

PUBLISH

UNITED STATES COURT OF APPEALS

October 21, 2014

TENTH CIRCUIT

Elisabeth A. Shumaker
Clerk of Court

WILDEARTH GUARDIANS;
HEAL UTAH; NATIONAL PARKS
CONSERVATION ASSOCIATION;
POWDER RIVER BASIN
RESOURCE COUNCIL; SIERRA
CLUB;

Petitioners,

v.

UNITED STATES
ENVIRONMENTAL PROTECTION
AGENCY; GINA McCARTHY,
Administrator, United States
Environmental Protection Agency,

Respondents.

PUBLIC SERVICE COMPANY OF
NEW MEXICO; PACIFICORP;
NEW MEXICO ENVIRONMENT
DEPARTMENT; BASIN
ELECTRIC POWER
COOPERATIVE; STATE OF
WYOMING; UTAH ASSOCIATED
MUNICIPAL POWER SYSTEM;
UTAH DIVISION OF AIR
QUALITY; CITY OF
ALBUQUERQUE,

Intervenors,

and

AMERICAN COALITION FOR

Nos. 12-9596, 13-9502, 13-9506,
13-9507, 13-9508, 13-9509,
13-9510

CLEAN COAL ELECTRICITY,

Amicus Curiae.

**PETITIONS FOR REVIEW OF FINAL DECISIONS ISSUED BY
THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Nos. EPA-R06-OAR-2009-0050, EPA-R08-OAR-2011-0400,
EPA-R08-OAR-2011-0114, EPA-RO6-OAR-2008-0702**

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Before **BACHARACH**, **SEYMOUR**, and **MURPHY**, Circuit Judges.

BACHARACH, Circuit Judge.

This appeal grows out of the Clean Air Act. In an effort to comply with the statute, three states (New Mexico, Utah, and Wyoming), one city (City of Albuquerque), and one county (Bernalillo County) adopted a regional cap-and-

trade program regulating sulfur-dioxide emissions over the Colorado Plateau.¹ Under this program, each participant obtained a ceiling on sulfur-dioxide emissions. If the ceiling was met, polluters would get allocations of sulfur dioxide that could be emitted. With these allocations, polluters had a choice. They could use the allocations or cut emissions and trade the unused portions of the allocations.

The program required approval of the Environmental Protection Agency. In determining whether to approve the program, the EPA had to apply its regulations. Under these regulations, states could satisfy the Clean Air Act by ensuring installation of the best available retrofit technology in all eligible major sources that contributed to visibility impairment. This mode of compliance is referred to as “BART.” States affecting visibility over the Colorado Plateau were allowed to use an alternative program in lieu of BART. But this alternative program had to be better than BART in improving air visibility.

¹ Final Rule, Approval and Promulgation of State Implementation Plans; Wyoming, 77 Fed. Reg. 73,926, 73,926 (Dec. 12, 2012); Final Rule, Approval, Disapproval and Promulgation of State Implementation Plans; Utah, 77 Fed. Reg. 74,355, 74,355 (Dec. 14, 2012); Final Rule, Approval and Promulgation of State Implementation Plans; New Mexico, 77 Fed. Reg. 70,693, 70,693 (Nov. 27, 2012); Final Rule, Approval and Promulgation of State Implementation Plans; City of Albuquerque-Bernalillo County, 77 Fed. Reg. 71,119, 71,119 (Nov. 29, 2012).

New Mexico, Utah, Wyoming, the City of Albuquerque, and Bernalillo County persuaded the EPA that the trading program would yield better results than BART because:

- the program covered polluters that would not have been subject to BART,
- the program encompassed emissions from new sources, which would not have been subject to BART, and
- the program encouraged polluters to expedite equipment upgrades and to operate below full capacity.

Five environmental groups filed petitions for review,² arguing that the EPA should not have approved the trading program. To decide these petitions, we must determine whether the EPA acted arbitrarily and capriciously in finding that the trading program was better than BART. We conclude that the EPA's decision was neither arbitrary nor capricious. Thus, we deny the petitions for review.

I. The Clean Air Act and the EPA's Regulatory Framework

The petitions require an understanding of the statutory and regulatory requirements for alleviation of air pollution.

A. Statutory Requirement for EPA Guidelines

The Clean Air Act requires the EPA to establish regulations to ensure "reasonable progress" toward the improvement in visibility and

² The Petitioners are WildEarth Guardians, Heal Utah, National Parks Conservation Association, Powder River Basin Resource Council, and Sierra Club.

“compliance with the requirements of [42 U.S.C. § 7491].”³ 42 U.S.C. § 7491(a)(4). In light of this requirement, the EPA had to establish regulations requiring states to develop implementation plans to improve visibility and adopt, maintain, and enforce air quality standards. *Id.* §§ 7410(a)(1), 7491.

Under the statutory scheme, the EPA would then review the state implementation plans to ensure compliance with the Clean Air Act and implementing regulations. *Id.* §§ 7410(a)(3)(B), 7492(e)(2); *see Oklahoma v. EPA*, 723 F.3d 1201, 1204 (10th Cir. 2013). Once approved, state implementation plans would be enforceable as federal law. 42 U.S.C. §§ 7413, 7604.

States implementing the BART requirement do so in two steps: (1) identify the sources subject to BART, and (2) determine the particular technologies required for individual sources. 40 C.F.R. § 51.308(e)(1); *see Util. Air Regulatory Grp. v. EPA*, 471 F.3d 1333, 1335-36 (D.C. Cir. 2006). In considering the required technologies, states must consider five factors for each BART-eligible source:

- (1) the costs of compliance;

³ “Reasonable progress” is measured by comparing “the costs of compliance, the time necessary for compliance, . . . the energy and nonair quality environmental impacts of compliance, and the remaining useful life of any existing [regulated] source” (known as the “four factors”). *See* 42 U.S.C. § 7491(g)(1); 40 C.F.R. § 51.308(d)(1)(i)(A).

- (2) the energy and nonair quality environmental impacts of compliance;
- (3) the existing pollution control technologies already in place;
- (4) the remaining useful life of the source; and
- (5) the improvement in visibility anticipated from the use of given technologies.

42 U.S.C. § 7491(g)(2).

B. Regulations Governing the Colorado Plateau

Congress also enacted legislation requiring the EPA to establish a visibility transport commission to study regional haze in the Grand Canyon and to recommend curative action. 42 U.S.C. § 7492(f).

To comply, the EPA established the Grand Canyon Visibility Transport Commission, which would “assess scientific, technical, and other information related to adverse visual air quality impacts from potential or projected emissions growth from sources located in the Transport Region.” Joint App. at 71. Upon completion of this assessment, the Transport Commission would report to the EPA on appropriate measures to improve visual air quality on the Colorado Plateau. *Id.*⁴

⁴ The EPA expanded the scope of the Grand Canyon Visibility Commission’s review to include sixteen Class I areas in the vicinity of the Grand Canyon. With this expansion, the Commission addressed visual air quality in the “Golden Circle” of parks and wilderness areas in the Colorado Plateau. *See* Notice of Meeting, Grand Canyon Visibility Transport Commission, 56 Fed. Reg. 57,522, 57,523 (Nov. 12, 1991).

1. The Grand Canyon Visibility Transport Commission

The Transport Commission analyzed the effects of regional haze in sixteen Class I areas⁵ affected by pollution in nine states (Arizona, California, Colorado, Idaho, Nevada, New Mexico, Oregon, Utah, and Wyoming).⁶ 42 U.S.C. § 7492(c)(1); Final Rule, Regional Haze Regulations, 64 Fed. Reg. 35,714, 35,770 (July 1, 1999).

Based on this analysis, the Transport Commission recommended a regional cap-and-trade program for sulfur dioxide that would go into effect when participating states exceed an emissions target. Joint App. at 56. Details of the program would be worked out later.

The functions of the Transport Commission were passed on to the Western Regional Air Partnership, which continued the study and recommended a plan. *Id.* at 190. The plan included:

- (1) milestones to measure reductions in regional emissions of sulfur dioxide, and

⁵ Class I federal areas include all regions as of August 7, 1977, consisting of national wilderness areas and national memorial parks exceeding 5,000 acres, national parks exceeding 6,000 acres, and international parks. *See* 42 U.S.C. § 7472(a).

