ORAL ARGUMENT NOT YET SCHEDULED

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

No. 16-1406 (consolidated with Nos. 16-1410, 16-1428, 16-1429, 16-1432, 16-1435, 16-1436, 16-1437, 16-1438, 16-1439, 16-1440, 16-1441, 16-1442, 16-1443, 16-1444, 16-1445, 16-1448, and 17-1066)

STATE OF WISCONSIN, *et al.*,

***Petitioners*,**

v.

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

***Respondents*.**

On Petitions for Judicial Review of Final Agency Action of the United States Environmental Protection Agency 81 Fed. Reg. 74,504 (Oct. 26, 2016)

JOINT REPLY BRIEF OF INDUSTRY PETITIONERS

Norman W. Fichthorn
E. Carter Chandler Clements
HUNTON & WILLIAMS LLP
2200 Pennsylvania Avenue, N.W.
Washington, D.C. 20037
(202) 955-1500
nfichthorn@hunton.com
eclements@hunton.com

Counsel for the Utility Air Regulatory Group

Dated: March 19, 2018
[Page-Proof Brief]

[ADDITIONAL COUNSEL LISTED ON INSIDE FRONT COVER AND FOLLOWING PAGES]

Peter S. Glaser
Troutman Sanders LLP
401 Ninth Street, NW
Suite 1000
Washington, D.C. 20004
202-274-2998
peter.glaser@troutmansanders.com

Margaret Claiborne Campbell
M. Buck Dixon
Troutman Sanders LLP
600 Peachtree Street, NE
Suite 5200
Atlanta, GA 30308-2216

Scott C. Oostdyk
E. Duncan Getchell, Jr.
Michael H. Brady
McGuire Woods LLP
Gateway Plaza
800 East Canal Street
Richmond, Virginia 23219-3916
804-775-4743
soostdyk@mcguirewoods.com

Counsel for Murray Energy Corporation

JANE E. MONTGOMERY
J. MICHAEL SHOWALTER
AMY ANTONIOLLI
Schiff Hardin LLP
233 South Wacker Drive, Suite 6600
Chicago, Illinois 60606
(312) 258-5500
Jmontgomery@schiffhardin.com
mshowalter@schiffhardin.com
aantoniolli@schiffhardin.com

Counsel for Prairie State Generating Company, LLC

P. Stephen Gidiere III
Julia B. Barber
Balch & Bingham LLP
1901 6th Ave. N., Ste. 1500
Birmingham, Alabama 35203
205-251-8100
sgidiere@balch.com

David W. Mitchell
Balch & Bingham LLP
601 Pennsylvania Avenue, N.W.
Suite 825 South
Washington, D.C. 20004

Stephanie Z. Moore
Executive Vice President & General Counsel
Vistra Energy Corp.
6555 Sierra Drive
Irving, Texas 75039

Daniel J. Kelly
Vice President & Associate General Counsel
Vistra Energy Corp.
6555 Sierra Drive
Irving, Texas 75039

Counsel for Luminant Generation Company LLC, Big Brown Power Company LLC, Luminant Mining Company LLC, La Frontera Holdings, LLC, Oak Grove Management Company LLC, and Sandow Power Company LLC

David M. Flannery
Kathy G. Beckett
Steptoe & Johnson PLLC
P.O. Box 1588, Charleston, WV 25326-1588
Chase Tower, 8th Floor
707 Virginia Street, East
Charleston, WV 25301
(304) 353-8000
Dave.flannery@steptoe-johnson.com
Kathy.beckett@steptoe-johnson.com

Edward L. Kropp
Steptoe & Johnson PLLC
PO Box 36425
Indianapolis, Indiana 46236
317-946-9882
Skipp.kropp@steptoe-johnson.com

Counsel for the Indiana Energy Association, the Indiana Utility Group, and the Midwest Ozone Group

Megan H. Berge
Aaron Streett
Baker Botts L.L.P.
1299 Pennsylvania Ave., NW
Washington, DC 20004
(202) 639-7700
megan.berge@bakerbotts.com

Counsel for Western Farmers Electric Cooperative

Charles T. Wehland
Jones Day
77 West Wacker Drive, Suite 3500
Chicago, Illinois 60601-1692
p: (312) 782-3939
f: (312) 782-8585
ctwehland@jonesday.com

Counsel for Oklahoma Gas and Electric Company

Todd E. Palmer
John A. Sheehan
Michael, Best & Friedrich LLP
601 Pennsylvania Ave. NW, Suite 700
Washington, DC 20004-2601
(202) 747-9560 (telephone)
(202) 347-1819 (facsimile)

tepalmer@michaelbest.com
jasheehan@michaelbest.com

Attorneys for Wisconsin Paper Council, Wisconsin Manufacturers and Commerce, Wisconsin Industrial Energy Group, and Wisconsin Cast Metals Association

Ben H. Stone
Terese T. Wyly
M. Brant Pettis
BALCH & BINGHAM LLP
1310 Twenty Fifth Avenue
Gulfport, MS 39501
Tel: (228) 864-9900
Fax: (228) 864-8221
bpettis@balch.com

C. Grady Moore III
BALCH & BINGHAM LLP
1901 Sixth Avenue North, Suite 1500
Birmingham, AL 35303-4642
Tel: (205) 251-8100
Fax: (205) 488-5704
gmoore@balch.com

Counsel for Mississippi Power Company

Louis E. Tosi
Cheri A. Budzynski
Shumaker, Loop & Kendrick, LLP
1000 Jackson Street
Toledo, Ohio 43604
419.241.9000
ltosi@slk-law.com
cbudzynski@slk-law.com

