IN THE UNITED STATES COURT OF APPEALS
FOR THE TENTH CIRCUIT

STATE OF UTAH, on behalf of the Utah Department of Environmental Quality, Division of Air Quality, Petitioner, v. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, et al., Respondent.	Case No. 16-9541
PACIFICORP, Petitioner, v. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, et al., Respondent.	Case No. 16-9542
UTAH ASSOCIATED MUNICIPAL POWER SYSTEMS, Petitioner, v. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, et al., Respondent.	Case No. 16-9543

DESERET GENERATION AND TRANSMISSION COOPERATIVE, Petitioner, v. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, et al., Respondent.	Case No. 16-9545
CARBON COUNTY, UTAH; EMERY COUNTY, UTAH; and UTAH MUNICIPAL POWER AGENCY, Petitioner-Intervenors.	
HEAL UTAH, NATIONAL PARKS CONSERVATION ASSOCIATION, SIERRA CLUB, and UTAH PHYSICIANS FOR A HEALTHY ENVIRONMENT, Respondent-Intervenors.	

UTAH MUNICIPAL POWER AGENCY'S BRIEF IN SUPPORT OF PETITIONERS' MOTIONS FOR STAY

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I. INTRODUCTION

Intervenor Utah Municipal Power Agency ("UMPA") supports Petitioners' motions to stay the effectiveness of part of the Environmental Protection Agency's ("EPA") Final Rule disapproving portions of Utah's regional haze state implementation plan ("SIP") and adopting a federal implementation plan ("FIP").[1] The FIP requires the installation of Selective Catalytic Reduction ("SCR") controls at Units 1 and 2 of both the Hunter and Huntington coal-fired power plants. EPA itself estimated that the SCRs will cost over $500 million.[2] PacifiCorp estimates that the cost will exceed $700 million.[3] EPA's proposed SCR equipment will result in no perceptible visibility improvements over Utah's proposed SIP.[4]

As a co-owner of Hunter 1, UMPA would bear its *pro rata* share of the costs of complying with the FIP. UMPA has no ability to collect those costs from EPA if the Court confirms that the FIP is unlawful. The potential cost consequences or

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[1] *See* Approval, Disapproval and Promulgation of Air Quality Implementation Plans; Partial Approval and Partial Disapproval of Air Quality Implementation Plans and Federal Implementation Plan; Utah; Revisions to Regional Haze State Implementation Plan; Federal Implementation Plan for Regional Haze", 81 Fed. Reg. 43,893 (July 5, 2016) ("Final Rule") (Exhibit A).

[2] *Id.* at 43,907.

[3] PacifiCorp's Motion for Stay, Doc. 01019712752 at 1.

[4] *See* Final Rule at 43,898-99 (The mandated installation control equipment will result in an average incremental visibility improvement over Utah's proposed Best Available Retrofit Technology ("BART") Alternative of just 0.14 deciviews, approximately one-seventh of what is discernible to the human eye.)

adverse impacts on continued plant operation would cause irreparable h arm that should not be triggered before the Court determines the lawfulness of the FIP.

II. BACKROUND REGARDING UMPA AND HUNTER 1

UMPA is a municipal power agency and a body corporate and politic, organized and existing under the laws of the State of Utah. UMPA was created by its member municipalities, each of which owns and operates a not -for-profit municipal electric system to serv e their respective retail customers. UMPA's members are the Town of Levan, and the Cities of Manti, Nephi, Provo, Salem, and Spanish Fork.

UMPA's primary obligation is to provide its members the reliable and economical bulk electric power supply they need in order to serve their retail electric customers. To that end, UMPA has ownership interests in , and has contracted with various suppliers to buy the output of , a number of generating resources.

UMPA holds a 6.25% ownership interest in Hunter 1 , the majo rity owner and operator of which is PacifiCorp. This ownership entitles UMPA to receive 32 megawatts ("MW") of electric capacity and associated energy in July and August of each year, and 27 MW of electric capacity and associated energy in each of the other 10 months of each year. This entitlement serves approximately 18.5 % of UMPA's members' annual energy requirements.

UMPA is the only minority owner of Hunter 1. PacifiCorp is the majority owner and operator of Hunter 1, the majority owner and operator of Hunter 2, and the sole owner and operator of Hunter 3 and Huntington.

While all of Hunter's owners have certain common interests, their interests can also diverge because each owns different amounts of different units. Compliance strategies that best suit PacifiCorp's interests may not best serve UMPA's interests. For example, sacrificing Hunter 1 in order to protect other generating units in which PacifiCorp has an interest would not be in UMPA's interests even if it were an option for PacifiCorp.

III. STANDARD OF REVIEW

To avoid repetition, UMPA incorporates herein by reference Petitioners' discussions of the standard of review and the reasons why the Court should stay the effectiveness of the FIP while it is under review by this Court. UMPA here focuses only on the irreparable harm that premature compliance with the FIP will cause to UMPA, its municipal members, and their retail customers.