⁶ The sixteen Class I areas are the Grand Canyon National Park, Sycamore Canyon Wilderness, Petrified Forest National Park, Mount Baldy Wilderness, San Pedro Parks Wilderness, Mesa Verde National Park, Weminuche Wilderness, Black Canyon of the Gunnison Wilderness, West Elk Wilderness, Maroon Bells Wilderness, Flat Tops Wilderness, Arches National Park, Canyonlands National Park, Capital Reef National Park, Bryce Canyon National Park, and Zion National Park. 40 C.F.R. § 51.309(b)(1).

(2) a trading program for the nine states.

The trading program acted as a “backstop,” which would be triggered only if the milestones were reached.

2. The Regional Haze Rule

In 1999, the EPA adopted the Transport Commission’s recommendations in its Regional Haze Rule, 40 C.F.R. §§ 51.308, 51.309. This rule requires states to develop programs that assure reasonable progress toward meeting the national goal of addressing visibility impairment in Class I areas. 40 C.F.R. § 51.300(a). Sections 51.308 and 51.309 create two methods of compliance.

Under the first method, states can submit an implementation plan containing emission limitations applying BART for each BART-eligible source impairing visibility in a Class I area. 40 C.F.R. § 51.308(e).

The second method is authorized in 40 C.F.R. § 51.309. Through this method, states could use the Transport Commission’s cap-and-trade program if participants would expect better results than they would have had under BART regulations. The cap-and-trade program is known as the “309 program.”⁷

The 309 program establishes voluntary measures to reduce sulfur-dioxide emissions through milestones providing “steady and continuing

⁷ States opting for a 309 program still had to comply with § 51.308 with respect to any other Federal Class I area not encompassed in the 309 program. 40 C.F.R. § 51.309(a).

emissions reductions through 2018.” 40 C.F.R. § 51.309(d)(4)(i). After 2018, the milestone remains constant until the states submit revised implementation plans. *Id.* § 51.309(d)(4)(vi)(A). These milestones must provide a “50 to 70 percent reduction in [sulfur dioxide] emissions from 1990 actual emission levels by 2040.” *Id.* § 51.309(d)(4)(i).

If sulfur-dioxide emissions surpass the milestone, a backstop regional emission trading program would be triggered. Under the program, sources are given a set volume of emissions. Any source exceeding its allowance must pay a penalty and suffer a loss in its allotted emissions. Joint App. at 226-27. To encourage early reductions in emissions, the trading program provided additional allocations to sources that reduce emissions ahead of schedule.

Upon approval of an implementation plan, the EPA would regard the state to be in compliance through 2018 with the reasonable-progress requirement for the sixteen Class I areas encompassed in the 309 program. 40 C.F.R. § 51.309(a). For additional Class I areas not covered in the 309 program, the state had to show long-term strategies under § 308. *Id.* § 51.309(g).

3. The D.C. Circuit Court’s Rulings

After the Western Regional Air Partnership submitted its report, Arizona, New Mexico, Oregon, Utah, Wyoming, the City of Albuquerque, and Bernalillo County chose to participate in the 309 program.

Before the EPA acted on these participants' submissions, the D.C. Circuit Court of Appeals invalidated part of the § 51.308(e) methodology (requiring evaluation of progress by considering emission reductions in the aggregate). *Am. Corn Growers Ass'n v. EPA*, 291 F.3d 1, 8-9 (D.C. Cir. 2002).

The EPA continued to apply the invalidated methodology in the context of determining whether the 309 program was better than BART, but the D.C. Circuit Court of Appeals again struck down the EPA's action in *Center for Energy & Economic Development v. EPA*, 398 F.3d 653, 660 (D.C. Cir. 2005). There the court upheld the EPA's view that an alternative program could satisfy the reasonable progress goals. But, the court held that the EPA should not have used the invalidated methodology. *Ctr. for Energy & Econ. Dev.*, 398 F.3d at 654.

4. Regional Haze Rule Revisions

In 2006, the EPA responded to these decisions by revising the Regional Haze Rule, making the evaluation of the final BART factor a source-by-source determination rather than one based on an evaluation of emission reductions in the aggregate. Final Rule, Regional Haze Regulations; Revisions to Provisions Governing Alternative to Source-Specific BART Determinations, 71 Fed. Reg. 60,612, 60,612-13 (Oct. 13, 2006). Thus, the participating states had to resubmit implementation plans.

5. Subsequent Implementation Plans Adopting 309 Program

Arizona and Oregon decided not to participate in the 309 program. But New Mexico, Utah, Wyoming, the City of Albuquerque, and Bernalillo County resubmitted plans for a 309 program. In the new plans, the participants adjusted the emission milestones to account for withdrawal of Arizona and Oregon and reductions already achieved under the 2003 milestones. Joint App. at 426, 430-38.

The new implementation plans set the following regional milestones:

- 269,083 tons of sulfur dioxide in 2008,
- 234,903 tons of sulfur dioxide in 2009,
- 200,722 tons of sulfur dioxide in 2010-2012,
- 185,795 tons of sulfur dioxide in 2013,
- 170,868 tons of sulfur dioxide in 2014,
- 155,940 tons of sulfur dioxide in 2015-17, and
- 141,849 tons of sulfur dioxide in 2018 and beyond.

Id. at 461.

When determining whether the 309 program would outperform BART, the participants considered BART-eligible sources and other sources. Because presumptive rates were not established for the other sources, the states analyzed individual sources to determine the emission-rate benchmark for sources that were ineligible under BART. *Id.*

The 309 program set the 2018 milestone to the BART benchmark based on the presumptive BART in Appendix Y. But New Mexico, Utah, Wyoming, the City of Albuquerque, and Bernalillo County determined that the 309 program would outperform BART by:

- encouraging early cuts in emissions,
- including non-BART stationary sources, covering 63 more sources that produce emissions,
- capping growth in new sources,
- addressing not only stationary sources but also mobile sources, fire, and clean air corridors (which are not covered by BART), and
- establishing a “mass-based cap,” which created an absolute limit on allowable emissions (unaffected by demand fluctuations or operational malfunctions that could increase emissions).

In 2011, New Mexico, Utah, Wyoming, the City of Albuquerque, and Bernalillo County revised their implementation plans adopting the 309 program. In late 2012, the EPA approved the plans, finding that the 309 program would achieve greater reasonable progress than BART. *Id.* at 1-53. The Petitioners challenge the EPA’s approval of the 309 program.

II. Standard of Review

The Clean Air Act authorizes judicial review of the EPA’s approval of state implementation plans, but does not designate the applicable standard of review. 42 U.S.C. § 7607(b)(1). In conducting this review, we

are bound by the Administrative Procedure Act. *See Oklahoma v. EPA*, 723 F.3d 1201, 1211 (10th Cir. 2013) (“We follow the standards of the Administrative Procedure Act . . . in reviewing the EPA’s actions under the [Clean Air Act].”).

Under the Administrative Procedure Act, we can reverse agency action only if it is “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 5 U.S.C. § 706(2)(A). This standard requires us to determine whether the agency considered the relevant data and rationally explained its decision. *See In re FCC*, 753 F.3d 1015, 1041 (10th Cir. 2014). Under this standard, we will not disturb an agency action unless the agency

relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.

Motor Vehicle Mfrs. Ass’n of the U.S., Inc. v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983).

If the agency’s “path may reasonably be discerned” from its explanation, we will not disturb the action even when the explanation is not entirely clear. *Alaska Dep’t of Env’tl. Conservation v. EPA*, 540 U.S. 461, 497 (2004) (quoting *Bowman Transp., Inc. v. Ark.-Best Freight Sys., Inc.*, 419 U.S. 281, 286 (1974)). When an agency acts under an “unwieldy

and science-driven statutory scheme[] like the Clean Air Act, ” we afford the agency ““particular deference.”” *Nat’l Ass’n of Clean Air Agencies v. EPA*, 489 F.3d 1221, 1229 (D.C. Cir. 2007) (quoting *Bluewater Network v. EPA*, 372 F.3d 404, 410 (D.C. Cir. 2004)).