Michael A. Born
Shumaker, Loop & Kendrick, LLP
41 South High Street, Suite 2400
Columbus, Ohio 43215
64.463.9441
mborn@slk-law.com

Counsel for the Ohio Utility Group and Its Member Companies (AEP Generation Resources Inc., Buckeye Power, Inc., The Dayton Power and Light Company, Duke Energy Ohio, Inc., Dynegy Commercial Asset Management, LLC, First Energy Solutions, and Ohio Valley Electric Corporation)

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GLOSSARY OF ABBREVIATIONS, ACRONYMS, AND TERMS

CAA	Clean Air Act
CAIR	Clean Air Interstate Rule
CSAPR	Cross-State Air Pollution Rule
DV	design value
EIA	Energy Information Administration
EPA	United States Environmental Protection Agency
IPM	Integrated Planning Model
JA	Joint Appendix
NAAQS	national ambient air quality standard(s)
NOx (or NO_x)	nitrogen oxide or nitrogen oxides
ppb	part(s) per billion
RTC	Response to Comments
SIP	state implementation plan
TSD	Technical Support Document
VOC	volatile organic compounds

SUMMARY OF ARGUMENT

EPA cannot support its claim that this Court's precedents compelled sole reliance on computer modeling—to the exclusion of real-world air-quality data—in identifying "problem" receptors. EPA's failure to properly consider such data was compounded by its disregard of international transport and other factors, inflating ozone-concentration projections and risking over-control.

EPA's incomplete over-control assessment improperly ignored ozone-reducing effects of all Rule-required emission reductions. EPA failed to explain why, given the Clean Air Act ("CAA") principle that each state bears primary responsibility for attaining NAAQS within its borders, EPA refused to consider ozone-reducing effects of controls reasonably available to meet states' own nonattainment-area requirements. Moreover, significant elements of EPA's modeling departed, without on-the-record explanation, from determinations it announced during rulemaking.

EPA's interference-with-maintenance approach over-controlled states linked solely to maintenance-only receptors. And EPA used an unsupported six-month control-installation assumption.

Finally, EPA fails to respond effectively to state-specific and facility-specific arguments in Industry Petitioners' brief.

ARGUMENT

I. EPA Presented No Lawful Basis for Deeming Attaining Receptors "Problem" Receptors.

Lacking adequate explanation for reversing its longstanding policy of checking—given "uncertainties inherent in regionwide modeling," 70 Fed. Reg. 25,162, 25,241 (May 12, 2005)—air-quality-modeling results against monitored data,[1] EPA contends (at 52) that it considered real-world air quality "to the fullest extent possible" but that *North Carolina v. EPA*[2] tied its hands and that *EME Homer II* authorizes it to disregard monitored ozone. EPA is wrong.

EPA's reliance on *North Carolina* is misplaced. North Carolina argued CAIR's interference-with-maintenance approach provided inadequate protection because, although "all of its counties *are projected to attain* … by 2010 [the EPA-modeled year], several … are at risk of *returning* to *nonattainment* due to interference from upwind sources." 531 F.3d at 909 (emphases added). Agreeing, the Court said "[a]reas that find themselves barely meeting attainment in 2010 due in part to upwind sources interfering with that attainment have no recourse" because EPA's approach "provide[d] no protection for downwind areas that, despite EPA's predictions, still

[1] Ind.-Pet. Br. 8-14 (discussing monitored-plus-modeled approach in "NOx SIP Call" and Clean Air Interstate Rule ("CAIR") and EPA's deviation from that approach in the Cross-State Air Pollution Rule ("CSAPR") *for a reason unique to CSAPR and absent here*); *EME Homer City Generation, L.P. v. EPA*, 795 F.3d 118, 135 (D.C. Cir. 2015) ("*EME Homer II*") (not checking CSAPR-modeling results against real-world data was permissible given unique situation CSAPR presented).

[2] 531 F.3d 896 (D.C. Cir.), *on reh'g*, 550 F.3d 1176 (D.C. Cir. 2008).

find themselves struggling to meet NAAQS due to upwind interference." *Id.* at 910-11. EPA attempts to expand *North Carolina* to support regulation of states linked to areas *currently* measuring *attainment*. Of the CSAPR Update Rule's thirteen "maintenance-only" receptors, nine measured attainment design values ("DVs") in 2013-2015. 81 Fed. Reg. 74,504, 74,533 Table V.D-2 (Oct. 26, 2016) ("Rule" or "Update"), JA___. All four states (Iowa, Kentucky, Tennessee, and Wisconsin) that EPA linked solely to maintenance-only receptors were linked exclusively to one or more of these currently-attaining receptors. Ind.-Pet. Br. 13-14. *North Carolina* did not hold *currently-attaining* receptors should be deemed problem receptors.

EPA incorrectly argues the "possibility" that currently-attaining receptors may violate NAAQS in the future "under certain environmental conditions" is "'exactly what the maintenance prong … is designed to guard against.'" EPA Br. 54 (quoting 81 Fed. Reg. at 74,531, JA___). *North Carolina* held EPA should offer "recourse" to NAAQS-violating areas that are projected to "barely meet[] attainment in [future-year modeling]" if they "still find themselves struggling to meet NAAQS *due to upwind interference*" in the future year. 531 F.3d at 910-11 (emphasis added). All receptors linked with Iowa, Kentucky, Tennessee, and Wisconsin currently attain, and EPA did *not* show any future violations at those receptors would be "due to upwind interference." *Id.* at 911; *see infra* IV.

