



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

June 29, 2020

THE ADMINISTRATOR

Mr. Joshua Smith
Staff Attorney
Sierra Club
2101 Webster Street, Suite 1300
Oakland, California 94612

Dear Mr. Smith:

I am responding to your November 28, 2017, letter in which you submitted a petition for reconsideration on behalf of the Sierra Club and the National Parks Conservation Association concerning the U.S. Environmental Protection Agency's final rule titled *Interstate Transport of Fine Particulate Matter: Revision of Federal Implementation Plan Requirements for Texas*. 82 FR 45481 (September 29, 2017).

The petitioners requested that the EPA reconsider portions of the final rule, specifically (1) the EPA's conclusion that the *Cross-State Air Pollution Rule* continues to be a valid alternative to the installation of source-specific "best-available retrofit technology" under the *Regional Haze Rule* despite the withdrawal of Texas from the trading program; (2) the EPA's emissions shifting analysis; and, (3) the agency's reliance on its 2012 modeling.

As discussed more fully in the enclosure, after careful review, the EPA concludes that the petition does not meet the statutory criteria under 42 U.S.C. 7607(d)(7)(B) to warrant reconsideration. Therefore, the EPA denies the petition.

Thank you for your interest in this matter.

Sincerely,

A handwritten signature in black ink that reads "Andrew R. Wheeler".

Andrew R. Wheeler

Enclosure

Enclosure

The EPA's Basis for Denying the Sierra Club and the National Parks Conservation Association's Petition for Reconsideration

I. Statutory and Regulatory Background

A. *Visibility Requirements*

In section 169A of the *Clean Air Act*, Congress declared a national goal of preventing future and remedying existing manmade visibility impairment in certain national parks and wilderness areas. 42 U.S.C. 7491(a)(1). One type of visibility impairment is regional haze, which is caused by the emission of air pollutants from numerous anthropogenic sources located over a wide geographic area. 40 CFR 51.301. To reach the national goal, Congress required states to submit implementation plans [referred to as state implementation plans or State Implementation Plans (SIPs)] that: (1) “contain such emission limits, schedules of compliance and other measures as may be necessary to make reasonable progress toward meeting the national goal”; (2) require certain older, often uncontrolled sources of air pollution that contribute to visibility impairment to “procure, install, and operate . . . the best available retrofit technology [BART]”; and (3) include “a long-term . . . strategy for making reasonable progress toward meeting the national goal.” 42 U.S.C. 7491(b)(2), (b)(2)(A)–(B).

Congress also specified factors that states must consider when determining what constitutes “reasonable progress” and BART. *Id.* 7491(g)(1)-(2). Pursuant to CAA section 169A, the EPA promulgated the *Regional Haze Rule*, which required states to submit their regional haze SIPs by December 2007. 64 FR 35714 (July 1, 1999); 40 CFR 51.308(b). The EPA can act on a SIP submission in whole or in part and must approve a submission “if it meets all of the applicable requirements of [the Act].” 42 U.S.C. 7410(k)(3). If the EPA disapproves a SIP submission, then the EPA must promulgate a federal implementation plan within two years unless the state makes a new submission that corrects the deficiency and the EPA approves it before promulgating a FIP. *Id.* 7410(c).

B. *BART and BART Alternatives*

As part of an overall strategy to achieve natural visibility conditions in protected national parks and wilderness areas (“class I areas”), CAA section 169A requires states (or the EPA when issuing a FIP) to determine BART for certain categories of stationary sources built between 1962 and 1977. 42 U.S.C. 7491. If such a “BART-eligible” source is found to contribute to visibility impairment at one or more class I areas, and thus is considered “subject-to-BART,” the state (or the EPA) must make a BART determination for the source considering five statutory factors. *Id.* 7491(g)(2). The BART guidelines, which are mandatory for certain large power plants, direct how to consider the five statutory factors to determine the appropriate level of control for a source. *See* appendix Y to 40 CFR part 51.

The *Regional Haze Rule* includes provisions that allow states to adopt alternative measures to BART so long as the “BART alternative” will achieve “greater reasonable progress” in overall

visibility improvement than BART. *See* 40 CFR 51.308(e)(2)(i)(E). As one specific way to make the required demonstration, a state (or the EPA) may use air-quality modeling to demonstrate numerically that under the BART alternative, first, visibility does not decline in any class I area as compared to baseline conditions, and second, there is an overall improvement in visibility on average across all impacted class I areas as compared to BART. *See* 40 CFR 51.308(e)(3).

C. “CSAPR Better Than BART”

The *Cross-State Air Pollution Rule* (CSAPR), 76 FR 48208 (August 8, 2011), implements a series of emissions trading programs for sulfur dioxide (SO₂) and nitrogen oxides (NO_x) across the eastern United States in order to address interstate ozone and fine particulate (PM_{2.5}) pollution under CAA section 110(a)(2)(D)(i)(I) (the “good neighbor provision”). 42 U.S.C. 7410(a)(2)(D)(i)(I). The EPA has issued regulations allowing the CSAPR states to rely on participation in these trading programs in lieu of requiring source-specific BART controls at their BART-eligible electric generating units covered by one or more of the CSAPR trading programs with respect to the visibility pollutant at issue (i.e. NO_x or SO₂). *See* 40 CFR 51.308(e)(4).¹ This 2012 determination authorizing reliance on CSAPR participation as a BART alternative is often referred to as “CSAPR Better Than BART,” 77 FR 33642 (June 7, 2012).

In the EPA’s 2012 action promulgating CSAPR Better Than BART, the EPA used air-quality modeling and a sensitivity analysis to show CSAPR met the two-pronged numerical test for a BART alternative under 40 CFR 51.308(e)(3). *See generally* 77 FR 33642. In that action, the EPA found that under a scenario analyzing the visibility benefits of CSAPR (referred to as the “CSAPR plus BART elsewhere” or “CSAPR” scenario), visibility would not decline in any class I area compared to a baseline scenario, satisfying the first prong of the two-pronged BART-alternative test. The EPA also found that the CSAPR scenario would result in an overall improvement in visibility on average across class I areas as compared to a scenario analyzing visibility benefits resulting from “presumptive” BART limits at all BART-eligible sources (referred to as the “nationwide BART” or “BART” scenario), satisfying the second prong of the two-pronged BART-alternative test. The EPA’s findings held true whether looking at the 60 class I areas in the eastern U.S. most heavily impacted by the sources subject to CSAPR or looking at all 140 class I areas in the continental U.S. This action was upheld in *UARG v. the EPA*, 885 F.3d 714 (D.C. Cir. 2018) (*UARG II*).

D. *The CSAPR Remand and the EPA’s 2017 Affirmation of CSAPR Better Than BART*

CSAPR was largely upheld by the Supreme Court in 2014, *the EPA v. EME Homer City Generation, L.P.*, 572 U.S. 489 (2014). However, the case was remanded to the D.C. Circuit Court of Appeals (D.C. Circuit) to assess whether the EPA may have “over-controlled” certain states. In *EME Homer City Generation, L.P. v. the EPA*, 795 F.3d 118 (D.C. Cir. 2015), based on this potential for overcontrol, the court remanded certain state budgets to the EPA, including Texas’ SO₂ budget, which the EPA had established to address PM_{2.5} transport. To address the remand, in November 2016, the EPA proposed to remove Texas EGUs from the CSAPR SO₂ Group 2 Trading

¹ The EPA had previously made a similar finding for the predecessor to CSAPR, the *Clean Air Interstate Rule*, and this determination was upheld in *UARG v. the EPA*, 471 F.3d 1333 (D.C. Cir. 2006) (*UARG I*).