III. The EPA’s Approval of the Implementation Plans

The environmental groups argue that:

- the 309 program does not achieve greater reasonable progress than implementation of BART,
- the 309 program will not achieve reasonable progress toward eliminating visibility impairment because only three of the nine eligible states participated, and
- New Mexico’s program is deficient based on the failure to analyze emissions from the Escalante coal plant.

We reject each argument.

A. The EPA’s Determination that the 309 Program Was Better than BART

The Regional Haze Rule establishes three steps for states to follow when determining whether an alternative program is better than BART:

- (1) establish a BART benchmark and predict emission reductions if BART were implemented;
- (2) predict the emission reductions from an alternative program; and
- (3) compare the two.

40 C.F.R. § 51.308(e)(2).

The environmental groups contend that the EPA acted arbitrarily and capriciously because:

- the BART benchmark improperly adopted the presumptive emission rate established in Appendix Y of the BART guidelines,
- the participants misapplied the “clear weight of the evidence” standard, and
- the participants overstated the effectiveness of the 309 program by inappropriately considering qualitative factors.

The EPA’s approval of the better-than-BART determination was not arbitrary or capricious because:

- the presumptive BART benchmark was appropriate under the Clean Air Act and Regional Haze Rule,
- the Regional Haze Rule allows comparison of BART to the alternative measure through a “clear weight of the evidence” standard, and
- the participants properly considered qualitative factors in determining the effectiveness of the 309 program.

1. BART Benchmark

When approving the implementation plans, the EPA concluded: “The BART benchmark calculation . . . was not intended to assess actual emissions at BART subject sources nor was it intended to assess the control capabilities of later installed controls. Instead, the presumptive [sulfur dioxide] emissions rate served as a necessary simplifying assumption.” Wyoming Rule, 77 Fed. Reg. at 73,929-30.

The environmental groups challenge this conclusion, arguing that source-specific data showed that actual emissions fell below the BART benchmark. For this argument, the environmental groups rely on a report prepared by their expert witness, Ms. Vicki Stamper. Ms. Stamper concluded that source-by-source BART analyses and actual emissions were lower than the presumptive BART benchmark used to approve the 309 program.

Relying on Ms. Stamper's conclusions, the environmental groups contend that:

- the participants should have conducted a source-by-source BART analysis instead of relying on the presumptive BART benchmark, and
- the BART benchmark was inappropriate.

The first argument is untimely. Under federal law, a petitioner has only 60 days to sue after the agency acts. 42 U.S.C. § 7607(b)(1); *see Utah v. EPA*, 750 F.3d 1182, 1184 (10th Cir. 2014). The environmental groups failed to comply with this deadline.

The environmental groups' second challenge, involving the validity of the BART benchmark, fails on the merits.

a. The 309 Program's Presumptive BART Benchmark

The first challenge requires an understanding of:

- the regulatory requirements for states to establish the BART benchmark, and

- how the participants used the presumptive BART benchmark in their better-than-BART analyses.

As noted above, participants in the 309 program had to determine the “BART benchmark,” which represents the expected emissions under a BART regime. *See* 40 C.F.R. § 51.308(e)(2).

The BART benchmark is typically set by determining how much sulfur dioxide would be emitted by each BART-regulated source. *See id.* § 51.308(e)(2)(i)(C) (“This analysis must be conducted by making a determination of BART for each source subject to BART and covered by the alternative program as provided for in [the subsection outlining the BART determination].”).

But an exception exists when the alternative program is designed to achieve a requirement other than BART, such as the reasonable progress goals. In this situation, a source-by-source BART determination is not necessary to determine the BART benchmark. Instead, the state could determine the BART benchmark “based on both source-specific and category-wide information, as appropriate.” *Id.*

The 309 program was designed to implement something other than BART: the recommendations of the Transport Commission toward eradication of regional haze over the Colorado Plateau. Accordingly, the participants did not need to conduct source-by-source BART

determinations to establish the BART benchmark. And the participants did not do so.

Instead, the participants relied on the Western Regional Air Partnership's better-than-BART analysis. As the BART benchmark, the Air Partnership determined that "[a]ll utilities that were determined to be subject to BART were assumed to be operating at the presumptive emission rate established in 40 CFR Part 51, Appendix Y [0.15 pound per million British thermal units]." Joint App. at 435.

The "Appendix Y" presumptive emission rate refers to the EPA's 2005 amendment to the Regional Haze Rule, which added guidelines to instruct states analyzing individual sources under BART. *See* 70 Fed. Reg. 39,131-32; 40 C.F.R. pt. 51, App. Y. In Appendix Y, the EPA established a presumptive BART emission rate of 0.15 pound per million British thermal units for BART-eligible sources.

The Western Regional Air Partnership relied on Appendix Y's presumptive emission rate for all but two BART-eligible sources. For these two sources (the Hunter and Huntington power plant units), a lower BART emission rate of 0.12 pound per million British thermal units was used based on limits already in place. Joint App. at 448.

b. Timeliness

The environmental groups argue that the participants should have set the BART benchmark by predicting emissions for each BART-regulated

source (rather than relying on the presumptive rate in Appendix Y). This argument is not timely.

When amending the Regional Haze Rule in 2006, the EPA recognized that “the [Appendix Y] presumptions represent[ed] a reasonable estimate of a stringent case BART.” 71 Fed. Reg. at 60,619. In light of the reasonableness of this estimate, the EPA decided in 2006 that participants could rely on the presumptive rate when attempting to meet a requirement other than BART. By using the presumptive rate, participants could avoid the need to predict emissions for each source under a BART system of regulation. *Id.* at 60,618-19.

The environmental groups argue that the participants should have conducted their own source-specific BART analyses. In the absence of these analyses, the environmental groups contend that the EPA arbitrarily approved use of the presumptive BART benchmark. In effect, this contention challenges the EPA’s 2006 amendment establishing use of the presumptive BART benchmark. We can adopt this view only if we conclude that the EPA erred in adopting the Appendix Y BART as a presumptive benchmark.⁸

⁸ The environmental groups deny that they are asserting a need for a source-by-source BART determination. But in her expert report, Ms. Stamper stated that § 51.308(e)(2)(i)(C) required a source-by-source BART determination. Joint App. at 684. And the environmental groups rely heavily on this report in criticizing the presumptive BART benchmark.

It is too late for the Petitioners to make this argument. If the environmental groups wished to challenge adoption of Appendix Y as the presumptive BART emission rate, they had to file a petition for review within 60 days of the EPA's publication of the 2006 amendment to the Regional Haze Rule. *See* 42 U.S.C. § 7607(b)(1); *Utah v. EPA*, 750 F.3d 1182, 1184 (10th Cir. 2014). That amendment was published in the Federal Register on October 13, 2006, and the petitions for review were not filed until more than six years later (December 2012 and January 2013). *See* 71 Fed. Reg. at 60,612; 40 C.F.R. Pt. 51, App. Y. Accordingly, we lack jurisdiction over a challenge to the EPA regulation authorizing use of Appendix Y in lieu of a source-by-source determination. *See Utah*, 750 F.3d at 1184; *Utah v. EPA*, ___ F.3d ___, Nos. 13-9535, 13-9536, 2014 WL 4345770, at *5 (10th Cir. Sept. 3, 2014).

Pet'rs' Opening Br. at 34, 41 (arguing that the presumptive BART was "much *less stringent than* source-by-source BART determinations").

In their reply brief, the environmental groups retreat from this argument: "Contrary to EPA's assertions in its answering brief, Petitioners do not contend that states participating in the 309 Program must conduct source-by-source BART determinations based on the methodology in 40 C.F.R. § 51.308(e)(1) and the BART Guidelines in order to develop a valid BART benchmark." Pet'rs' Reply Br. at 6.

Even if the environmental groups had not retreated from this argument, it would have been untimely. Thus, we need not address the parties' disagreement over Ms. Stamper's opinions on emissions from BART-regulated sources. *See, e.g.,* Industry Intervenors' Response Br. at 34.

c. Actual Emissions Lower than the Presumptive BART Emission Rate

The environmental groups also invoke § 51.308(e)(2)(i)(C), arguing that the EPA should have considered whether use of category-wide information was “appropriate.” Pet’rs’ Reply Br. at 26; *see* 40 C.F.R. § 51.308(e)(2)(i)(C).⁹ This argument stems from unreasonable assumptions about the information available to the states when they submitted their plans.