While *EME Homer II* held CSAPR "afford[ed] independent effect to the 'interfere with maintenance' prong," 795 F.3d at 136, it never held EPA's approach to

implementing that prong otherwise "comports with the statute," EPA Br. 55. *See infra* IV.

Finally, EPA's claim (at 56) that its multiyear-averaging does not address inter-annual variability conflicts with its on-the-record explanation that "average [DV] is used to dampen the effects of inter-annual variability." 81 Fed. Reg. at 74,532, JA____.

II. EPA's Air-Quality Assessment Ignored Important Factors, Distorting Downwind-Ozone Projections and Failing To Assure Against Over-Control.

The EPA framework's steps built upon one another, and, in many cases, over-control potential originated in Step 1 (identification of "problem" receptors): When receptors' projected ozone is inflated, *more states are "linked"*—and, hence, subjected to the Rule—than warranted; *states are linked to more receptors* than they should be; and *greater upwind-state emission reductions* are mandated to address overstated downwind "problems." EPA ignored sources of over-control.

A. International Transport

Attempting to explain its disregard of international-transport effects, EPA claims the Rule only obligates upwind states "to address that portion of their own emissions considered 'significant.'" EPA Br. 64. This ignores that EPA's delineation of downwind "problems" drove upwind-state requirements: Where ozone projections incorporate international-emissions contributions, upwind states may be

linked to receptors that would *not* be designated "problem receptors" at all in the absence of non-U.S. contributions.[3]

Moreover, assuming *arguendo* some problems would remain even without international emissions, projected problem-receptor ozone would be lower if non-U.S. contributions were factored out. Thus, failing to factor out non-U.S. contributions forces upwind states to reduce more. Although "upwind states [may not be required to] continue to reduce their emissions until the receptor reaches attainment," *id.*, EPA over-controls a state if the state must continue reducing emissions *after* its linked receptors would attain in the absence of international emissions.

CAA section 179B(a), 42 U.S.C. § 7509a(a), reflects the principle that EPA can only require states to eliminate air-quality problems their emissions cause. When downwind areas would "attain … *but for*" non-U.S. emissions—and are thereby statutorily excused from demonstrating attainment, *id.* (emphasis added)—additional upwind-state reductions cannot be required to achieve the attainment obligation from which the downwind areas are excused. Ignoring this "but-for" limitation imposes improper burdens on upwind states—burdens heavier than nonattainment-area states,

[3] EPA inappositely asserts (at 65) that receptors would attain if all in-state, all upwind-state, or all non-anthropogenic contributions were eliminated. EPA and states possess authority to regulate in-state and upwind-state—but not international—sources. And non-anthropogenic emissions are subject to exclusion as "exceptional events." CAA § 319(b), 42 U.S.C. § 7619(b).

to which the CAA assigns *primary* NAAQS-attaining responsibility (*infra* III.B.), are required to bear.

Finally, Environmental Respondent-Intervenors' "contribution" cases are inapposite; those cases *reject* a "but-for" test like that applicable under the CAA where non-U.S. emissions prevent attainment. Envtl.-Resp.-Int. Br. 9-10 (citing cases rejecting "'but-for causation rule'").

B. Existing Requirements

EPA concedes its "failure" to account for ozone-reducing effects of Pennsylvania's volatile-organic-compound ("VOC") reductions. EPA Br. 69. Even if Pennsylvania's regulation postdated EPA's cutoff, once EPA considered it, EPA had to consider *all* its effects or justify—on the record—why it could reasonably consider only *some*. EPA did neither.

Post-hoc, EPA asserts its "failure" is "harmless." *Id.* EPA offered no on-the-record explanation justifying that conclusion. Rather, the record supports Petitioners: While EPA's brief (at 68-69) calls NOx "the key driver," its rulemaking undisputedly relied on quantifying impacts of upwind-state "'NO_x *and VOC* emissions.'" Ind.-Pet. Br. 18 (quoting 81 Fed. Reg. at 74,536 (emphasis added), JA___). Even EPA's brief (at 76) recognizes NOx is *only one* "ozone precursor[]."

III. EPA Failed To Justify Emission-Budget Determinations and Assure Against Over-Control.

A. Refusal To Account for the Rule's Full Ozone-Reducing Effects

EPA offers no meaningful response to Industry Petitioners' argument that it failed to account fully for ozone-reducing effects of Rule-required emission reductions, rendering its over-control analysis fatally inadequate.

EPA claims (at 79) that evaluating required emission reductions from *all* states subject to the Rule "would effectively shift a portion of the burden to eliminate upwind emissions back onto states' emissions that are excluded by the Act." EPA's argument is both illogical—because accounting for Rule-required reductions in the over-control analysis would not (and could not) "shift" any "burden"—and unsupported; EPA cites (and has) no authority for disregarding required reductions' effects. Nor does EPA rebut Petitioners' argument that EPA's disregard of required emission reductions' effects was uncompelled by any purported "fair-share" criterion. Ind.-Pet. Br. 21-22.

The record shows many states not "linked" to a given receptor contribute ozone to that receptor. Air Quality Modeling Technical Support Document ("AQM-TSD") Appx. C, EPA-HQ-OAR-2015-0500-0575, JA___-___; *cf.* AQM-TSD 30 (0.5-percent-of-NAAQS threshold produces "significantly more [state-to-state] linkages"), JA___. Thus, for instance, although Delaware has no problem receptors—and therefore is linked with no upwind states—Delaware receives ozone-reducing benefits

from several states' Rule-required emission reductions "due to [those states'] linkages with [*non-Delaware*] receptors." EPA Br. 48-49. Yet aggregate ozone-reducing effects at problem receptors from unlinked states' Rule-required reductions are unaccounted-for on the record—*precisely because EPA improperly refused to account for them.* Because EPA's over-control analysis unreasonably excluded ozone-reducing benefits from unlinked-state emission reductions, EPA arbitrarily overstated the problem at each receptor that the Rule requires be addressed by states that *were* linked to that receptor. That is a recipe for over-control.