Program as well as the CSAPR NO_x Annual Trading Program, which similarly addressed PM_{2.5} transport. *See* 81 FR 78954 (Nov. 10, 2016). The EPA indicated that if the withdrawal was finalized, Texas would no longer be eligible under 40 CFR 51.308(e)(4) to rely on participation of its EGUs in a CSAPR trading program as an alternative to source-specific SO₂ BART determinations. *Id.* at 78956.² As relevant to this petition denial, in that proposal, the EPA also provided a proposed analysis showing that, despite certain changes in the geographic scope of CSAPR coverage since the EPA's original 2012 CSAPR Better Than BART determination, including the proposed withdrawal of Texas EGUs from the CSAPR SO₂ and annual NO_x trading programs, CSAPR nonetheless would continue to satisfy both prongs of the two-pronged test for a BART alternative under 40 CFR 51.308(e)(3). *See id.* at 78961-64.

In September 2017, the EPA finalized the withdrawal of Texas EGUs from the CSAPR SO₂ and annual NO_x programs. *See* 82 FR 45481 (September 29, 2017). In the same action, the EPA also issued its final analysis showing that, even with Texas EGUs no longer participating in these programs (and other changes in the geographic coverage of CSAPR), the EPA's original 2012 analytical finding that CSAPR is better than BART remained valid. *See id.* at 45490-94. In response to comments received on the November 2016 proposed analysis, the EPA's final analysis included an evaluation of the potential impact of emissions shifting under both prongs of the two-pronged test for a BART alternative under 40 CFR 51.308(e)(3). This analysis focused on the fact that if Texas sources were withdrawn from the CSAPR SO₂ Group 2 Trading Program, they would no longer purchase up to 22,300 SO₂ allowances from sources in other Group 2 states, as had been projected in the CSAPR scenario used in the 2012 CSAPR Better Than BART determination. As to the first prong, the EPA explained that, relative to a baseline scenario without CSAPR or BART, a revised CSAPR scenario with an increased quantity of SO₂ allowances available for use by units in other Group 2 states would still show no visibility degradation at any class I area because, absent unusual circumstances that the EPA showed were not expected to occur in this case, all units in the remaining Group 2 states would still have stronger incentives to control their SO₂ emissions in the revised CSAPR scenario (with some positive allowance price) than in the baseline scenario (without any allowance price). *Id.* at 45493.

As to the second prong, the EPA assumed that the availability of 22,300 additional allowances would result in a 22,300-ton increase in emissions in the remaining Group 2 states, but observed that the potential adverse visibility impacts of those emissions would be more than offset by the favorable visibility impacts of at least 127,300 tons of reduced emissions in Texas under an assumption of source-specific SO₂ BART for the state's BART-eligible EGUs. *Id.* at 45493-94. Thus, the EPA's conclusion that CSAPR satisfied the second prong of the two-pronged test rested in part on assuming net SO₂ reductions of approximately 105,000 tons from source-specific BART in Texas, after accounting for the potential for shifting of 22,300 tons of emissions from Texas to the remaining Group 2 states. *Id.*

² The EPA also noted that because Texas EGUs would continue to participate in a CSAPR trading program for ozone-season NO_x emissions, Texas would still be eligible under 40 CFR 51.308(e)(4) to rely on CSAPR participation as an alternative to source-specific NO_x BART determinations. 81 FR at 78962.

E. Promulgation and Affirmation of the Texas Intrastate SO₂ Trading Program as a BART Alternative

In 2012, the EPA issued a limited disapproval of Texas' regional haze SIP due to the state's reliance on the *Clean Air Interstate Rule* to satisfy NO_x and SO₂ BART for Texas' BART-eligible EGUs. CAIR had been found unlawful by the D.C. Circuit and had been replaced by CSAPR, making CAIR participation unavailable as a BART alternative. The limited SIP disapproval triggered a two-year deadline for the EPA to promulgate a FIP to satisfy these obligations.³ In January 2017, the EPA proposed a FIP for SO₂ BART comprising source-specific SO₂ BART controls for subject-to-BART power plants in Texas. *See* 82 FR 912 (Jan. 4, 2017). In issuing this proposal, the EPA explained that, with the anticipated withdrawal of Texas EGUs from the CSAPR SO₂ trading program, which the EPA had proposed in November 2016 (see discussion above), BART-eligible sources in Texas would no longer be able to rely on CSAPR participation as a BART alternative for SO₂ under 40 CFR 51.308(e)(4). *Id.* at 915. The EPA received comments on this proposal encouraging the EPA to consider other potentially viable methods of implementing a BART alternative for SO₂ in Texas, rather than finalizing source-specific BART limits. After considering these and other comments, the EPA took final action in October 2017 establishing an intrastate trading program for SO₂ for certain Texas EGUs as an alternative to BART. *See* 82 FR 48324 (October 17, 2017).⁴

The EPA based the intrastate SO₂ trading program for Texas on the CSAPR SO₂ trading program and determined that the intrastate program would achieve similar emission reductions to CSAPR, had the state continued to be subject to the CSAPR trading program through a FIP or SIP. The EPA found that the intrastate trading program achieves greater reasonable progress than source-specific BART under the clear-weight-of-evidence test in 40 CFR 51.308(e)(2), relying on the EPA's national finding that CSAPR provides for greater reasonable progress than BART and the fact that the Texas program would achieve similar emission reductions to CSAPR in Texas. *See* 82 FR at 48329-30. As finalized in October 2017, the Texas trading program established an annual trading program budget of 238,393 tons allocated to the covered units, as well as a Supplemental Allowance Pool budget of 10,000 tons, for a total of up to 248,393 allowances potentially available in each year on average. *Id.* at 48358. However, depending on compliance needs and the availability of allowances in the Supplemental Allowance Pool, up to 54,711 tons could be allocated from that pool in a given year. *Id.* at 48356.

The program allowed "banking" of allowances for use in future years, similar to the CSAPR trading programs, but unlike the CSAPR programs did not impose an "assurance level" above which annual emissions would be penalized via a higher allowance-surrender ratio. The program did not include all EGUs that would have been subject to CSAPR, but the EPA concluded that potential annual emissions from the excluded units were relatively small (i.e. less than 27,500 tons) and would not undermine its overall conclusion that the Texas program was essentially equivalent in design and stringency to the CSAPR program. *Id.* In reaching that conclusion, the EPA compared the annual average emission limit of 248,393 tons under the Texas program (combined with estimated emissions for the non-covered EGUs) to a benchmark figure of 317,100

³ 77 FR 33642, 33653-54 (June 7, 2012).

⁴ In the same January 2017 and October 2017 notices, the EPA also proposed and finalized action to rely on CSAPR participation as a NO_x BART alternative for Texas EGUs, *see* 82 FR at 946; 82 FR at 48361.

tons of annual SO₂ emissions evaluated for EGUs in Texas in the 2012 CSAPR Better Than BART sensitivity analysis. *Id.* at 48359-60. The Texas program went into effect at the start of 2019.

In light of the change in direction between the EPA's proposed and final actions for SO₂ BART in Texas, the EPA announced, in response to a petition for reconsideration of the October 2017 final action, that certain aspects of that action would benefit from additional public input. In August 2018, the EPA proposed to affirm its October 2017 action and provided the public an opportunity to comment on relevant aspects of the action, as well as other specified related issues. *See* 83 FR 43586 (August 27, 2018).

In November 2019, partly in response to comments received on its proposed affirmation, the EPA published a supplemental notice of proposed rulemaking (SNPRM). *See* 84 FR 61850 (November 14, 2019). One proposed change was the addition of "assurance provisions" to the Texas program similar to those in the CSAPR trading programs. These provisions impose a penalty surrender ratio of three-to-one on SO₂ emissions exceeding a specified "assurance level," thus providing an effective upper bound on emissions under the program in individual years. *Id.* at 61853. The SNPRM proposed a variability limit set at 7 percent of the trading program budget (or 16,668 tons) and a resulting assurance level of 107 percent of the trading program budget (or 255,081 tons) based on the CSAPR methodology establishing such amounts for CSAPR states, but applied to Texas-specific data.⁵ The EPA also proposed several other changes to the Texas program which in general strengthened the overall stringency of the program. *Id.* at 61855-56.