According to the environmental groups, most BART-eligible sources emitted less sulfur dioxide than the presumptive benchmark would allow and the EPA elsewhere projected even lower presumptive emission rates. In the face of this data, the environmental groups argue that § 51.308(e)(2)(i)(C) would prohibit states from relying on Appendix Y’s presumptive BART rate.

⁹ The environmental groups argue:

Petitioners challenge EPA’s application of th[e] authorization [to use a simplifying presumption] and interpretation to establish the BART benchmark despite readily available category-wide and source-specific evidence that the presumptive rate is not an “appropriate” simplifying assumption because it grossly underestimates the emission reductions achievable by installing BART at the affected sources.

Pet’rs’ Reply Br. at 26.

This argument is based largely on the report of Ms. Stamper, who said that 17 of the BART-eligible sources had emission rates that dipped below the rates allowed in Appendix Y. Reliance on Ms. Stamper's report is misguided. Ms. Stamper relied on contemporaneous measures of emissions post-dating the participants' implementation plans, and the EPA regulations expressly allowed reliance on the presumptive rate.

The Western Regional Air Partnership submitted its better-than-BART determination in October 2010, and the participants relied on this determination in their 2011 implementation plans. Joint App. at 435; *see* Final Rule, Approval and Promulgation of State Implementation Plans; Wyoming, 77 Fed. Reg. 73,926, 73,926 (Dec. 12, 2012); Final Rule, Approval, Disapproval and Promulgation of State Implementation Plans; Utah, 77 Fed. Reg. 74,355, 74,355 (Dec. 14, 2012); Final Rule, Approval and Promulgation of State Implementation Plans; New Mexico, 77 Fed. Reg. 70,693, 70,693 (Nov. 27, 2012); Final Rule, Approval and Promulgation of State Implementation Plans; City of Albuquerque-Bernalillo County, 77 Fed. Reg. 71,119, 71,119 (Nov. 29, 2012).

The environmental groups contend that the participants should have accounted for actual emissions. The EPA could reasonably conclude that inclusion of Ms. Stamper's data would have been infeasible, for the better-than-BART determination resulted from coordinated efforts by the

participants over several years¹⁰ and much of the omitted data did not even exist until this process had almost come to an end. Thus, the EPA rejected the environmental groups' insistence that the participants should have incorporated the new data. Joint App. at 30-31. This conclusion was not arbitrary or capricious. *See San Luis & Delta-Mendota Water Auth. v. Jewell*, 747 F.3d 581, 620-21 (9th Cir. 2014) (holding that the Fish and Wildlife Service's choice of a baseline, though imperfect, was not arbitrary or capricious because removal of the imperfections would not have been feasible).

Reliance on Ms. Stamper's data was not only infeasible, but also invalid under the EPA regulations. These regulations expressly allowed participants to use the presumptive benchmark to predict emissions instead of assessing how much pollution would be emitted from each source under a BART regime. 71 Fed. Reg. at 60,618-19. Ms. Stamper's analysis suggests that the presumptive benchmark is overly generous for some sources. But imprecision is inherent in the nature of a simplifying assumption.

In arguing that the EPA disregarded site-specific information, the environmental groups refer to two units (the Hunter Unit 1 and the Dave Johnson Unit 4) and point out that the EPA used actual emissions in the Cross-State Air Pollution Rule. *See* Final Rule, Regional Haze; Revision

¹⁰ Joint App. at 175, 426.

to Provisions Governing Alternatives to Source-Specific BART Determinations, 77 Fed. Reg. 33,642, 33,649 (June 7, 2012); Proposed Rule, Regional Haze; Revisions to Provisions Governing Alternatives to Source-Specific BART Determinations, 76 Fed. Reg. 82,219, 82,225-26 (Dec. 30, 2011).

The EPA's use of actual emissions in one rule does not require the EPA to use actual emissions in every rule. And, the regulations expressly allow participants to use the benchmark in lieu of actual emissions. Thus, the EPA interpreted its Regional Haze Rule and concluded:

- “[T]here is no need to develop a precise estimate of the emissions reductions that could be achieved by BART in order simply to compare two programs,” and
- “the [Appendix Y] presumptions represent a reasonable estimate of a stringent case BART.”

71 Fed. Reg. at 60,618-19.

This interpretation was reasonable. Section 51.308 mandates the use of source-specific and category-wide information “as appropriate.” 40 C.F.R. § 51.308(e)(2)(i)(C). Information may be appropriate in one context, but not another. Section 51.308 provides flexibility in what may be considered, and the EPA reasonably interpreted that provision.

d. The EPA's Statements Regarding Appendix Y's Presumptive BART

The environmental groups also argue that the presumptive rate (0.15 pound per million British thermal units) is rebuttable and serves only as

the starting point of the BART analysis. Pet'rs' Opening Br. at 42. This argument is rejected.

For this argument, the environmental groups refer to other rules in which the EPA has clarified the BART analysis for states and the role of Appendix Y. *Id.* at 43. For example, the environmental groups point to the rejection of Arkansas' implementation plan, where the EPA said that states must ““consider the level of control that [was] currently achievable at the time the BART analysis [was] being conducted.”” *Id.* (quoting Final Rule; Approval and Promulgation of Implementation Plans; Arkansas, 77 Fed. Reg. 14,604, 14,613-14 (Mar. 12, 2012)).

This argument overlooks a critical distinction. In the cited instances, the states were conducting a BART analysis. Here, they weren't. Instead, the participants in our case were conducting a better-than-BART determination. This analysis required a comparison of the 309 program to the BART benchmark, which adopted Appendix Y's presumptive BART as a simplifying assumption. The environmental groups have not identified any authority requiring a source-by-source analysis for states conducting a 309 program.

2. Comparison of the 309 Program to BART

At the second and third stages of the better-than-BART analysis, the participant must:

- (1) predict the emission reductions achieved by implementing the alternative program (the second stage), and
- (2) compare the effectiveness of the alternative measure to the effectiveness of implementing BART (the third stage).

40 C.F.R. § 51.308(e)(2)(i)(D), (E). The environmental groups challenge the EPA's approval at both stages.

At the third stage, the groups claim that the participants used an improper method of comparison. And at the second stage, the groups allege improper reliance on qualitative factors to bolster the effectiveness of the 309 program. Because the applicability of qualitative factors at the second stage depends on the method used at the third stage, we first address whether the participants used the proper method to compare the 309 program to BART.

a. Comparison of the Milestones (in the 309 Program) to BART

The EPA compared the 309 program as a whole to BART. The environmental groups suggest in their reply brief that the EPA should have compared the 309 program milestones (rather than the 309 program as a whole) to the effectiveness of BART. *See* 40 C.F.R. § 51.309(d)(4)(i). But we cannot entertain this suggestion because it was unexhausted and omitted in the environmental groups' opening brief.

Under the Clean Air Act, “[o]nly an objection to a rule or procedure which was raised with reasonable specificity during the period for public comment (including any public hearing) may be raised during judicial

review.” 42 U.S.C. § 7607(d)(7)(B); *see EPA v. EME Homer City Generation, L.P.*, __ U.S. __, 134 S. Ct. 1584, 1602 (2014) (holding that satisfaction of § 7607(d)(7)(B) was mandatory, but not jurisdictional). But the environmental groups failed to raise this issue in the EPA proceedings. That failure renders the claim unexhausted. *See Oklahoma v. EPA*, 723 F.3d 1201, 1214-15 (10th Cir. 2013).

Even in the present action, the environmental groups did not raise the issue until they filed their reply brief. By then it was too late to raise a new issue. *See M.D. Mark, Inc. v. Kerr-McGee Corp.*, 565 F.3d 753, 768 n.7 (10th Cir. 2009) (the “general rule in this circuit is that a party waives issues and arguments raised for the first time in a reply brief”).