Petitioners do not "seek to devise another [over-control] test." Envtl.-Resp.-Int. Br. 12. Quite the opposite: Petitioners explained that, absent adequate, on-the-record EPA evaluation and explanation of the Rule's full effects, it is impossible to conclude that EPA did not "require[] States to reduce pollutants beyond the point necessary to achieve downwind attainment," *EME Homer II*, 795 F.3d at 132—*this Court's* over-control test.

Contrary to EPA's contention (at 80), its failure is not excusable on grounds it avoided "under-control." While modeling may involve some "imprecision," *EPA v. EME Homer City Generation, L.P.*, 134 S. Ct. 1584, 1609 (2014), EPA *unnecessarily* introduced over-control risk by refusing to account fully for the Rule's effects.

EPA concedes unlinked states' Rule-required reductions confer ozone-reducing "benefits" downwind but claims "incidental" over-control is "permissible" when ""necessary to ensure attainment elsewhere."" EPA Br. 80-81 (quoting *EME Homer*,

134 S. Ct. at 1608). But Petitioners' point is wholly distinct: The Court nowhere authorized EPA to disregard the extent of downwind ozone reductions produced by its emission budgets in all states subject to those budgets. Rather, the Court's observations underscore that Rule-required reductions aimed at lowering one area's ozone also lower *other* areas' ozone—a phenomenon that is not limited to receptors "linked" with a given state but that occurs in *all* areas receiving any contribution from any Rule-regulated state. This Court rejected, as incompatible with "the Supreme Court's analysis," the notion that "over-attainment in downwind locations" due to required upwind-state reductions is allowable "when that excess attainment is 'unnecessary.'" *EME Homer II*, 795 F.3d at 130 (quoting *EME Homer*, 134 S. Ct. at 1609 ("reductions unnecessary to downwind attainment anywhere fall outside the Agency's statutory authority" (emphasis omitted))). EPA may require "eliminat[ion] [of] *only those "amounts"* of upwind pollutants *essential* to achieving attainment downwind." *EME Homer*, 134 S. Ct. at 1609 n.23 (emphases added). EPA's refusal to fully evaluate over-control violated both Courts' holdings.

No on-the-record explanation exists for EPA's conclusory assertion that "emission reductions from unlinked states have 'little air quality impact.'" EPA Br. 80 (quoting Response to Comments ("RTC") 443, EPA-HQ-OAR-2015-0500-0572, JA___). EPA's unsupported view that ozone-reducing effects of unlinked-state reductions are categorically inconsequential and undeserving of analysis, RTC 443, JA___, ignores the significance of *combined* effects from multiple states' emission

reductions. Moreover, EPA improperly relies on post-hoc claims that manipulating spreadsheet values purportedly reveals no over-control. *See* EPA Br. 80-81 & n.17. Cryptic, extra-record instructions to "change" such values (*id.* at 81 n.17)—without even explaining the instructions' significance (*e.g.*, what do the "4" and "6" "value[s] in cell 'H2'" (*id.*) signify?)—cannot substitute for on-the-record justification. Furthermore, EPA fails to explain how Hamilton's 74.781-parts-per-billion ("ppb") estimated-maximum DV (and the 0.077-ppb differential) that EPA cites (at 81) do or do not relate either to Hamilton's *higher*, 75.1-ppb estimated-maximum asserted in the Rule as grounds for EPA's no-over-control determination, 81 Fed. Reg. at 74,551, JA___, *or* to the *even lower* 74.3-ppb level EPA, elsewhere in the record, projects for Hamilton.[4] EPA's unexplained discrepancies underscore its over-control assessment's inadequacy.

B. Refusal To Consider Downwind Nonattainment-Area Controls

EPA's attempt to invoke statutory deadlines to avoid considering effects of reasonably-expected controls in downwind nonattainment areas, Ind.-Pet. Br. 22-23, is unavailing. Such deadlines do not constrain EPA's ability to estimate—and to

[4] Ozone Transport Policy Analysis Final Rule TSD ("OTPA-TSD") 35 Table D-8 (columns "CAMx Max. DV," "AQAT Max. DV"), EPA-HQ-OAR-2015-0500-0555, JA___. At 74.3, Hamilton is *substantially* below-NAAQS—significantly more so than at the Rule preamble's inconsistent 75.1 (*see* 81 Fed. Reg. at 74,551-52 (discussing EPA's truncation convention), JA___-___)—further undermining EPA's no-over-control determination. 81 Fed. Reg. at 74,551 (*at 75.1*, Hamilton would "*just be maintaining*" attainment) (emphasis added), JA___.

consider in interstate-transport rulemakings—reasonable required nonattainment-area emission reductions. Just as EPA considered "on-the-books" requirements, State-Resp.-Int. Br. 27-28, EPA should have considered effects of statutory nonattainment-area requirements. *See, e.g., S. Coast Air Quality Mgmt. Dist. v. EPA*, No. 15-1115, 2018 WL 911201, at *1-3 (D.C. Cir. Feb. 16, 2018) (describing nonattainment-area requirements). Refusal to consider such effects, as EPA did in previous rulemakings, Ind.-Pet. Br. 22-23, ignores that the state with the nonattainment area bears "the primary responsibility" to reduce emissions to achieve attainment. CAA § 107(a), 42 U.S.C. § 7407(a); CAA § 110(a)(1), 42 U.S.C. § 7410(a)(1). It likewise ignores the prohibition against "requir[ing] a State to reduce its [emissions] by more than is necessary to achieve attainment" downwind. *EME Homer*, 134 S. Ct. at 1608.