Concurrently with the issuance of today's denial, the EPA is taking final action affirming the Texas intrastate trading program as a BART alternative, with the amendments proposed in November 2019.⁶ The EPA's analysis in that final action is that the Texas trading program continues to limit the average annual emissions of the covered EGUs to 248,395 tons and, as amended, now also effectively limits the SO₂ emissions of the covered EGUs in individual years to be no higher than the final assurance level of 255,083 tons.⁷ For purposes of comparing emissions allowed under the Texas intrastate trading program as amended in the final action to emissions allowed under CSAPR, the EPA used a conservative estimate that total emissions from the EGUs that would have been subject to the CSAPR program, but which are not subject to the intrastate program, may be as high as 35,000 tons per year. Thus, with the Texas program in place as amended, the total maximum figure for SO₂ emissions from Texas units that would have been subject to CSAPR in Texas is projected to be 283,395 tons per year on average and no more than 290,083 tons in an individual year.⁸ These figures are approximately 33,700 tons and 27,000 tons

⁵ The increment between a state's emissions budget and its corresponding assurance level is referred to as a "variability limit," because the increment is designed to account for year-to-year variability in electricity generation and associated emissions.

⁶ Refer to Docket ID EPA-R06-OAR-2016-0611 at www.regulations.gov.

⁷ Because of a small correction made to the allowance allocations for one source, the trading program budget and assurance level as finalized concurrently with this denial are two tons higher than the amounts identified in the October 2017 action establishing the Texas program and the November 2019 SNPRM.

⁸ We note that these figures merely represent the stringency of the Texas program, not actual or anticipated emissions from the relevant EGUs in Texas. Actual SO₂ emissions from Texas EGUs have been much lower in recent years and are not anticipated to increase due to continuing shifts in methods of electrical generation in Texas and the U.S.

less than the 317,100-ton benchmark used for Texas SO₂ emissions in the 2012 CSAPR Better Than BART determination, respectively.

II. Summary of the Petition for Reconsideration

On November 28, 2017, the Sierra Club and the National Parks Conservation Association submitted a petition for partial reconsideration under CAA section 307(d)(7)(B) of our September 29, 2017, action withdrawing Texas from the CSAPR trading programs for SO₂ and annual NO_x and affirming that CSAPR participation continues to satisfy requirements as a BART alternative.⁹ The petitioners alleged that it was impracticable and indeed impossible to comment on the relationship between the Texas SO₂ BART alternative and the CSAPR Better Than BART analysis in the final rule because the EPA did not finalize the Texas SO₂ BART alternative until after the final rule was signed and the EPA had assumed presumptive source-specific SO₂ BART controls in the rulemaking record for the final rule. Pet. 8-9. The petitioners also alleged it was impracticable to comment on other aspects of the EPA's geographic emissions shifting analysis, which was not presented until the final rule. Pet. 9. The petitioners argued that both sets of issues are of central relevance.

With respect to the BART requirements in Texas, the petitioners argue that the final rule is “impermissibly based upon a factual predicate that no longer exists – namely, that sulfur dioxide emission reductions associated with the installation of presumptive source-specific BART would be install [sic] at Texas EGUs.” Pet. 10. By contrast, the petitioners allege that the BART alternative in Texas is a trading program that permits even greater emissions than CSAPR would have. Pet. 10-11. The petitioners allege that if one combines the 238,393 Texas budget with the potential for up to 54,711 tons of allowances that may be allocated from the Supplemental Allowance Pool in an individual year, as well as an assumed 27,446 tons of annual emissions from non-covered EGUs in Texas, the resulting figure is actually higher than the 317,100-ton benchmark the EPA used for CSAPR in Texas. Pet. 11. The petitioners go on to purport to demonstrate, using a sensitivity-analysis methodology developed by the EPA, that source-specific BART in Texas would improve visibility in class I areas in or affected by Texas more than CSAPR or the intrastate trading program. Pet. 11-13.

With respect to other aspects of the EPA's analysis of potential emissions shifting resulting from changes in the geographic scope of CSAPR, the petitioners allege that these appeared for the first time in the final rule. Pet. 13. The petitioners argue that the emission shifting analysis was defective because the EPA should have conducted updated air-dispersion modeling pursuant to 40 CFR 51.308(e)(3). Pet. 14-15. Further, the petitioners allege the EPA needed to fully account for all of the various economic and sectoral factors that could result in emissions shifting, noting that the EPA has used economic modeling for such assessments in other actions. Pet. 15. The petitioners state that the EPA should have updated its 2012 sensitivity analysis to determine the impacts of emissions shifting. Pet. 16. Finally, the petitioners argue that the EPA should have assessed the impact of SO₂ allowance-market prices and alleged “significant changes” in the cost-effectiveness and efficacy of source-specific BART. Pet. 16-17. The petitioners argue that the EPA

⁹ The Sierra Club and National Parks Conservation Association, Petition for Partial Reconsideration of Interstate Transport of Fine Particulate Matter: Revision of Federal Implementation Plan Requirements for Texas; Final Rule; 82 FR 45,481 (September 29, 2017); EPA-HQ-OAR-2016-0598; FRL-9968-46-OAR (November 28, 2017).

could have used specific information on source-specific BART controls taken from our January 2017 proposed BART rule for Texas sources, rather than continuing to rely on “presumptive” BART limits. Pet. 17. Such an analysis would have shown, according to the petitioners, that SO₂ emissions in Texas could decrease by as much as 194,000 tons rather than the 127,000 tons used to represent a BART scenario for Texas in the final rule. *Id.*

III. Criteria for Granting a Mandatory Petition for Reconsideration

Under section 307(d)(7)(B) of the act, “[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). However, “[i]f a person raising an objection can demonstrate . . . that it was impracticable to raise such objection within such time or if the grounds for such objection arose after the period for public comment . . . and if such objection is of central relevance to the outcome of the rule, the Administrator shall convene a proceeding for reconsideration of the rule.” *Id.* The EPA considers an objection to be of “central relevance” to the outcome of a rule “if it provides substantial support for the argument that the regulation should be revised.” *See Coal. For Responsible Regulation, Inc. v. the EPA*, 684 F.3d 102, 125 (D.C. Cir. 2012) (internal citation and quotation omitted).

IV. The EPA’s Evaluation of the Petition for Reconsideration

A. Summary of the EPA’s Conclusions

The petitioners’ primary objection is that the EPA’s analysis of CSAPR Better Than BART in the final rule was materially flawed and must be reconsidered to the extent it rested on an assumption that EGU BART sources in Texas would be subject to source-specific BART controls for SO₂ rather than the intrastate SO₂ trading program the EPA in fact promulgated.¹⁰ The petitioners contend that the failure to account for the BART alternative rather than source-specific BART in Texas leads to a miscalculation in the EPA’s emissions shifting analysis in the final rule. For purposes of the second prong of the two-pronged test under 40 CFR 51.308(e)(3), that analysis accounted for estimated increased SO₂ emissions of 22,300 tons in the remaining CSAPR states and assumed these increased emissions would be more than offset by an estimated 127,300 tons of SO₂ emission reductions in Texas due to source-specific BART controls.¹¹ That assumption was proven false when the EPA promulgated the Texas intrastate trading program authorizing emission levels comparable to CSAPR rather than source-specific BART.¹²

As to the Texas intrastate SO₂ trading program, the EPA concedes that the first part of the two-part test for mandatory reconsideration under CAA section 307(d)(7)(B) is met. It was “impracticable” to raise objections regarding the Texas trading program during the public comment period because the EPA did not promulgate the trading program for Texas (rather than source-specific BART controls) until after the final rule was signed and published on September 29, 2017. However, for reasons explained in Section IV.B below, the EPA concludes that this

¹⁰ *See, e.g.*, Pet. 6, 9 (citing 82 FR 45494).

¹¹ *Id.* at 13-14 (citing 82 FR 45493-94).