We decline to entertain this issue, for it was not exhausted or raised in the environmental groups’ opening brief.

b. Consideration of Qualitative Factors

The EPA determined that the 309 program as a whole was more effective than a fully implemented BART regime because the 309 program:

- (1) included non-BART sources of sulfur-dioxide emissions,
- (2) included new sources of emissions,
- (3) created a “mass-based” cap covering emissions in the aggregate, and
- (4) encouraged early reductions in emissions.

The environmental groups characterize this rationale as qualitative and argue that the EPA should instead have focused solely on quantitative considerations. We reject this argument.

i. Failure to Use § 51.308(e)(3)'s Method

According to the environmental groups, a quantitative approach was required in 40 C.F.R. § 51.308(e)(3). Instead of using one of the quantitative methods, the groups continue, the EPA improperly applied a qualitative standard (“clear weight of the evidence”).

Section 51.308(e)(2)(i) sets out the process to compare an alternative program to BART. This section did not initially articulate a method for the comparison. The EPA considered a method that would compare the “expected visibility improvement under the alternative program and under BART according to the criteria established in § 51.308(e)(3).” Proposed Rule, Regional Haze Regulations; Revisions to Provisions Governing Alternative to Source-Specific BART Determinations, 70 Fed. Reg. 44,154, 44,158 (Aug. 1, 2005). The EPA also sought comment on: (1) whether § 51.308(e)(3) provided the sole way to demonstrate greater reasonable progress, or (2) whether qualitative factors could be considered. *Id.*

In 2006, the EPA determined that § 51.308(e)(3) should not serve as the only means to show “greater reasonable progress.” Thus, the EPA amended § 51.308(e)(2)(i) to add “E,” which authorized use of the “clear weight of evidence” standard as a way of showing that the alternative

program was better than BART. Final Rule, Regional Haze Regulations; Revisions to Provisions Governing Alternative to Source-Specific BART Determinations, 71 Fed. Reg. 60,612, 60,622 (Oct. 13, 2006). Under § 51.308(e)(2)(i)(E), the better-than-BART analysis may be made “under paragraph (e)(3) of this section or otherwise based on the clear weight of evidence that the trading program or other alternative measure achieves greater reasonable progress than would be achieved through the installation and operation of BART at the covered sources.” 40 C.F.R. § 51.308(e)(2)(i)(E).

Accordingly, the regulation establishes two ways that a state can compare a 309 program to BART. The state can use the two quantitative methods stated in § 51.308(e)(3) or apply a qualitative standard (the clear weight of evidence). *See* 71 Fed. Reg. at 60,622 (“With respect to the use of a ‘weight of evidence’ approach as an alternative to the methodology of section 51.308(e)(3), we support the use of such a test as an alternative to the methodology set forth in section 51.308(e)(3).”).

The participants chose the qualitative standard, which was permissible under the EPA’s interpretation of its regulations. *See Fed. Express Corp. v. Holowecki*, 552 U.S. 389, 397 (2008) (“Just as we defer to an agency’s reasonable interpretations of [its authorizing] statute when it issues regulations in the first instance, . . . the agency is entitled to further

deference when it adopts a reasonable interpretation of regulations it has put in force.” (citation omitted)).

ii. Qualitative v. Quantitative Factors

The environmental groups argue that even if § 51.308(e)(3) did not furnish the exclusive methodology, the participants should not have relied on qualitative factors because:

- (1) the EPA sought comment on, but did not adopt, a “qualitative” means of evaluating whether an alternative program was better than BART, and
- (2) when adding a “clear weight of the evidence” standard, the EPA identified only quantitative emissions and visibility data as appropriate for a better-than-BART determination.

These arguments do not suggest arbitrariness or capriciousness by the EPA. Both arguments depend on the environmental groups’ interpretation of the EPA regulations. The EPA expressly concluded that a participant could use the “clear weight of the evidence” standard. When using this standard, however, the EPA sanctioned consideration of “all available information.”¹¹ There was no prohibition against the consideration of qualitative evidence.

¹¹ In its final rule adding the “clear weight of the evidence” standard as one means of determining that an alternative program was better than BART, the EPA clarified:

“Weight of evidence” demonstrations attempt to *make use of all available information and data which can inform a decision* while recognizing the relative strengths and weaknesses of that information in arriving at the soundest decision possible.

It is true that the EPA provided examples that are quantitative. *See* Final Rule, Regional Haze Regulations; Revisions to Provisions Governing Alternative to Source-Specific BART Determinations, 71 Fed. Reg. 60,612, 60,622 (Oct. 13, 2006). But the EPA pointed out that these examples were not exhaustive and that the determination should be based on “all available information and data which can inform a decision while recognizing the relative strengths and weaknesses of that information in arriving at the soundest decision possible.” *Id.*

Because this language supports the EPA’s interpretation of its regulation, we do not regard the use of qualitative factors as arbitrary or

Factors which can be used in a weight of evidence determination in this context *may include, but not be limited to*, future projected emissions levels under the program as compared to under BART, future projected visibility conditions under the two scenarios, the geographic distribution of sources likely to reduce or increase emissions under the program as compared to BART sources, monitoring data and emissions inventories, and sensitivity analyses of any models used. This array of information and other relevant data may be of sufficient quality to inform the comparison of visibility impacts between BART and the alternative program. In showing that an alternative program is better than BART and when there is confidence that the difference in visibility impacts between BART and the alternative scenarios are expected to be large enough, a weight of evidence comparison may be warranted in making the comparison. The EPA will carefully consider the evidence before us in evaluating any [state implementation plans] submitted by States employing such an approach.

Final Rule, Regional Haze Regulations; Revisions to Provisions Governing Alternative to Source-Specific BART Determinations, 71 Fed. Reg. 60,612, 60,622 (Oct. 13, 2006) (emphases added).

capricious. *See Fed. Express Corp. v. Holowecki*, 552 U.S. 389, 397 (2008).

c. The Qualitative Factors

The EPA relied on four factors that could be considered “qualitative”:

- (1) The trading program included sources not subject to BART regulation;
- (2) the trading program discouraged emissions from new sources more effectively than a BART regime would have done;
- (3) the trading program included an aggregate cap on emissions, which would have decreased emissions more effectively than BART; and
- (4) the trading program encouraged earlier reductions than under a BART regime.

Joint App. at 31-32. These considerations provided a reasonable basis for the EPA’s approval of the 309 program.

i. Emission Reductions from Non-BART Sources

In concluding that the 309 program would outperform BART, the EPA relied in part on inclusion of “all sources with emissions greater than 100 tons/year of [sulfur dioxide].” *See id.* at 516. The threshold for regulation under BART would have been much higher. *See* 40 C.F.R. § 51.301 (stating that sources are eligible for BART if they can emit 250 tons of sulfur dioxide per year, were built between 1962 and 1977, and fall within one of the specified source categories).

The environmental groups criticize the EPA for considering potential reductions in emissions involving non-BART sources. The groups argue that rather than consider non-BART sources, the EPA should have confined its analysis to BART-eligible sources.

We disagree. The environmental groups are relying on regulatory language applicable to the first step of the better-than-BART analysis (the determination of the BART benchmark), not the comparison of BART to the alternative program.

Under 40 C.F.R. § 51.308(e)(2)(i), subsections “A” through “C” outline the requirements to determine the BART benchmark, the first step of the better-than-BART determination. 40 C.F.R. § 51.308(e)(2)(i)(A)-(C). Subsection “D” addresses the second step: “[a]n analysis of the projected emissions reductions achievable through the trading program or other alternative measure.” *Id.* § 51.308(e)(2)(i)(D). And, as previously discussed, subsection “E” states how one compares the relative successes of the alternative program and BART, the third and final step in the better-than-BART analysis. *Id.* § 51.308(e)(2)(i)(E) (requiring a comparison of “the trading program or other alternative measure” with BART).

Accordingly, the environmental groups are mistaken. The EPA could reasonably read “D” and “E” to allow comparison of BART to the entirety of the alternative program (including the non-BART-eligible sources).