Assessing $1,400-per-ton reductions in both downwind and upwind states, EPA Br. 75, does not satisfy the obligation to consider downwind-state nonattainment-area reductions. Given nonattainment areas' particular obligations—and each state's "*primary* responsibility for assuring [attainment] air quality *within*" that state, CAA § 107(a) (emphases added)—some controls may be reasonable in nonattainment areas at costs above $1,400-per-ton.[5] "[A]ssum[ing] that downwind states" should bear only "the *same* responsibility as upwind states for reducing ozone

[5] State Respondent-Intervenors' assertion (at 28-29) that "equities" demand upwind-state reductions ignores statutorily-imposed obligations on nonattainment areas.

pollution," EPA Br. 75 (emphasis added),[6] was no solution but, rather, highlights the Rule's inconsistency with the statute.

C. Failure To Justify Elements of EPA's Methodology

Unjustified modeling assumptions and choices receive no deference. *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto Ins. Co.*, 463 U.S. 29, 50 (1983). Unexplained assumptions that operational units will be idled, and that certain units could achieve a below-0.10-pounds rate, conflicted with on-the-record Agency determinations. Ind.-Pet. Br. 23-25. Having made those determinations, EPA could not incorporate conflicting choices without on-the-record *explanation*. Because EPA's attempts at reconciling its choices, and its asserted conclusion that "virtually" no differences resulted, appear only in its brief, they cannot discharge EPA's "duty to explain." EPA Br. 84.

IV. EPA's "Interference-With-Maintenance" Approach Was Arbitrary.

EPA concedes downwind "maintenance receptors" present a "*smaller problem*" than nonattainment receptors. EPA Br. 78 (emphasis added). EPA further acknowledges the "practical possibility" that imposing "a *lesser level of control*" on states linked to maintenance areas—*i.e.*, a level less stringent than that for states linked to nonattainment areas—may "eliminate[]" the "smaller" maintenance-only problem. *Id.* (emphasis added). Given these concessions, EPA's refusal to apply less-stringent levels to states linked solely to maintenance areas—consistent with this Court's

[6] *See also id.* at 28.

admonition that "under the 'interfere with maintenance' prong, EPA may *only limit* emissions '*by just enough* to permit an already-attaining State to maintain satisfactory air quality," *EME Homer II*, 795 F.3d at 137 (quoting *EME Homer*, 134 S. Ct. at 1604 n.18) (emphases added)[7]—is particularly arbitrary.[8]

EPA asserts (at 76) it may compel reductions to avoid not only potential future NAAQS violations due to upwind-state emissions of "ozone precursors" "but also" violations due to "variations in atmospheric conditions and weather patterns." In construing the interference-with-maintenance prong, however, *North Carolina* required "protection for downwind areas" that will "struggl[e] to meet NAAQS *due to upwind interference*," 531 F.3d at 910-11 (emphasis added), not due to other factors like those EPA describes.[9]

V. EPA's Installation-Timeline Assumption Was Unsupported.

EPA's analysis[10] did *not* determine "a six-month installation time is feasible." EPA Br. 82. EPA labels contrary comments "anecdotal," *id.*, but itself cited *two units'* anecdotal experiences, 2010-TSD 2-3, JA___-___, and never demonstrated their

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[7] Ind.-Pet. Br. 25-26.

[8] That EPA's self-constructed over-control analysis disclosed no over-control of states linked to maintenance receptors is unavailing because EPA's budget-setting for those states was flawed in the first place (even apart from the deficiencies in EPA's over-control analysis itself, *see, e.g., supra* III.A.).

[9] *See also supra* I.

[10] Installation Timing for Low NO_x Burners ("2010-TSD"), EPA-HQ-OAR-2015-0500-0493, JA___-___.

experiences were representative. EPA's analysis actually described an EPA-projected "aggressive" *eleven-month* timeframe, while assuming autumn and spring installations, *id.* at 2—yet EPA's timing precluded autumn installations. Ind.-Pet. Br. 27-28. Thus, even an eleven-month assumption was unrealistic, *id.*; the six-month assumption EPA actually used was even more so, and unsupported.

EPA's characterization (at 82) of this defect as "immaterial" is belied by EPA's reliance on significant emission-reduction percentages. RTC 489-90 (11% (Oklahoma), 9% (Michigan)), JA___-___. Regardless, EPA's "feasibility" analysis—which was "independent" of EPA's budget-setting[11]—cannot excuse reliance on unsupported assumptions in establishing budgets that, unlike feasibility assessments, are binding regulations. Moreover, extra-record "[p]reliminary information," EPA Br. 82 n.18, cannot save flawed rulemaking.

VI. State-Specific and Facility-Specific Actions Were Arbitrary.

Illinois (Prairie State Generating Company ("PSGC")). EPA argues PSGC "confuses the separate methodologies for budget-setting at Step 3 and for allocation" in Step 4. EPA Br. 100. No "confusion" occurred: while Illinois's *budget* established in Step 3 may not have disadvantaged PSGC, EPA offers no support for why the Step-4 "allocation" should mirror the data used in Step 3. In rejecting PSGC's Step-4 arguments, EPA reasons that allocating allowances based on historic

[11] EGU NO_x Mitigation Strategies Final Rule TSD 14, EPA-HQ-OAR-2015-0500-0554, JA___ ; EPA Br. 91-92.

heat input is "fuel-neutral, control-neutral, transparent, and based on reliable data." *Id.* at 101; 81 Fed. Reg. 74,564, JA___. The Rule ignores the transition in *generation technologies and fleet retirements*, relying on inputs that reflect neither efficiency nor newer units' sunk-capital costs.