¹² *Id.*

objection is not of “central relevance” to the final rule, because even when CSAPR is analyzed in combination with the Texas trading program rather than source-specific BART in Texas, the EPA’s conclusion that CSAPR continues to meet the two-pronged test of 40 CFR 51.308(e)(3) remains valid. Thus, the objection fails to provide “substantial support” for the argument that the final rule should be revised. *See Coal. For Responsible Regulation, Inc. v. the EPA*, 684 F.3d 102, 125 (D.C. Cir. 2012).

With respect to the remainder of the petitioners’ objections, the EPA likewise finds that they do not satisfy either or both parts of the two-part test for mandatory reconsideration under CAA section 307(d)(7)(B). The EPA responds to each of these remaining objections in turn in Section IV.C below.

B. Relationship between the Texas BART Alternative and CSAPR Better Than BART

As an initial matter, the method by which BART requirements are addressed in Texas – whether via source-specific BART controls or a BART alternative – is neither in-scope nor relevant to the final rule or the EPA’s disposition of this petition. The EPA is taking final action in a separate administrative proceeding to affirm, with amendments, the Texas SO₂ intrastate trading program as a BART alternative meeting the requirements of 40 CFR 51.308(e)(2).¹³

This proceeding primarily concerns whether the emissions assumptions used for Texas for purposes of the second prong of the two-pronged test under 40 CFR 51.308(e)(3) in our 2017 analysis were so flawed as to lead to an incorrect result in concluding that participation in a CSAPR trading program remains a viable BART alternative. This prong concerns average visibility impacts across large numbers of class I areas. For purposes of the final rule being assessed here, the only relevant information needed to evaluate this prong of the test consists of reasonable estimates of any changes in aggregate SO₂ emissions in other CSAPR states caused by the removal of Texas units from the CSAPR SO₂ program combined with a reasonable estimate of the emissions outcome of the Texas program.

In assessing the petitioners’ objections, the EPA reviewed its analysis in the final rule, 82 FR at 45492-94, and the information about the Texas program available to the petitioners at the time they filed their petition. Although the EPA does not need to rely on the amendments to the Texas program being finalized concurrently in order to deny that the petitioners’ objections are of central relevance, we discuss below how these changes to the Texas program only strengthen the EPA’s conclusions in this regard.

1. The EPA’s Analysis in the Final Rule

¹³ Refer to Docket ID the EPA-R06-OAR-2016-0611 at www.regulations.gov. Various parties filed petitions for review in the Fifth Circuit Court of Appeals challenging the EPA’s October 17, 2017, final action promulgating the Texas trading program. *See NPCA v. EPA*, No. 17-60828 (5th Cir.) Those challenges are in abeyance pending the EPA’s proceeding on the Texas program, and the EPA anticipates that with the finalization of our affirmation with amendment of that program, all legal challenges to the Texas program will be consolidated and reviewed in the Fifth Circuit. *See* CAA section 307(b) (challenges to locally or regionally applicable actions must be brought in the regional circuit courts).

The EPA received comments on its November 2016 proposal arguing that it must assess the potential for emissions shifting from Texas back into states remaining in the CSAPR SO₂ Group 2 trading program before it could affirm that CSAPR remains better than BART with the removal of Texas from the program. *See* 82 FR at 45491-92. Thus, in the final rule, the EPA acknowledged and analyzed this potential concern. The EPA assumed that if Texas was no longer in the interstate trading program under CSAPR, this would make up to 22,300 additional SO₂ allowances available for use in the remaining CSAPR SO₂ Group 2 states (Alabama, Georgia, Kansas, Minnesota, Nebraska and South Carolina). *Id.* at 45492. The EPA arrived at this figure by examining the results of the EGU modeling for the CSAPR scenario in the 2012 CSAPR Better Than BART determination. In that EGU modeling, Texas was projected to be a net buyer of SO₂ allowances from the other CSAPR Group 2 states, in an amount of roughly 22,300 tons.¹⁴ *Id.* The EPA noted that, of the remaining Group 2 states, the allowances would most likely be used to cover increased emissions in either Alabama or Georgia, because the other Group 2 states were already emitting close to their “assurance levels” and would not be expected to exceed those levels and incur penalty surrender ratios. *Id.*; *see supra* Section I.E. The EPA then evaluated the potential impact of such a shift in emissions under both prongs of the two-pronged test for a BART alternative under 40 CFR 51.308(e)(3). As discussed in Section I.D. above, with respect to the second prong (but not the first prong), the EPA’s analysis relied in part on an assumption that the potential adverse visibility impacts of 22,300 tons of additional emissions in Alabama and Georgia would be offset by a reduction in visibility impacts from an emissions reduction of at least 127,300 tons in Texas caused by the assumed implementation of source-specific BART. 82 FR at 45492-94.

2. The Texas Program

As the EPA acknowledges above, the EPA’s assumption in the final rule that Texas sources would be subject to source-specific SO₂ BART, 82 FR at 45492-94, proved to be incorrect when the EPA subsequently promulgated a BART-alternative trading program modeled on CSAPR for Texas sources. *See supra* Section I.E. Thus, the offsetting analysis the EPA presented in the final rule to address the effects of emissions shifting as to the second prong of the two-pronged test under 40 CFR 51.308(e)(3) is, admittedly, no longer correct. However, this does not mean the petitioners’ objections are of central relevance. The relevant question is whether a corrected

¹⁴ The EPA noted in the final rule that, due to an increase in Texas’ CSAPR budget after the CSAPR modeling was completed, it may be possible that remodeling of the CSAPR scenario could have changed the quantity of allowances that Texas was projected to purchase from other states. *See* 83 FR at 45492 n.87. The EPA also observed that the maximum quantity of allowances that Texas sources could have purchased from sources in other Group 2 states and used for compliance without incurring a penalty surrender ratio was approximately 53,000 tons, the amount of the variability limit for Texas under the CSAPR SO₂ program. *Id.* at 45493. The petitioners noted the 53,000 figure in their petition. Pet. 6, 13. However, while acknowledging the possibility of a change in projected purchases, the EPA did not suggest that any such change was expected, let alone that a large increase was expected. Because the increases in the CSAPR budgets were based on the EPA’s reassessments of the cost-effective emissions reduction opportunities in each CSAPR state, and such reassessments would also have been reflected in the assumptions used in any remodeling, the most likely outcome of a remodeled scenario would have been little or no change in projected interstate purchases. Moreover, all other things being equal, as the recipient of the largest budget increase, Texas would have been less likely than other states to show an increase in interstate allowance purchases in a remodeled scenario. Thus, the EPA continues to consider 22,300 tons the most reasonable assumption to use for the magnitude of emissions shifting associated with the withdrawal of Texas EGUs from the CSAPR SO₂ program.

emissions shifting analysis that reflects the Texas BART alternative program allows the EPA to reach the same conclusion that it reached in the final rule that CSAPR remains better than BART.

As originally promulgated, the Texas program established an annual trading budget of 238,393 tons of allocated allowances and a Supplemental Allowance Pool with an annual budget of 10,000 tons. 82 FR at 48359. Under the provisions for allocating allowances from the Supplemental Allowance Pool to sources, if in a given year sources' collective emissions did not exceed the overall 238,393-ton trading budget and individual sources' emissions generally did not exceed their initial allocations from the trading budget, then not all allowances allocated to the pool in that year would be allocated to sources. In this case, the allowances could be retained in the pool and allocated to sources in a future year in which sources' emissions did exceed their initial allocations from the trading budget. The amount of allowances over the annual trading budget that could be allocated from the pool in any individual year was capped at 54,711 tons, making it theoretically possible that in some individual year, after at least five years in which all or most sources' emissions did not exceed their initial allocations from the trading budget, the sum of allocations from the trading budget and the pool could reach as high as 293,104 tons. *Id.* The EPA also assumed that certain sources previously subject to CSAPR but not included in the Texas program could emit up to 27,500 tons and were not anticipated to significantly increase emissions above that figure. *Id.* at 48360.