Thus, the EPA acted reasonably when it considered non-BART sources at the second and third steps of the better-than-BART determination.

ii. Emission Reductions from New Sources

The environmental groups also argue that the EPA incorrectly considered emission reductions from new sources. New sources would not be subject to BART because they would have been built after 1977. *See id.* § 51.301. The groups contend that new sources are already subject to regulations that are more effective than a cap on emissions in the 309 program. We reject this contention.

As the environmental groups state, new sources of emissions are independently regulated by the Clean Air Act. 42 U.S.C. §§ 7411, 7475, 7503; *see United States v. DTE Energy Co.*, 711 F.3d 643, 644-45 (6th Cir. 2013) (“New Source Review [under the Clean Air Act] forbids the construction of new sources of air pollution without a permit.”). Thus, even without the trading program, new sources would need to show that they meet emission standards based on the “best available control technology.” 42 U.S.C. § 7475(a)(4). But, the EPA could reasonably conclude that the 309 program would go beyond the existing regulatory process in reducing emissions from new sources.

The environmental groups contend that a cap would prove meaningless by allowing new sources to obtain allocations equaling the maximum emissions already allowed. We disagree.

Under the new-source regulatory scheme, new-source emissions were limited but not capped. The EPA set out to establish a cap through approval of 309 programs. With caps, the EPA expected polluters to adopt voluntary measures to reduce emissions. Joint App. at 431-32, 438. The EPA coupled this strategy with regulation for new sources. *Id.* This two-fold strategy for new sources had a reasonable foundation: The EPA hoped to reduce emissions for new sources by regulating them and encouraging voluntary reductions in emissions. *Id.* at 31-32.

According to the environmental groups, the cap is ineffective because it accommodated construction of all projected new electric generating units proposed, which renders the “cap” on future sources no better than the new-source regulatory scheme. *Id.* at 212, 432. Under the 309 program, however, the 2018 milestone continues as an emission cap for sulfur dioxide until the participants obtain approval of revised implementation plans. Accordingly, any post-2018 growth will be limited unless a revised implementation mandates otherwise. In view of this strategy by the EPA, its consideration of new sources was not arbitrary or capricious.

iii. “Mass-Based Cap” on Sulfur-Dioxide Emissions

The environmental groups also contend that:

- (1) the EPA improperly relied on the purported benefits of a “mass-based cap” on sulfur-dioxide emissions,

- (2) the mass-based cap cannot outperform BART because the cap assumes that sources were operating at 85% capacity when many of those sources were actually operating at lower capacity,
- (3) setting the assumption of capacity so high allows sources to actually increase emissions, and
- (4) BART would reduce emission rates across all operations even when they are operating at less than full capacity.

The EPA disagreed and had a reasonable foundation for its disagreement.

Id. at 31-32.

The Western Regional Air Partnership designed the mass-based cap to allow for an increase in operating capacity at existing sources in light of a projected increase in electrical needs. By setting the assumed capacity at 85%, designers of the program established room for sources to adapt to future needs. The EPA approved the mass-based cap only after concluding that a cumulative limit on emissions would be more effective than BART.

It is true that a source's presumptive capacity may be higher than the actual capacity at any given time. But this possibility does not render the EPA action arbitrary or capricious. The participants followed the concept stated by the Western Regional Air Partnership, setting a cap based on projected increases in electrical needs and accommodation of future growth. *Id.* at 32. Based in part on the Air Partnership's analysis, the EPA determined that the 309 program would be better than a BART system of regulation. *Id.* This determination was not arbitrary or capricious.

iv. Early Emission Reductions

In 1996, the Transport Commission recommended that the market trading program “contain specific provisions to encourage and reward early emission reductions, including reductions achieved before 2000.” *Id.* at 437 (internal quotation marks omitted). Following this recommendation, the participants provided additional allocations to sources that reduce emissions ahead of schedule.

In its 2010 report, the Western Regional Air Partnership concluded that participants in the trading program had decreased sulfur-dioxide emissions:

- 25% between 1990 and 2000 in the nine states eligible to participate in the 309 program, and
- an additional 31% between 2000 and 2008 in the participating states.

Id. at 438. The Western Regional Air Partnership attributed these reductions to the 2003 implementation plans.

The environmental groups question the connection between the early reductions and the 309 program. But the EPA never attributed the early reductions to the 309 program. Instead, the EPA simply said that it could not discount the possibility of a causal relationship. For example, when approving the 309 program, the EPA stated that it could not “discount that the 2003 309 [state implementation plan] submittal may have already influenced sources to upgrade their plants before any case-by-case BART

determination under Section 308 may have required it.” Final Rule, Approval and Promulgation of State Implementation Plans; Wyoming, 77 Fed. Reg. 73,926, 73,930 (Dec. 12, 2012).

In oral argument, the EPA acknowledged that it was aware of the early reductions, but did not explicitly attribute them to the 309 program. Instead, the EPA argued that proof of a causal relationship was unnecessary. Oral Arg. 31:45-35:29. We agree: The EPA was not required to prove a causal relationship between the already-achieved emission reductions and the decade-long progression of the 309 program. Rather, in its better-than-BART determination of the 309 program, the EPA had to predict whether the alternative program would yield greater reductions than a fully-implemented BART regime. *See* 40 C.F.R. § 51.308(e)(2)(i).

The existing reductions tended to support the soundness of a strategy encouraging early reductions through the 309 program. The EPA had no need to go further by proving actual causation between the strategy and the early reductions. Thus, the EPA did not act arbitrarily or capriciously in considering the early-reduction incentives.

d. Summary

The approval of the participants’ better-than-BART determination was not arbitrary or capricious, and we reject the criticism of the EPA’s

reliance on qualitative factors and application of the “clear weight of the evidence” standard.

B. “Critical Mass” of Participating States in 309 Program

We must also address the soundness of the 309 program based on the number of states and tribes refusing to participate. Six out of the nine eligible states refused to participate, as did every one of the 211 eligible tribes. Joint App. at 426, 652. The environmental groups argue that without greater participation, the 309 program was doomed to fail. The EPA acted reasonably in rejecting this argument.

1. Timeliness

The EPA contends that this challenge was not raised in a timely manner. For this contention, the EPA characterizes the challenge as an attack on the Regional Haze Rule.

We disagree with this characterization. The environmental groups are not questioning the absence of a critical mass requirement in the Regional Haze Rule. Instead, the groups are contending that the participating states are too few to satisfy the statutory goal of reasonable progress. The groups’ contention addresses the EPA’s approval, rather than the validity of the Regional Haze Rule. This contention is timely.

2. The Absence of a Statutory or Regulatory Requirement of Minimum Participation

Though the argument is timely, it is invalid because neither the Clean Air Act nor the EPA regulations require participation by a certain number of states or tribes. *See* 40 C.F.R. § 51.309(a), (e).

Without a statutory or regulatory requirement, the environmental groups rely on the EPA's proposed 2002 rulemaking. There the EPA stated:

The requirements in 40 CFR 51.309, if revised, will be the product of a substantial effort by many States, Tribes, Federal agencies, and other interested parties, extending over a number of years from the work of the [Grand Canyon Visibility Transport Commission] to that of the [Western Regional Air Partnership]. The EPA recognizes, however, that the States and Tribes do have the option of implementing the regional haze rule under 40 CFR 51.308 rather than 40 CFR 51.309. Because the objective of 40 CFR 51.309 is to provide a regional approach to protecting air quality at the 16 Class I areas on the Colorado Plateau, EPA believes that there must be a "critical mass" of States participating for 40 CFR 51.309 [state implementation plans] to be approvable.

Proposed Rule, Proposed Revisions to Regional Haze Rule to Incorporate Sulfur Dioxide Milestones and Backstop Emissions Trading Program, 67 Fed. Reg. 30,418, 30,420 (May 6, 2002); *see also* Final Rule, Revisions to Regional Haze Rule to Incorporate Sulfur Dioxide Milestones and Backstop Emissions Trading Program, 68 Fed. Reg. 33,764, 33,770 (June 5, 2003) ("The EPA continues to believe, as discussed in the proposal, that

judgments on the issue of ‘critical mass’ are best left to the [Western Regional Air Partnership].”).