The Update changed CSAPR's definition of "new" units in a manner that has outsized impacts in Step 4 on "transitioning" units (units that began operating in 2011-2016). The result—disproportionate financial burdens on "transitioning" units—is not what CSAPR intended.

The Update does not change the implementation scheme, although years have passed with major generation-fleet changes. Units retired after 2011 keep their allowances for some time, controlling unit operations so they have "sufficient" allowances to operate. Transitioning units are hit with outsized costs in two ways: First, their allocations are reduced to a pro-rata share of state emissions, so they shoulder a higher per-output-based burden of states' "good-neighbor" obligations. Second, to obtain sufficient allocations to operate as intended when "new," they must purchase allowances from older existing units. Thus, the Update imposes arbitrary burdens on newer units. A third category is required.

EPA's response—that each state can address allocations—is no answer when the scheme fundamentally burdens one type of unit over another.

Indiana (Indiana Electric Association/Indiana Utility Group ("IEA/IUG")). EPA's response to IEA/IUG fails to address the key legal deficiency—that EPA based the Rule on a radically-changed budget-setting methodology and thus was obligated to seek additional comment.

EPA failed to demonstrate why it was necessary to adopt this new methodology. Budgets were intended to be based on what each electricity-generating unit could achieve by effectively using existing or soon-to-be-installed controls. That analysis should be fact-based. It is unnecessary and inappropriate to use "relative-rate" analysis. Also, EPA's proposal using 2014-heat-input data was a material fact on which it did not seek comment. EPA did not demonstrate switching to 2015 data was appropriate.

EPA stated it adopted the "relative-rate" methodology because the proposed methodology—used in CSAPR—yielded "potentially insufficient tons for a state budget" for certain states. OTPA-TSD 11, JA___. However, the new methodology yields "potentially insufficient tons" for Indiana, as EPA's feasibility analysis demonstrates. EPA responds by saying the market or banked allowances can accommodate shortfalls in Indiana. So why couldn't states that were short under the proposed methodology go to the market just as well? By substituting a methodology that helps certain states and harms others, EPA acted arbitrarily.

Concerning Cayuga, the Rule states reductions are achievable "through actions such as turning on and operating existing pollution controls." 81 Fed. Reg. at 74,521,

JA___. EPA should have concluded Cayuga's selective catalytic reduction was not operating in the baseline and would operate under the Rule. Correcting this error alone would increase Indiana's budget by over 1,000 tons.

Mississippi (Mississippi Power Company). Mississippi's emissions are already below the level that EPA's own model showed Mississippi could reach at the $1,400-per-ton cost threshold. This is important because further reductions, as the Rule requires, mean Mississippi sources must incur additional costs, and reductions costing more than $1,400 per ton exceed the level EPA deemed cost-effective. EPA identifies no record evidence to support its claim that Mississippi sources can further reduce their emissions cost-effectively. Therefore, on this record, Mississippi's budget must be remanded.

EPA claims its "relative-rate methodology" eliminates the possibility that budgets will be too high **or** too low when the model's baseline emissions "appear[] too high or too low compared to actual data, due to some structural assumption of the model." EPA Br. 89. However, errors in EPA's model for Mississippi cannot be assumed away as "structural assumption[s]." Specifically, EPA modeled a "base case" of 7,624 tons of NOx for Mississippi, but Mississippi's actual emissions were 6,438 tons. OTPA-TSD Appx. E, Tab "Final Budget Calcs." Relying on this 7,624-ton "base case," EPA modeled that Mississippi could reduce its emissions by 125 tons applying the $1,400-per-ton threshold. *Id.* But EPA provides no basis to conclude

Mississippi can reduce its emissions (i) to the same extent, and (ii) for $1,400 per ton when those reductions must be taken from a much lower baseline. Instead, EPA assumes emission-reduction costs are identical at every emissions level. But EPA is incorrect: the marginal cost of the next ton of reduction for Mississippi is significantly higher with each additional reduction. *See id.* (compare Cell F27 with I27). Indeed, EPA's model finds that reducing Mississippi's emissions below 6,438 tons would cost more than $6,400 per ton. EPA cannot rely on unsupported assumptions about the marginal cost of reductions when the statutory level of reductions hinges specifically on those reductions' cost-effectiveness. EPA's findings must be sufficiently supported by the record—not based on "'speculative factual assertion[s].'" *Chem. Mfrs. Ass'n v. EPA*, 28 F.3d 1259, 1266 (D.C. Cir. 1994). Because EPA can only require reductions in emissions to the extent they can be "eliminated cost-effectively," *EME Homer*, 134 S. Ct. at 1597, Mississippi's budget must be remanded.