The petitioners indicate that these figures, taken together, indicate that the Texas program could result in emissions of as much as 320,600 tons per year. *See* Pet. at 11. This would be higher than the benchmark of 317,100 tons the EPA used to represent emissions from Texas under CSAPR in its 2012 sensitivity analysis. *See id.* Thus, the petitioners appear to argue that, if the EPA had used the 320,600-ton figure as the correct metric to represent implementation of the Texas intrastate trading program, the EPA's analysis must necessarily have reached the conclusion that with the Texas program serving as the BART alternative in a revised CSAPR scenario, CSAPR is not better than BART. *Id.*¹⁵

The petitioners' conclusion regarding the Texas program's implications for CSAPR Better Than BART is unfounded for two distinct reasons. First, just because a 317,100-ton benchmark for Texas emissions was used in the 2012 sensitivity analysis does not mean that higher assumed emissions from Texas would not have continued to support a determination that CSAPR participation qualified as a BART alternative. The petitioners present no argument that CSAPR would have failed the test under 40 CFR 51.308(e)(3) had some higher emission figure been used for Texas. Indeed, in Section IV.B.4 below, using a corrected version of the analysis the petitioners included in the petition, the EPA shows that CSAPR would continue to satisfy the numerical criteria to qualify as a BART alternative even if Texas emissions were assumed to be 320,600 tons per year.

Second, the 320,600-ton figure is an excessively conservative representation of expected emissions performance under the Texas program. The EPA's derivation of the 317,100 figure used as a benchmark in the 2012 sensitivity analysis was the result of a combination of a modeling

¹⁵ We emphasize the "apparent" nature of the petitioners' argument with respect to the Texas intrastate program, because despite noting these figures, their quantitative argument at Pet. 11-13 continues to compare the CSAPR program to a source-specific BART scenario in Texas, even though Texas is no longer in the CSAPR program.

projection of emissions under CSAPR in Texas of 266,600 tons, coupled with an assumption that all 50,517 additional tons in Texas' revised CSAPR budget would be emitted by Texas EGUs. *Id.* at 48359 n.133. The CSAPR modeling projection reflects emissions by Texas EGUs equal to the entire CSAPR budget each year, along with approximately 22,300 tons of emissions made possible by purchases of allowances from other states. Under the Texas intrastate trading program, where purchasing allowances from other states is not possible, the analogous figure to the 317,100 projection under the CSAPR scenario would generally be the sum of the Texas trading budget and the annual Supplemental Allowance Pool budget, or 248,393 tons, which is the figure the EPA assumed for average annual emissions under the program (plus an estimate of emissions from sources not covered by the program). In contrast, the petitioners' assumed 320,600-ton emissions figure for the Texas program is not derived in an analogous manner, but rather is an extreme assumption for potential emissions in a single year based on the maximum possible allowance allocations in a single year. Total allocations of this magnitude in a year would have been possible only if all allowances from prior years were not used because of emissions below the budget in those prior years.¹⁶

The petitioners had all of the information described above available to them at the time they filed their petition in November 2017. They also had access to the methodology the EPA had previously used to make conservative adjustments in its 2012 sensitivity analysis for the CSAPR Better Than BART determination. The petitioners could have used this information and methodology to evaluate whether a revised CSAPR scenario reflecting both a Texas program resulting in emissions of 248,393 tons – or even the petitioners' own preferred assumption of 293,104 tons – from covered sources and 22,300 tons of additional emissions in other Group 2 states would satisfy the criteria under 40 CFR 51.308(e)(3) for CSAPR to qualify as a BART alternative. The petitioners did not do so, but instead used the sensitivity analysis methodology and the estimated 127,300-ton emissions reduction in Texas representing presumptive source-specific BART in the final rule to present an analysis that is irrelevant to the question at issue in this proceeding. In Section IV.B.3 below, the EPA discusses why the petitioner's analysis is irrelevant and the petitioners' other methodological errors, and in Section IV.B.4 below, the EPA shows the analysis the petitioners could have performed of potential visibility impacts in all relevant class I areas using the same methodology and the other available information discussed above; this analysis, however, supports rather than undermines the continued validity of CSAPR participation as a BART alternative.

The EPA notes that, in the amendments to the Texas program finalized concurrently with this petition denial, the cap on annual allocations from the Supplemental Allowance Pool has been reduced from 54,711 tons to 16,688 tons, so that the sum of initial allocations from the trading budget and allocations from the pool in an individual year cannot exceed the final assurance level of 255,083 tons. Using this revised total in conjunction with the EPA's revised assumption of 35,000 tons for the maximum annual emissions from noncovered sources, the petitioners'

¹⁶ The EPA notes that estimated Texas emissions under CSAPR of approximately 317,100 tons (i.e. the modeled projection plus the full amount of the post-modeling budget increase) were less than the state's final CSAPR assurance level of 347,476 tons (i.e. the sum of the state's budget and variability limit). *See* 40 CFR 97.710(a)(i)(7) and (b)(7). Thus, the petitioner's repeated claims that the Texas program would allow emissions increases relative to CSAPR (*see* Pet. 9, 10, 14, 16) are incorrect, and, therefore, not of central relevance, whether one compares the expected average annual emissions under the two programs or the anticipated maximum possible emissions in an individual year under the two programs.

approach of focusing on the maximum total amount of allowances that could be issued in a single year, plus maximum emissions from noncovered sources, would now yield an amount of 290,083 tons rather than 320,600 tons. However, while this information further supports the EPA's conclusion that the Texas program is at least as stringent as CSAPR applied to Texas units would have been and further shows the EPA's conservatism in using the petitioners' assumed value of 320,600 tons in the EPA's corrections to the petitioners' analysis in Section IV.B.4 below, the EPA need not rely on this information for purposes of this petition denial, as explained below.

3. Methodological Problems in the Petitioners' Sensitivity Analysis

As discussed above, the petitioners used the methodology from the EPA's 2012 sensitivity analysis to perform a new analysis, which they presented in the petition. However, instead of evaluating whether a revised CSAPR scenario reflecting their 320,600-ton emissions assumption for Texas and the 22,300-ton figure for emissions shifted to other Group 2 states would continue to meet the second prong of the two-pronged test for a BART alternative under 40 CFR 51.308(e)(3), the petitioners presented a numerical analysis that compares the final rule's estimated 127,300-ton emissions reduction in Texas from presumptive source-specific BART to the CSAPR value for Texas and attempts to estimate the change in visibility improvement from the application of source-specific SO₂ BART in Texas only for the nine class I areas that are geographically within or closest to Texas. Pet. 11-13. There are two significant problems with the analysis.

The first and most important problem is that the analysis examines an issue that is not relevant to the question of whether CSAPR remains better than BART under the two-pronged test in 40 CFR 51.208(e)(3). For the second prong of this test, the 2012 CSAPR Better Than BART determination evaluated visibility improvement averaged over 60 eastern class I areas or 140 nationwide class I areas under a CSAPR scenario and a BART scenario. The comparison was used to determine whether the average visibility improvement from CSAPR, as applied across all CSAPR states (plus BART in the non-CSAPR states), would be greater than the visibility improvement from nationwide BART. Similarly, the final rule evaluated whether a revised CSAPR scenario reflecting the removal of Texas from the CSAPR programs for SO₂ and annual NO_x (and other changes in CSAPR's geographic scope) would continue to show greater visibility improvement than the BART scenario on average across either 60 eastern class I areas or 140 nationwide class I areas. Neither the 2012 CSAPR Better Than BART determination nor the final rule is in any way premised on selectively quantifying visibility impacts at only the class I areas nearest to Texas. While it is possible that source-specific BART in Texas might result in greater visibility improvement on the 20 percent best days or the 20 percent worst days at some class I areas near Texas, that is not part of the two-pronged test for determining whether CSAPR qualifies as a BART alternative under 40 CFR 51.308(e)(3). CSAPR is a large regional program that has beneficial visibility impacts at most class I areas in the eastern U.S., far beyond just the class I areas most affected by Texas emissions.