Later in this proposed revision, however, the EPA indicated that it would “defer to the [Western Regional Air Partnership’s] judgment on the issue of ‘critical mass,’ and . . . request[ed] comment on this proposal.” 67 Fed. Reg. at 30,427. And the Western Regional Air Partnership did not require participation by a minimum number of states or tribes. *See* Joint App. at 174-267.¹² Accordingly, the EPA did not impose such a requirement. *See* 77 Fed. Reg. at 24,769-70 (“Section 51.309 does not require the participation of a certain number of States to validate its effectiveness.”).

¹² Instead, the Air Partnership proposed further study on the number and diversity of sources needed to make the program viable:

The Annex has been developed based on the Grand Canyon Visibility Transport Commission recommendations, which assumed that all of the states and tribes in the transport region would participate in the program. The regional haze rule establishes two paths for states: implement the Commission recommendations, including the backstop trading program under §309; or develop an independent plan under §308. An important issue still to be addressed is the effect on the trading program if one or more states and tribes do not choose to participate. Will there be enough sources or enough diversity in the program to create a viable market? Will the administrative costs of the program be justifiable with a smaller group of states and tribes? To address these questions, the [Western Regional Air Partnership] needs to evaluate the economics of the program, and determine the critical mass that is needed to create a viable program.

Joint App. at 234.

3. The Environmental Groups' Arguments on the Soundness of the EPA's Conclusion

The environmental groups argue that not enough states are participating to allow reasonable progress because:

- the three states participating in the 309 program contribute only a small percentage of the sulfur dioxide in Utah's Class I areas and the Colorado Plateau, and
- sources in the three participating states could shift emissions to unregulated sources.

The arguments do not render the EPA's determination arbitrary or capricious because states remain regulated under BART when they decline to participate in the 309 program. With continued regulation under BART, the EPA reasonably concluded that the 309 program could work effectively even without participation from heavy polluters. Joint App. at 29-30.

The environmental groups challenge the factual basis for this conclusion because:

- the 3 states generating the greatest emissions (Nevada, California, and Arizona) chose not to participate,
- the 309 program excludes dozens of coal-fired power plants,
- the 309 program encompasses only 15 coal-fired power plants, and
- the participating states contribute only 36% of the sulfur-dioxide emissions over the Colorado Plateau.

These factual arguments do not undermine the reasonableness of the EPA's prediction. Notwithstanding exclusion of many heavy polluters, the EPA legitimately predicted that the 309 program would make "reasonable

progress” toward improvement of visibility over the Colorado Plateau. *Id.* The excluded sources would still be regulated, though not under the 309 program.

The environmental groups counter that:

- the exclusions prevent the 309 program from qualifying as a “regional” program, and
- the existence of a regional program is necessary for the EPA to satisfy the statutory and regulatory purposes.

Pet’rs’ Reply Br. at 46-47 (citing 42 U.S.C. § 7492(c)). We disagree.

Section 7492 states that “[w]henver . . . the current or projected interstate transport of air pollutants from *one or more States* contributes significantly to visibility impairment in class I areas located in the affected States, the Administrator may establish a transport region for such pollutants that includes such States.” 42 U.S.C. § 7492(c)(1) (emphasis added). Accordingly, the statutory authorization of regional programs does not require a minimum number of participating states. *See id.*

The environmental groups also assert that exclusion of major coal-fired power plants from the nonparticipating states would lead sources in the three participating states to shift emissions to unregulated sources. Pet’rs’ Opening Br. at 51. To illustrate this assertion, the environmental groups refer to power plants owned by PacifiCorp. PacifiCorp could shift emissions from power plants in Wyoming and Utah (states participating in the 309 program) to power plants in Arizona and Colorado

(nonparticipating states). This shift would allow PacifiCorp to comply with the milestones established in the 309 program while increasing emissions in the nonparticipating states. According to the environmental groups, this shift would impede the overall reduction of emissions in the region and could even worsen visibility.

As support, the environmental groups cite the EPA's statements in the Clean Air Interstate Rule:

Inclusion of all units substantially in the electricity sales business minimizes the potential for shifting utilization, and emissions, *from regulated to unregulated* units in that business and thereby freeing up allowances, with the result that total emissions from generation of electricity for sale exceed the [Clean Air Interstate Rule] emissions caps. The fact that units in the electricity sales business are generally interconnected through their access to the grid significantly increases the potential for utilization shifting.

Final Rule, Rule to Reduce Interstate Transport of Fine Particulate Matter and Ozone (Clean Air Interstate Rule), 70 Fed. Reg. 25,162, 25,277 (May 12, 2005) (emphasis added).¹³

¹³ The D.C. Circuit Court of Appeals struck down the Clean Air Interstate Rule, reasoning that it violated the statutory prohibition against contribution of pollution in downwind states from sources within the upwind states. *North Carolina v. EPA*, 531 F.3d 896, 908 (D.C. Cir. 2008); *see North Carolina v. EPA*, 550 F.3d 1176, 1178 (D.C. Cir. 2008) (en banc) (deciding to leave the Clean Air Interstate Rule in place until the EPA could promulgate additional regulations). The D.C. Circuit Court of Appeals reached this conclusion because the cap-and-trade program in the Clean Air Interstate Rule would not “assure that upwind states will abate their unlawful emissions as required by section 110(a)(2)(D)(i)(I).” *North Carolina*, 531 F.3d at 906. Essentially, the D.C. Circuit Court of Appeals agreed that upwind states participating in the regional trading program

The environmental groups overlook a vital distinction: Even when a state does not participate in the 309 program, it must comply with § 51.308. Accordingly, approval was not arbitrary or capricious based on the refusal of 6 states and 211 tribes to participate.

4. Inconsistency and a Lack of Explanation

The environmental groups argue that the EPA changed its position regarding the “critical mass” of participating states without sufficient explanation. *See* Pet’rs’ Opening Br. at 53. We reject this argument.

An unexplained deviation from past practice can render an agency’s decision arbitrary and capricious, but inconsistency with past practice “is not a basis for declining to analyze the agency’s interpretation[s].” *Nat’l Cable & Telecomms. Ass’n v. Brand X Internet Servs.*, 545 U.S. 967, 981 (2005). “[I]f the agency adequately explains the reasons for a reversal of policy, ‘change is not invalidating.’” *Id.* (quoting *Smiley v. Citibank (S.D.), N.A.*, 517 U.S. 735, 742 (1996)).

The EPA never stated, one way or the other, whether a critical mass of participating states was necessary for the success of a 309 program. Instead, the EPA explicitly deferred to the judgment of the Western Regional Air Partnership, which did not make a recommendation on

could trade emissions with other states to avoid the statutory duty to reduce emissions. *Id.* Here, however, the environmental groups do not assert that shifting of emissions between sources would allow the participating states to avoid their statutory duties.

whether to require a minimum number of states. *See* 67 Fed. Reg. at 30,427; Joint App. at 174-267. Because the EPA did not render an opinion on the critical-mass requirement, its approval of the 309 program was not arbitrary and capricious based on an alleged inconsistency with prior policy.

C. Emissions from the Escalante Coal Plant in New Mexico's Implementation Plan

The environmental groups also challenge the EPA's approval of New Mexico's implementation plan in areas beyond the Class I areas subject to the 309 program. In this challenge, the groups argue that the EPA did not account for emissions from the state's second-largest non-BART coal plant, the Escalante coal plant. 42 U.S.C. § 7491(b)(2)(B); 40 C.F.R. § 51.308(d)(1), (3). We reject this argument.

1. Background

The environmental groups' argument requires examination of the regulatory and factual setting for New Mexico's implementation plan.

a. Reasonable Progress Goals in § 51.308(d)(1)

The regulations require states to establish reasonable progress goals through deciviews that would: (1) improve visibility during the most impaired days, and (2) ensure no degradation in visibility on the least impaired days. 40 C.F.R. § 51.308(d)(1). The related analysis involves two steps.

In the first step, states consider four factors:

- (1) the cost of compliance;
- (2) the time necessary for compliance;
- (3) the energy and non-air quality environmental impacts of compliance; and
- (4) the remaining useful life of any potentially affected sources.

Id. § 51.308(d)(1)(i)(A).