EPA's rulemaking results confirm its error as applied to Mississippi. Mississippi's reductions will achieve no more than a 0.0004-ppb improvement at any Mississippi-linked receptor at a cost exceeding $406 million per ppb.[12] While EPA's methodology may be generically permissible, EPA must assess whether the results are

[12] Ind.-Pet. Br. 37 n.36.

reasonable when applied to Mississippi. Here, the results are unreasonable on their face. EPA must reevaluate its action.[13]

Oklahoma (Western Farmers Electric Cooperative ("Western Farmers")/Oklahoma Gas and Electric Company). Oklahoma's budget is arbitrarily derived from a 2017 Integrated-Planning-Model ("IPM") baseline that inexplicably projects a 50-percent emissions increase in two years. Ind.-Pet. Br. 38-40. EPA concedes (at 96) the "baseline value diverged from evidence that Oklahoma's actual emission rate … would be far lower." That admission necessitates recalculating Oklahoma's budget with a proper baseline. *Appalachian Power Co. v. EPA*, 249 F.3d 1032, 1054-55 (D.C. Cir. 2001) (rejecting modeling with "stark disparities between … projections and real world observations").

EPA claims its arbitrary baseline played a "limited role," but confirms "the delta between IPM's baseline case and its control case" dictated Oklahoma's budget. EPA Br. 97 (emphasis omitted). An inflated baseline ineluctably yields an inflated delta and artificially low budget.

EPA declares the delta is nonetheless accurate because "structural assumptions informing" the arbitrary baseline also informed the control case. *Id.* But how can using erroneous assumptions *twice* render the delta non-arbitrary? EPA claims (at 96), without citation, it "acknowledged" the baseline's arbitrariness, but EPA never

[13] *Cf. Chem. Mfrs. Ass'n*, 28 F.3d at 1265 (Evidence of "poor fit" between model and party's reality deserves heightened scrutiny).

explained its two-wrongs-make-a-right principle in its rule (or brief). EPA argues (at 97) petitioners should prove arbitrary inputs generated an unreliable delta. But "'garbage in; garbage out'" is an "inviolable law of data analysis." *Mississippi v. EPA*, 744 F.3d 1334, 1352 (D.C. Cir. 2013). Regardless, it is EPA's burden to "justify its choice" to use admittedly arbitrary models. *Appalachian Power Co. v. EPA*, 251 F.3d 1026, 1035 (D.C. Cir. 2001). EPA never did so.[14]

Western Farmers. For Western-Farmers units, EPA admits it used just one year's data (2015)—the only year with EPA-reported data—and ignored four years of available Energy Information Administration ("EIA") data. EPA's own TSD refutes its claim that it followed the Rule's methodology. Allowance Allocation Final Rule TSD, EPA-HQ-OAR-2015-0500-0396 ("Allocation-TSD"), JA___-___.

That TSD provides "values for the baseline period of 2011 through 2015 are identified *using data reported to EPA or, where EPA data are unavailable, EIA*." Allocation-TSD 7 (emphasis added), JA___. EPA says (at 98) this means if just one year's EPA data exist, EPA must ignore EIA data for the other four. But that contravenes the textual goal of establishing a multi-year baseline and the corollary that "unavailab[ility]" is assessed on a year-by-year basis.

[14] Oklahoma's achieving its budget neither excuses EPA's error nor renders it harmless. Oklahoma units have fewer allocations to use, sell, or save than they would under accurate modeling. 81 Fed. Reg. at 74,555, JA___.

The TSD selected a multi-year baseline to guard against any "single year's operations (which might be negatively affected by … unusual events) determin[ing]" allocations. Allocation-TSD 7, JA___. By ignoring years of available EIA data whenever *one year* of EPA data exist, EPA *guaranteed* some allocations would be based on a single year, directly undermining the TSD's rationale for a multi-year baseline.

Only for years where "a unit has *no data*" is it to be "assigned a zero value" (*e.g.*, "year[s] before … a unit started operating"). *Id.* (emphasis added), JA ___. Zeroes should thus be used only when no EPA *or* EIA data exist (*e.g.*, when units were dormant). Yet EPA assigned zeroes for *four years* when Western-Farmers units operated and EIA data existed, illustrating its departure from the TSD's methodology. Ind.-Pet. Br. 41 (citing Cells A1511-Z1603).

Contrary to EPA's paraphrasing, EPA Br. 99, CSAPR was silent on this issue. *This Rule's* TSD was not. Finally, EPA's post-hoc rationale that EPA and EIA provide "distinct data sets with distinct approaches," *id.*, is a red herring. If using EIA data were unworkable, the TSD would not endorse it. The Court should reject EPA's arbitrary action that deprived Western-Farmers units of usable, sellable, and bankable allocations.

CONCLUSION

Industry Petitioners' petitions should be granted and the Rule remanded.

Dated: March 19, 2018

Respectfully submitted,

/s/ Norman W. Fichthorn
Norman W. Fichthorn
E. Carter Chandler Clements
HUNTON & WILLIAMS LLP
2200 Pennsylvania Ave., N.W.
Washington, D.C. 20037
(202) 955-1500
nfichthorn@hunton.com
eclements@hunton.com

Counsel for the Utility Air Regulatory Group

/s/ Peter S. Glaser
Peter S. Glaser
Troutman Sanders LLP
401 Ninth Street, NW
Suite 1000
Washington, D.C. 20004
202-274-2998
peter.glaser@troutman.com

Margaret Claiborne Campbell
M. Buck Dixon
Troutman Sanders LLP
600 Peachtree Street, NE
Suite 5200
Atlanta, GA 30308-2216
404-885-3410
margaret.campbell@troutman.com

Scott C. Oostdyk
E. Duncan Getchell, Jr.
Michael H. Brady
McGuire Woods LLP
Gateway Plaza
800 East Canal Street
Richmond, Virginia 23219-3916
804-775-4743
soostdyk@mcguirewoods.com