The second problem is that, even if selectively considering visibility impacts at only the class I areas most affected by Texas were relevant, the petitioners' analysis applies an inappropriately large adjustment factor to the visibility impacts at these class I areas. The analysis assumes the visibility improvement at the nine class I areas from the implementation of source-specific BART increases linearly with the estimated decrease in Texas emissions. Thus, because

the petitioners assumed a 68 percent emissions reduction, they also assumed a 68 percent increase in visibility improvement, which is not scientifically justified. In essence, this approach flips the conservativeness of the EPA's sensitivity analysis on its head. While the assumption of a linear relationship between emissions *increases* and visibility *degradation* is conservative for purposes of evaluating whether increases in CSAPR budgets would cause a CSAPR scenario to no longer produce greater average visibility improvement than a BART scenario, the assumption of a linear relationship between emissions *decreases* and visibility *improvement* is *not* conservative for purposes of evaluating the degree of visibility improvement achievable through the implementation of source-specific BART in Texas. The petitioners admit as much in the notes to their analysis in the appendix to the petition. Pet. Exhibit A at 7.

4. Corrected Sensitivity Analysis Showing CSAPR Better Than BART

In order to evaluate whether CSAPR participation satisfied the two-pronged test under 40 CFR 51.308(e)(3) to qualify as a BART alternative, the 2012 CSAPR Better Than BART determination relied on a modeling analysis that compared projected visibility under three scenarios: a CSAPR scenario (called the "CSAPR plus BART elsewhere" case), a BART scenario (called the "nationwide BART" case) and a baseline scenario without either CSAPR or BART. Each scenario reflected a combination of power-sector modeling and air-quality modeling. The first prong of the test is passed if visibility does not decline in any class I area in the CSAPR scenario relative to the baseline scenario. The second prong is passed if there is an overall improvement in visibility, determined by comparing the average visibility improvement on the 20 percent best days and the 20 percent worst days over all affected class I areas, in the CSAPR scenario relative to the BART scenario. In order to provide a broad interpretation of the affected class I areas, the results were averaged over the 60 eastern class I areas generally representing the CSAPR region and also over all 140 class I areas in the contiguous U.S.

Because certain CSAPR budgets increased after the modeling was conducted, the 2012 CSAPR Better Than BART determination also included a sensitivity analysis that examined the effect of the budget increases on the modeled visibility impacts for the CSAPR scenario. The EPA determined that the increases in SO₂ and NO_x budgets were small enough that they did not require a comprehensive set of new power sector and air-quality modeling. Instead, the sensitivity analysis applied a simple, but very conservative adjustment factor to the existing quantitative air-quality modeling results to show that, even with the higher emissions budgets, the CSAPR scenario was still projected to show greater reasonable progress toward natural visibility than the BART scenario. Specifically, the sensitivity analysis applied adjustments to visibility impacts in the CSAPR scenario to account for increases in the SO₂ budgets for Texas and Georgia, since SO₂-driven impacts were the most important impacts in the analysis and Texas and Georgia had the largest SO₂ budget increases. The sensitivity analysis identified sets of class I areas that are most impacted by emissions in Texas (9 areas) and Georgia (7 areas) and assumed that *all* of the modeled visibility improvement in those sets of class I areas is due to SO₂ emissions reductions from either Texas or Georgia, respectively. This methodology is highly conservative because the projected SO₂ emissions reductions in Texas and Georgia represent only 4.4 percent and 1.8 percent, respectively, of the total projected regional emissions reductions in the CSAPR scenario, and the class I areas most impacted by Texas and Georgia emissions are also affected by the very large emissions reductions projected from other states in the regional CSAPR scenario. By

assuming a linear relationship between emissions increases in Texas and Georgia and visibility degradation in those class I areas, the EPA very conservatively determined that even with the budget increases, the CSAPR scenario was projected to achieve greater visibility improvement than the BART scenario on average across all 60 eastern class I areas and all 140 nationwide class I areas, thereby satisfying the second prong of the two-pronged test under 40 CFR 51.308(e)(3). The sensitivity analysis also showed no visibility degradation in the CSAPR scenario relative to the baseline scenario at any class I area, thereby satisfying the first prong of the test.

In the final rule, the EPA evaluated whether a revised CSAPR scenario reflecting the removal of Texas EGUs from the CSAPR SO₂ program (and other changes in CSAPR's geographic scope) would continue to satisfy the two-pronged test under 40 CFR 51.308(e)(3). For purposes of the second prong, to account for the effect of emissions shifting caused by the fact that Texas sources would no longer purchase SO₂ allowances from sources in other Group 2 states, the EPA assumed that emissions in Georgia would increase by 22,300 tons, the quantity of allowances that Texas had been projected to purchase from the other Group 2 states in the original CSAPR scenario. However, the EPA also assumed that emissions in Texas would decrease by 127,300 tons because of the implementation of presumptive source-specific BART, an assumption that is no longer appropriate in light of the promulgation of the Texas intrastate trading program as an SO₂ BART alternative. Through use of the same sensitivity analysis methodology that was used in the 2012 CSAPR Better Than BART determination, it is possible to evaluate whether a revised CSAPR scenario reflecting maximum increases in emissions in Texas and Georgia relative to the 2012 modeled levels would continue to satisfy the second prong of the two-pronged test. The EPA has applied this methodology to evaluate the average visibility impacts across all 60 eastern class I areas and all 140 nationwide class I areas from emissions increases in the amounts discussed in Sections IV.B.1 and IV.B.2 above. All of the necessary information, including the sensitivity analysis methodology, was in the record for this proceeding at the time the petitioners submitted their petition or was included by the petitioners in the petition.¹⁷

As discussed in Section IV.B.1, in the final rule, the EPA assumed that up to 22,300 additional allowances each year would be available for use in other Group 2 states because of the elimination of projected allowance purchases by Texas sources and further assumed that the resulting increases in annual emissions would be most likely to occur in Georgia or Alabama. Because the EPA already has an established sensitivity analysis methodology for emissions increases in Georgia, and because it is more conservative to assume the increases occur in Georgia

¹⁷ To the extent the petitioners maintain that emissions estimates under the Texas intrastate program rather than CSAPR would be the appropriate value to use, and these were not available at the time the EPA took final action in September 2017, such arguments are not meritorious for several reasons. First, in their own analysis, the petitioners themselves continued to use the CSAPR value for Texas, despite having information about the Texas program available to them. This is presumably in recognition that the EPA intentionally designed the Texas program to be equivalent to CSAPR. Second, using a higher estimate of 320,600, which the petitioners purport represents emissions under the Texas program (it does not), provides an even more conservative assessment that still fails to validate the petitioners' claims, as explained below. Third, the difference between a roughly 317,100 and 320,600 figure is ultimately trivial and, again, does not change the result of the EPA's analysis. Fourth, even if a figure representing the Texas program is more appropriate for this analysis, this figure was available to the petitioners "during the period for judicial review" on the September 2017 final rule, i.e. when the EPA published its final rule for Texas, which was before the petitioners submitted their petition.

than in Alabama, for purposes of this analysis the EPA has assumed the entire 22,300-ton increase occurs in Georgia.¹⁸ As discussed in Section IV.B.2, the petitioners assert that the EPA should have assumed annual emissions in Texas of up to 320,600 tons per year. While the EPA considers this figure to be excessively conservative, the figure is being used here to demonstrate the visibility impacts of a revised CSAPR scenario using Petitioners' own assumptions.¹⁹ Thus, for purposes of this sensitivity analysis, emissions in both Georgia and Texas are assumed to be higher than the emissions that were used in the sensitivity analysis performed as part of the 2012 CSAPR Better Than BART determination.

