necessary to address, though not completely resolve,

nonattainment and maintenance problems in all downwind areas. EPA fully explained why lower cost thresholds would not be appropriate, and its explanation is entitled to deference. *See* 76 Fed. Reg. 48,251-52, 48,256-57; Significant Contribution TSD, JA2935.

Petitioners' attempt to show that EPA's cost thresholds are arbitrary because receptors linked to Alabama, Georgia, and South Carolina would achieve air quality superior to the NAAQS also fails for the same reasons discussed above with regard to the Madison, Illinois receptor linked to Texas. *See supra* 53-57. The receptors linked to Alabama, Georgia, and South Carolina that Petitioners identify are also linked to other States, including in each case at least six of the following eleven Group 1 States: Illinois, Indiana, Kentucky, Michigan, Missouri, North Carolina, Ohio, Pennsylvania, Tennessee, West Virginia, and Wisconsin. *See* Air Quality TSD, JA2715-24. That the receptors linked both to these States and to Alabama, Georgia, and South Carolina are projected to achieve design values that are below the NAAQS can be attributed to the much larger emission reductions the Group 1 States are required to make to address nonattainment and maintenance problems elsewhere (combined with emission reductions in the linked receptors' home States). Because the environmental benefits Petitioners' claim as "over-control" are merely incidental to emission reductions required of certain Group 1 States to bring other downwind States into

nonattainment and maintenance, they are within EPA's good neighbor authority. *EME Homer City*, 134 S.Ct. at 1608-09.

B. EPA's Use of 2012 Projections to Determine the States Subject to the Transport Rule Is Consistent with the Statute and this Court's Directive in *North Carolina*.

Petitioners' contention (Indus. Br. 8, 14-15) that EPA improperly used 2012 air-quality projections, rather than 2014 projections, to determine which States would be subject to the Transport Rule fares no better. EPA required that emission reductions begin in 2012 in order to align emission reductions as closely as possible to statutory deadlines by which downwind States must demonstrate NAAQS attainment, as this Court had directed it to do in *North Carolina*, 531 F.3d at 911-12. 76 Fed. Reg. at 48,214, 48,277-79. Accordingly, EPA reasonably based the determination of which States are subject to the Transport Rule on the basis of the downwind air quality projected for 2012.

Thus, Petitioners' claim that the Rule's ozone-season emission budgets for 14 upwind States result in "over-control" should be rejected. As an initial matter, as Petitioners note, EPA did not set ozone-season NOx budgets for Iowa, Michigan, Oklahoma, and Wisconsin in the Transport Rule and thus Petitioners' challenges as to those States are not before the Court in this proceeding.

With regard to the remaining ten States, EPA explained at proposal that, for ozone, most of the relevant attainment deadlines had either passed in 2010, or were

quickly approaching in 2013. 75 Fed. Reg. at 45,285-86. As to Houston, Texas, which has a 2019 attainment deadline, EPA explained that the area is a severe nonattainment area and thus in need of immediate reductions. *Id*. at 45,285; *see also* 76 Fed. Reg. at 48,277-79. To excuse upwind States with significant contributions to downwind nonattainment merely because the State might eventually attain is contrary to the CAA's directive that attainment be achieved "as expeditiously as practicable," 42 U.S.C. § 7502(a)(2)(A), § 7511(a)(1), and that upwind States do their fair share by eliminating pollution that contributes significantly to downwind attainment and maintenance problems.

This is especially true given that the Transport Rule responds to the long-running failure of States to comply with the Good Neighbor Provision and to develop SIPs that "contain adequate provisions" to address transport. To excuse States from meeting this requirement because downwind States might come into attainment *after* their attainment dates would have the real consequence of subjecting downwind States that fail to attain to even more stringent requirements than they already had to bear. Again, this would have been contrary to Congress's clear directive in the Good Neighbor Provision that upwind States share the burden of achieving nation-wide attainment of the NAAQS. *See id.* § 7511a, § 7513, § 7513a (requiring reclassification of areas that fail to attain, accompanied by additional obligations for reclassified areas).

CONCLUSION

For all of the foregoing reasons, these consolidated petitions for review of the Transport Rule should be denied in their entirety.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing Corrected Brief for Respondents was served, this 16th day of January, 2015 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 13,865 words as counted by the Microsoft Office Word 2013 word processing system, and thus complies with the applicable word limitation.

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