Counsel for Murray Energy Corporation

/s/ Jane E. Montgomery
JANE E. MONTGOMERY
J. MICHAEL SHOWALTER
AMY ANTONIOLLI
Schiff Hardin LLP
233 South Wacker Drive, Suite 6600
Chicago, Illinois 60606
(312) 258-5500
Jmontgomery@schiffhardin.com
mshowalter@schiffhardin.com
aantoniolli@schiffhardin.com

Counsel for Prairie State Generating Company, LLC

/s/ P. Stephen Gidiere III
P. Stephen Gidiere III
Julia B. Barber
Balch & Bingham LLP
1901 6th Ave. N., Ste. 1500
Birmingham, Alabama 35203
205-251-8100
sgidiere@balch.com

David W. Mitchell
Balch & Bingham LLP
601 Pennsylvania Avenue, N.W.
Suite 825 South
Washington, D.C. 20004

Stephanie Z. Moore
Executive Vice President & General Counsel
Vistra Energy Corp.
6555 Sierra Drive
Irving, Texas 75039

Daniel J. Kelly
Vice President & Associate General Counsel
Vistra Energy Corp.
6555 Sierra Drive
Irving, Texas 75039

Counsel for Luminant Generation Company LLC, Big Brown Power Company LLC, Luminant Mining Company LLC, La Frontera Holdings, LLC, Oak Grove Management Company LLC, and Sandow Power Company LLC

/s/ David M. Flannery
David M. Flannery
Kathy G. Beckett
Steptoe & Johnson PLLC
P.O. Box 1588, Charleston, WV 25326-1588
Chase Tower, 8th Floor
707 Virginia Street, East
Charleston, WV 25301
(304) 353-8000
Dave.flannery@steptoe-johnson.com
Kathy.beckett@steptoe-johnson.com

Edward L. Kropp
Steptoe & Johnson PLLC
PO Box 36425
Indianapolis, Indiana 46236
317-946-9882
Skipp.kropp@steptoe-johnson.com

Counsel for the Indiana Energy Association, the Indiana Utility Group, and the Midwest Ozone Group

/s/ Megan H. Berge
Megan H. Berge
Aaron Streett
Baker Botts L.L.P.
1299 Pennsylvania Ave., NW
Washington, DC 20004
(202) 639-7700
megan.berge@bakerbotts.com

Counsel for Western Farmers Electric Cooperative

/s/ Charles T. Wehland
Charles T. Wehland
Jones Day
77 West Wacker Drive, Suite 3500
Chicago, Illinois 60601-1692
p: (312) 782-3939
f: (312) 782-8585
ctwehland@jonesday.com

Counsel for Oklahoma Gas and Electric Company

/s/ John A. Sheehan
Todd E. Palmer
John A. Sheehan
Michael, Best & Friedrich LLP
601 Pennsylvania Ave. NW, Suite 700
Washington, DC 20004-2601
(202) 747-9560 (telephone)
(202) 347-1819 (facsimile)
tepalmer@michaelbest.com
jasheehan@michaelbest.com

Attorneys for Wisconsin Paper Council, Wisconsin Manufacturers and Commerce, Wisconsin Industrial Energy Group, and Wisconsin Cast Metals Association

/s/ C. Grady Moore III
Ben H. Stone
Terese T. Wyly
M. Brant Pettis
BALCH & BINGHAM LLP
1310 Twenty Fifth Avenue
Gulfport, MS 39501
Tel: (228) 864-9900
Fax: (228) 864-8221
bpettis@balch.com

C. Grady Moore III
BALCH & BINGHAM LLP
1901 Sixth Avenue North, Suite 1500
Birmingham, AL 35303-4642
Tel: (205) 251-8100
Fax: (205) 488-5704
gmoore@balch.com

Counsel for Mississippi Power Company

/s/ Louis E. Tosi
Louis E. Tosi
Cheri A. Budzynski
Shumaker, Loop & Kendrick, LLP
1000 Jackson Street
Toledo, Ohio 43604
419.241.9000
ltosi@slk-law.com
cbudzynski@slk-law.com

Michael A. Born
Shumaker, Loop & Kendrick, LLP
41 South High Street, Suite 2400
Columbus, Ohio 43215
614.463.9441
mborn@slk-law.com

Counsel for the Ohio Utility Group and Its Member Companies (AEP Generation Resources Inc., Buckeye Power, Inc., The Dayton Power and Light Company, Duke Energy Ohio, Inc., Dynegy Commercial Asset Management, LLC, First Energy Solutions, and Ohio Valley Electric Corporation)

CERTIFICATE OF COMPLIANCE

Pursuant to Fed. R. App. P. 32(f) and (g) and Circuit Rule 32(e)(1), I hereby certify that this brief contains 4,509 words, excluding exempted parts, according to the count of Microsoft Word 2010. The sum of the words of the Joint Reply Brief of Industry Petitioners and the words of the Reply Brief of State Petitioners, Cedar Falls Utilities, and City of Ames, Iowa, does not exceed 9,000, consistent with the Court's Order of September 6, 2017 (ECF No. 1691655). I further certify that the foregoing Joint Reply Brief of Industry Petitioners complies with Fed. R. App. P. 32(a)(5) and (6) because it has been prepared in 14-point proportionally spaced Garamond typeface.

/s/ Norman W. Fichthorn
Norman W. Fichthorn

Dated: March 19, 2018

CERTIFICATE OF SERVICE

I hereby certify that on this 19th day of March 2018, the foregoing Joint Reply Briefing of Industry Petitioners was served electronically on all registered counsel through the Court's CM/ECF system.

/s/ Norman W. Fichthorn
Norman W. Fichthorn