Tables 1, 2 and 3 below show the average visibility improvement from the modeled baseline across all 60 eastern class I areas and all 140 nationwide class I areas for both the 20 percent best days and the 20 percent worst days for the CSAPR (plus BART elsewhere) and nationwide BART scenarios. In each table, the yellow highlighted columns (best days) are compared to each other and the orange highlighted columns (worst days) are compared to each other. The results are expressed in deciviews; negative values reflect improvements in visibility.

The results in Table 1 are for the original CSAPR Better Than BART analysis from the 2011 proposed rule. These results show that CSAPR plus nationwide BART elsewhere is clearly better than nationwide BART.

Table 1. 2011 CSAPR Better Than BART Prong 2 Analysis (Original CSAPR Better Than BART with No Adjustment)

Average Visibility Change	CSAPR+BART – 2014 base 20% best days	Nationwide BART – 2014 base 20% best days	CSAPR+BART – 2014 base 20% worst days	Nationwide BART – 2014 base 20% worst days
140 class I areas	-0.1	-0.1	-0.7	-0.5
60 eastern class I areas	-0.3	-0.2	-1.6	-1.0

The results in Table 2 are from the 2012 CSAPR Better Than BART final rule. These numbers include the conservative adjustment to account for increased SO₂ emissions budgets in Texas and Georgia.

¹⁸ A 22,300 ton SO₂ budget increase represents 29 percent of the modeled SO₂ emissions decrease in Georgia, but only 9 percent of the modeled SO₂ emissions decrease in Alabama. Therefore, in the context of the sensitivity methodology, an emissions increase in Georgia has approximately three times more visibility impact per ton than an emissions increase in Alabama. Consequently, assuming the increase occurs in Georgia results in calculation of much larger visibility impacts than would be the case if the increase were assumed to occur in Alabama.

¹⁹ The EPA notes that an assumption of 320,600 tons of emissions is equivalent to assuming emissions from sources covered by the Texas trading program of 248,395 tons (the total of the 238,395-ton trading budget and the 10,000-ton Supplemental Allowance Pool budget) as well as up to 72,206 tons of emissions from noncovered sources, which is higher than any total amount of emissions projected from the noncovered sources in any document in the record for this proceeding, including the power sector modeling runs for all scenarios used in the 2012 CSAPR Better Than BART determination.

Table 2. 2012 CSAPR Better Than BART Prong 2 Analysis (2012 adjusted Texas and Georgia emissions)

Average Visibility Change	CSAPR+BART – 2014 base 20% best days	Nationwide BART – 2014 base 20% best days	CSAPR+BART – 2014 base 20% worst days	Nationwide BART – 2014 base 20% worst days
140 class I areas	-0.1	-0.1	-0.6	-0.5
60 eastern class I areas	-0.2	-0.2	-1.3	-1.0

The results in Table 3 show the updated CSAPR Better Than BART results after applying the new Texas and Georgia adjustments.

Table 3. 2017 CSAPR Better Than BART Prong 2 Analysis (updated 2020 adjusted Texas and Georgia emissions)

Average Visibility Change	CSAPR+BART - 2014 base 20% best days	Nationwide BART - 2014 base 20% best days	CSAPR+BART - 2014 base 20% worst days	Nationwide BART - 2014 base 20% worst days
140 class I areas	-0.1	-0.1	-0.5	-0.5
60 eastern class I areas	-0.2	-0.2	-1.2	-1.0

The results in Table 3 show that continuing the highly conservative adjustment methodology and using the petitioners’ own assumption for emissions in Texas under the Texas intrastate trading program, the average visibility improvement in the CSAPR scenario is still equal to or greater than the visibility improvement in the BART scenario on both the 20 percent best days and the 20 percent worst days (averaged over the 60 eastern class I areas and the 140 nationwide class I areas). Thus, the sensitivity analysis supports the EPA’s conclusion that CSAPR participation remains a valid BART alternative. Along with the other flaws in the petitioners’ analysis the EPA identifies above, this analysis demonstrates that the petitioners’ objections concerning the EPA’s use of an incorrect assumption in the emission shifting analysis in the final rule would not change the outcome of the proceeding. Thus, the petitioners’ objections do not meet the “central relevance” part of the two-part test for mandatory reconsideration under CAA section 307(d)(7)(B).

C. Other Objections Raised by the Petition

1. Other Objections to the EPA’s Emissions Shifting Analysis

The petitioners claim that because the EPA’s November 2016 proposal to affirm the CSAPR Better Than BART determination did not contain the emissions shifting analysis included in the September 2017 final rule, the petitioners’ lack of opportunity to comment on the emissions shifting analysis is a basis for mandatory reconsideration of the final rule. Pet. 13-14. In Section IV.B above, the EPA has addressed this claim specifically to the extent that it relates to the EPA’s

reliance in the emissions shifting analysis on an assumption that was subsequently proved incorrect – namely the assumption that BART-eligible sources in Texas would be subject to source-specific BART determinations. As to the remainder of the claim, the EPA does not agree that an additional opportunity for comment is mandatory in the circumstances here, where a supporting analysis has been added to a final action to directly respond to comments received on the proposal and nothing in the petition indicates that the EPA’s analysis in the final action was incorrect.

The EPA concedes that it presented its assessment of emission shifting potential for the first time in the final action, but this was in response to comments raising this very concern. In general, agencies are not required to initiate a new round of public comment where new information in the final rule is presented to respond to comment and merely strengthens the basis for the proposed action rather than producing a different result. Further, “the EPA undoubtedly has authority to promulgate a final rule that differs in some particulars from its proposed rule.” *Small Refiner Lead PhaseDown Task Force v. EPA*, 705 F.2d 506, 546 (D.C. Cir. 1983). If that were not the case, the purpose of notice and comment – to allow an agency to reconsider, and perhaps revise, a proposed rule based on the comments submitted – would be undermined and agencies could either be “forced into perpetual cycles of new notice and comment periods” or “refuse to make changes in response to comments.” *Ass’n of Battery Recyclers, Inc. v. the EPA*, 208 F.3d 1047, 1058 (D.C. Cir. 2000). Thus, when considering the adequacy of notice and comment under both the *Administrative Procedure Act* and CAA section 307(d), courts ask whether the final rule is a “logical outgrowth” of the proposal. *Small Refiner*, 705 F.2d at 546. Updating and expanding an analysis in a final rule to respond to comments and establish why they do not lead the agency to a different approach than what it proposed often meets the “logical outgrowth” test. *See Community Nutrition Inst. v. Block*, 749 F. 2d 50, 58 (D.C. Cir. 1984); *Solite Corp. v. EPA*, 952 F.2d 473, 484-85 (D.C. Cir. 1991).

Here, the EPA’s regulatory action taken in the final rule is substantively identical to the regulatory action discussed in the proposal. Indeed, all of the objections in the petition addressed in this section of our analysis are already addressed in the record of the September 2017 final rule.

Thus, even if part one of the test for mandatory reconsideration could be established as to these objections (which it is not), the petitioners have failed to establish that their objections are of central relevance. In particular, they fail to demonstrate in the petition how any information that they allege the EPA failed to consider would have led to a different conclusion as to whether CSAPR qualifies as a BART alternative under either prong of the two-pronged test in 40 CFR 51.308(e)(3). As noted in Section IV.B.1 above, for purposes of the second prong of the test, which considers average visibility impacts across all affected class I areas, the only relevant information needed to support the EPA’s conclusion that CSAPR continues to pass this prong consists of reasonable estimates of any changes in aggregate SO₂ emissions in other CSAPR states caused by the removal of Texas units from the CSAPR SO₂ program combined with a reasonable estimate of the emissions outcome of the Texas program. In response to the claims in the petition, the EPA has shown that this prong of the test continues to be met through the updated sensitivity analysis in Section IV.B.4, using only information in the record or in the petition and using the same methodology that was in the original 2012 CSAPR Better Than BART determination and that was adapted (incorrectly) by the petitioners in the petition.