In the second step, states determine the rate of required progress by comparing the baseline visibility conditions to natural visibility conditions that are expected by 2064. *Id.* § 51.308(d)(1)(i)(B). In this step, the state considers:

- what progress is needed to obtain natural visibility conditions by 2064, and
- what would be needed for the duration of the implementation plan.

Id.

If the state determines that it cannot reach the uniform rate of progress, it must demonstrate that a slower rate of progress is reasonable and that the greater rate of progress is unreasonable. *Id.*

§ 51.308(d)(1)(ii).

b. New Mexico's Reasonable Progress Goals

In its plan, New Mexico applied the four-factor analysis and determined that the uniform rate of progress would not be reasonably

achievable. Final Rule, Approval and Promulgation of State Implementation Plans; New Mexico, 77 Fed. Reg. 70,693, 70,701-02 (Nov. 27, 2012). This determination required the state to demonstrate that its slower rate of progress would be reasonable under the four-factor analysis articulated in § 51.308(d)(1)(i)(A). New Mexico complied with this requirement in part based on the Western Regional Air Partnership’s analysis.

At New Mexico’s request, the Western Regional Air Partnership conducted an additional source-specific analysis of three petroleum refineries in New Mexico. Joint App. at 411. New Mexico used this source-specific analysis to argue that it could not achieve natural visibility conditions by 2064. *Id.* at 564. To defend its less ambitious goal, New Mexico pointed to natural causes of pollution (such as local wildfires) and predicted improvement in visibility during the most impaired days and preservation of existing visibility on the best days. *Id.* at 563-64.

This reasoning prompted criticism. In response, New Mexico said it would “examine and consider implementing additional emission reductions in the [state implementation plan] analysis for 2013.” *Id.* at 508. As promised, New Mexico analyzed emissions from additional power plants. *Id.*

c. The Escalante Coal Plant

Though New Mexico expanded its analysis, it did not examine emissions at the Escalante Coal Plant. That omission gives rise to the present challenge.

The Escalante Coal Plant is a 250-megawatt coal-fired power plant outside of Albuquerque, New Mexico. The environmental groups allege that the omission proves fatal because this plant “emits thousands of tons per year of haze-causing nitrogen oxides and is located within 200 miles of at least 5 of New Mexico’s Class I areas located outside of the Colorado Plateau.” Pet’rs’ Opening Br. at 57. The EPA counters that the Escalante plant’s emissions are far lower than the emissions from the only BART source in New Mexico (the San Juan Generating Station). Resp.’s Br. at 54 n.13.

2. Waiver

The EPA contends that the environmental groups did not exhaust this allegation because they did not cite § 51.308(d)(1), (3) or urge the need for analysis of the Escalante plant. Resp.’s Br. at 53-54. We disagree.

In comments to the EPA, the environmental groups asserted:

EPA’s proposal relies on the [Western Regional Air Partnership’s] general, non-source specific analysis of potential reasonable progress source categories. *See*, Docket EPA-R06-2009-0050-0014, Appendix E. The [Western Regional Air Partnership’s] general source category analysis fails to identify any specific New Mexico sources that may be subject to reasonable progress controls. *Id.* The [Western Regional Air

Partnership's] general source analysis is also factually incorrect. Table 6-1 of the [Western Regional Air Partnership's] analysis indicates that there is *no* [particulate matter, sulfur dioxide, or nitrogen oxide] emissions from coal fired boilers in New Mexico. *Id.* at p. 340. To the contrary, coal fired boilers at SJGS, Escalante coal plant, Raton coal plant, and Four Corners all emit significant quantities of these criteria pollutants. Thus, reliance on the [Western Regional Air Partnership] general source report for approval of the New Mexico [state implementation plan] is arbitrary and capricious due to its factual inaccuracy.

Joint App. at 753.

This comment put the EPA on notice of the current argument regarding the Escalante plant. As the EPA points out, the environmental groups did not argue that New Mexico was required to analyze the Escalante plant. But the comment alerted the EPA to the issue. *See S. Coast Air Quality Mgmt. Dist. v. EPA*, 472 F.3d 882, 891 (D.C. Cir. 2006) (“[C]ommenters must be given some leeway in developing their argument before this court, so long as the comment to the agency was adequate notification of the general substance of the complaint.”). The commenter was alleging a need to address emissions from all industrial sources in New Mexico, including the Escalante plant.

The groups' failure to cite § 51.308(d)(1), (3) is not fatal. The environmental groups discussed the reasonable progress goal, and this discussion provided “adequate notification of the general substance of the complaint.” *Natural Res. Def. Council v. EPA*, 571 F.3d 1245, 1259 (D.C. Cir. 2009) (quoting *S. Coast Air Quality Mgmt. Dist.*, 472 F.3d at 891).

3. Consideration of the Escalante Plant

Citing 40 C.F.R. § 51.308(d)(3)(iv), the environmental groups contend that New Mexico’s reasonable-progress analysis should have included an analysis of the Escalante plant¹⁴ instead of relying solely on: (1) the Western Regional Air Partnership’s general, non-source specific analysis of potential controls for eight source categories, which did not include the Escalante plant, and (2) source-specific analyses for three New Mexico petroleum refineries.

The environmental groups contend that New Mexico had “to undertake a ‘source-specific’ analysis to determine whether to require measures, such as installation of new air pollution control technology, to achieve the reasonable progress goals.” Pet’rs’ Opening Br. at 55. In support, the groups cite § 51.308(d)(1)(i)(A), the subsection outlining the four factors to be considered in the reasonable-progress analysis. *See* 40

¹⁴ In their opening brief, the environmental groups make a source-specific argument regarding the Escalante plant. *See, e.g.*, Pet’rs’ Opening Br. at 54 (“EPA’s approval of the New Mexico [state implementation plan] also was arbitrary because New Mexico failed to evaluate whether emissions reductions from the Escalante coal plant were necessary to achieve reasonable progress.”). In their reply brief, however, the groups attempt to expand their argument, stating that New Mexico failed to properly consider all electric generating units (as a category) for non-309 program Class I areas. *See, e.g.*, Pet’rs’ Reply Br. at 56. This source-category argument was not raised in the environmental groups’ opening brief; thus, we will not consider this argument. *See Silvertown Snowmobile Club v. U.S. Forest Serv.*, 433 F.3d 772, 783 (10th Cir. 2006) (“[W]e have held that ‘[t]he failure to raise an issue in an opening brief waives that issue.’” (quoting *Anderson v. U.S. Dep’t of Labor*, 422 F.3d 1155, 1174 (10th Cir. 2005))).

C.F.R. § 51.308(d)(1)(i)(A). As the EPA points out, however, this subsection does not require a source-specific analysis.

Rather, the “source-specific” language originates in § 51.308(e)(2)(i)(C), which discusses the better-than-BART analysis. *See* 40 C.F.R. § 51.308(e)(2)(i)(C). This subsection is distinct from the four factors in § 51.308(d)(1) that govern the determination of reasonable progress. Accordingly, we reject the environmental groups’ argument that the EPA had to engage in a source-specific analysis for a reasonable-progress determination. Nothing in the Regional Haze Rule or the Clean Air Act required New Mexico to conduct a four-factor analysis of the Escalante plant.

Two parts of the Regional Haze Rule allowed New Mexico to rely on the Western Regional Air Partnership’s four-factor analysis. First, § 51.308(d)(3)(iii) permits a state conducting a reasonable-progress determination to “rely[] on technical analyses developed by the regional planning organization.” 40 C.F.R. § 51.308(d)(3)(iii). Second, § 51.309 allows states to base determinations of reasonable progress “on assessments conducted by the States and/or a regional planning body.” *Id.* § 51.309(g)(1). Under both subsections, New Mexico could base their determination of reasonable progress on the Western Regional Air Partnership’s assessments.

Neither the Clean Air Act nor the Regional Haze Rule requires source-specific analysis in the determination of reasonable progress. Thus, the EPA's approval of New Mexico's plan was not rendered arbitrary or capricious based on the alleged failure to conduct a four-factor analysis of the Escalante coal plant.

IV. Conclusion

The EPA did not act arbitrarily or capriciously when it approved the participants' implementation plans. Thus, we deny the petitions for review.