The first prong of the test in 40 CFR 51.308(e)(3) concerns whether visibility under a revised CSAPR scenario would decline in any class I area relative to the baseline scenario. For purposes of addressing this prong in the final rule, the EPA explained that, although the withdrawal of Texas units from the CSAPR SO₂ program emissions was projected to result in the availability of additional allowances in the remaining Group 2 states and a consequent potential decrease in the price of allowances for the units in those states, the units in those states would generally not be expected to increase their emissions above their emission levels in the baseline scenario, where they faced no allowance price at all. 82 FR at 45493. The EPA further explained that exceptions to this economic principle would result only if some other factor influencing the units' operating decisions also changed because of the withdrawal of Texas units from the program. *Id.* The EPA identified and evaluated the potential impacts of two such non-allowance-related factors: demand for generation from other states (which could change if sources in Texas chose to import more electricity in a revised scenario because of their own increased environmental compliance costs) and relative fuel prices in other states (which could change if sources in Texas switched fuels as an environmental compliance strategy in a revised scenario). *Id.*²⁰

The petitioners do not challenge the economic principle underlying the EPA's analysis as summarized above, i.e. that all else being equal, in a revised CSAPR scenario with an allowance price, units would not generally be expected to significantly increase their emissions above their emission levels in a baseline scenario with no allowance price. Nor do petitioners identify any alleged errors in the EPA's assessment that the factors identified as having the potential to cause an exception in unusual instances – changes in relative fuel prices or the demand for generation – would not be expected to cause exceptions in this case. Rather, the petitioners list several additional factors that they allege the EPA should have considered while providing no discussion of how consideration of the additional factors would have been expected to change the conclusion of the EPA's analysis. Pet. 15, 16.

The EPA disagrees that consideration of the additional factors identified by the petitioners would have altered the analysis. One of the identified factors – allowance prices, *see* Pet. 16 – in fact was explicitly considered, and indeed was central to the EPA's comparison of a revised CSAPR scenario with an allowance price to a baseline scenario with no allowance price. Several of the identified factors – shutting units down, purchasing allowances and shifting generation to other units, *see* Pet. 15 – are mechanisms through which the influence of allowance prices on unit behavior affects emissions, and as such were addressed by proxy through the EPA's consideration of the effects on emissions of allowance prices and changes in relative fuel prices or the demand for generation. The last two identified factors – changes over time in market conditions and in BART determinations, *see* Pet. 15, 16 – are irrelevant to the question of whether a revised CSAPR scenario reflecting a different geographic scope for CSAPR implementation would result in emissions increases at some units sufficient to cause visibility degradation relative to a baseline scenario without CSAPR or BART.²¹

²⁰ Although in the final rule the EPA focused this explanation on units in the remaining Group 2 states, consistent with the concerns expressed in the comments on the November 2016 proposal, 82 FR at 45493 n.88, the EPA's explanation applies equally to units in Texas under the subsequently adopted Texas intrastate trading program.

²¹ The petitioners' claims that the EPA not only should have considered changes in the geographic scope of CSAPR but also should have updated other assumptions and performed new modeling are discussed in Sections IV.C.2 and IV.C.3 below.

In summary, none of the claims raised by the petitioners that the EPA should have considered additional factors in the emissions shifting analysis are of central relevance to the question of whether a CSAPR scenario revised to address changes in CSAPR's geographic scope would continue to pass either prong of the two-pronged test for a BART alternative under 40 CFR 51.308(e)(3).

2. The EPA's Continued Reliance on the Modeling Performed for the 2012 Analysis

The petitioners object to the EPA's continued reliance in the final rule on the emissions and air dispersion modeling performed for the 2012 CSAPR Better Than BART determination. This objection does not meet either part of the two-part test for mandatory reconsideration. With respect to the first part of the test, the petitioners could have commented and in fact did comment on this issue in response to the November 2016 proposal, and the EPA responded to those comments in the final rule. *See* 82 FR at 45491.

With respect to the second part of the test, the objection is also not of central relevance. To reiterate the points the EPA made in the final rule, *id.*: the EPA agrees that where a BART alternative is expected to result in a different distribution of emissions than BART, use of the two-pronged test under 40 CFR 51.308(e)(3) requires performance of an air-quality modeling analysis, which the EPA has done here. Contrary to the petitioners' suggestions, the regulations do not require performance of a new modeling analysis to address every change in assumptions. Here, the EPA has identified reasonable methodologies and conservative assumptions to evaluate the effects of limited changes in CSAPR's geographic scope on the results of the analysis conducted for the 2012 CSAPR Better Than BART determination. Based on that evaluation, the EPA has found that there is no reason to expect any change in the original conclusion that both prongs of the two-pronged test under 40 CFR 51.308(e)(3) would be satisfied. In these circumstances, there is no need for a new round of modeling. Further, as the EPA explained in the final rule when responding to the petitioners' similar comment on the November 2016 proposal, "the ... assertion that changes in industry data since 2011 necessitate a new analytic demonstration amounts to a call for recurring demonstrations that a BART alternative results in greater reasonable progress than BART as the industry evolves, rather than a one-time demonstration when the alternative is approved. The regulations include no such requirement for recurring demonstrations." 82 FR at 45491.

3. Use of Presumptive BART Limits in Analysis of Texas

The petitioners object to the EPA's use of presumptive BART to represent the cost-effectiveness and efficacy of source-specific BART for purposes of comparison to BART alternatives. This objection does not meet either part of the two-part test for mandatory reconsideration. With respect to the first part of the test, the petitioners could have commented on this issue in response to the November 2016 proposal. The EPA included in the proposal a description of the BART scenario, including the fact that modeled emission rates in that scenario generally reflected presumptive BART as specified in the BART guidelines. 81 FR at 78961. Thus, notice of the continued use of presumptive BART in the analysis was clearly provided at proposal. The petitioners' failure to raise the issue in comments on the proposal does not entitle them to raise

it as a basis for mandatory reconsideration where it was “practicable” for them to have done so during the comment period.

Nonetheless, even assuming the first part of the CAA section 307(d)(7)(B) test is met (which it is not), with respect to the second part of the test, the objection is not of central relevance, because the use of presumptive BART, while identified as a part of the methodology in the 2016 proposal, was not actually reopened in the proposal or the 2017 final rule and is thus not within scope of the action. As an initial matter, the EPA’s ability to use “category-wide” information such as presumptive BART limits has been settled law for some time. Indeed, in *UARG II*, the D.C. Circuit held that challenges to the use of presumptive BART in the 2012 CSAPR Better Than BART rule were *already* time-barred attacks on the EPA’s underlying regulations. *See* 885 F.3d 714, 719. In the November 2016 proposal, the EPA identified the relevant question to be addressed as whether the analytic demonstration used to support the 2012 CSAPR Better Than BART determination would still support that determination if the changes to CSAPR’s geographic scope made in response to the D.C. Circuit’s remand of several CSAPR budgets had been reflected in the analysis. 81 FR at 78958. Changes to assumptions other than CSAPR’s geographic scope, such as changes to the assumptions used regarding BART emission limits, are beyond that limited scope. Further, the petitioners’ claim that the BART assumptions should be revised based on newer or more specific data is another version of the more general claim that the EPA was obligated to revise the 2012 analytic demonstration more broadly to address changes in market and industry conditions since 2011. However, as explained in Section IV.C.2 above, such a claim amounts to an unsupported assertion that the *Regional Haze Rule* requires recurring demonstrations that BART alternatives make greater reasonable progress than BART instead of a one-time demonstration. Thus, the petitioners’ objections to the use of presumptive BART assumptions in the CSAPR Better Than BART analysis are beyond the scope of the 2017 action and therefore not of central relevance for purposes of mandatory reconsideration.

V. Conclusion

For the forgoing reasons, the EPA is denying the Sierra Club and the National Parks Conservation Association’s November 28, 2017, petition for reconsideration of the EPA’s final rule. This denial of the petition for reconsideration is effective immediately.