IV. ARGUMENT

Premature compliance with the FIP will cause irreparable harm to UMPA. Compliance will mean either that: (a) PacifiCorp will install SCRs on Hunter 1 causing UMPA to incur its *pro rata* share of those extreme costs, which UMPA must then pass to its member cities and they to their retail electric customers; or,

(b) operation of Hunter 1 will be deemed un economical, the unit will be retired, UMPA will lose a valuable source of baseload generation and will need to secure replacement generation on a long-term basis.[5]

Under the first possibility, UMPA will suffer irreparable harm due to significant increased costs of compliance that will ultimately fall on the retail ratepayers of UMPA's member systems. As co-owner in Hunter 1, UMPA will bear its *pro rata* share of SCR installation costs, which PacifiCorp estimated in its public comment letter at approximately $181 million for Hunter 1.[6]

EPA itself has acknowledged that SCR costs would increase PacifiCorp's rates.[7] This increase would cause a market-wide rate increase, including wholesale rates, as competitors gain headroom to increase their rates while remaining competitive with PacifiCorp. UMPA would face elevated prices when seeking

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[5] Regional haze requirements mandating the installation of costly SCR equipment have resulted in other utilities shutting down affected units, or converting them to natural gas. *See, e.g., Arizona Apache Plant*, 80 Fed. Reg. 19,220 (Feb. 27, 2015); *Arizona Cholla Plant*, 81 Fed. Reg. 46,852 (July 19, 2016); *Oregon Boardman Plant*, 76 Fed. Reg. 38,997 (July 5, 2011). UMPA fears that FIP compliance costs could lead to similar decisions impacting Hunter 1.

[6] PacifiCorp's Public Comments to EPA Proposed Rule in Docket ID No. EPA-R08-OAR-2015-0463, at 30 (Mar. 14, 2016) (Exhibit B).

[7] *See* Response to Comments for the Federal Register Notice for Air Quality State Implementation Plans; Approvals and Promulgations: Utah; Revisions to Regional Haze State Implementation Plan; Federal Implementation Plan for Regional Haze; Partial Approval and Partial Disapproval, Docket No. EPA-R08-OAR-2015-0463, at 370 (June 1, 2016) (Exhibit C) (estimating that installation of SCR at the Utah BART Units will result in 5-10 percent higher electricity rates for PacifiCorp's retail customers).

contracts for supplemental supply. Worse, if PacifiCorp seeks to retire Hunter 1 rather than install SCRs, UMPA would be forced to seek replacement resources for Hunter 1 in a market with elevated prices. UMPA would also forfeit its previous investment in Hunter, including environmental control equipment that was installed with the expectation that Hunter 1 would operate for its anticipated useful life.

Because EPA enjoys the protection of sovereign immunity, these harms are irreparable with no option for redress. *See Chamber of Commerce of U.S. v. Edmondson*, 594 F.3d 742, 770-71 (10th Cir. 2010) ("Imposition of monetary damages that cannot later be recovered for reasons such as sovereign immunity constitutes irreparable injury"); *Kansas Health Care Ass'n v. Kansas Dep't of Social & Rehabilitation Servs.*, 31 F.3d 1536, 1543 (10th Cir. 1994) (finding irreparable harm based on the petitioner's inability to recover funds from the government defendant).

UMPA and each of its members are not-for-profit. Their purpose is to provide electric service at the lowest cost reasonably possible. Neither UMPA nor its members have shareholders for whom they strive to earn a profit.

Under the second possibility, UMPA would be irreparably harmed if Hunter 1 is forced into early retirement. Hunter 1 supplies approximately 18.5% of UMPA's energy needs and approximately 11.5% of its capacity needs. As a

baseload energy resource, Hunter 1 is UMPA's most economically predictable energy source, consistently operating within budget. If forced to retire prematurely, UMPA's investment in Hunter would be "stranded" because that investment was based on the then-economic life of the plant, not on a life cut short. PacifiCorp recently completed environmental capital projects on Hunter 1, of which UMPA's *pro rata* share was $8.38 million. If Hunter is retired, UMPA would lose the benefit of that investment.

Baseload resources are developed as long-term investments. If UMPA were to enter now into a long-term alternative contract to hedge against potential shutdown of Hunter, UMPA would be saddled with a long-term contract it does not need if the Court finds the FIP unlawful. UMPA would have no recourse against EPA or any other third party for the costs of such a replacement contract.

If the FIP causes Hunter 1 or other PacifiCorp units to be prematurely retired, the energy markets would be distorted. As much as 1700 megawatts ("MW")[8] of capacity could be eliminated, and the affected utilities would find themselves competing for replacement resources.

V. CONCLUSIONS

The Court should not allow the FIP to trigger the irreparable harm inherent in FIP compliance while the FIP is under review by the Court. EPA has ignored

[8] Hunter 1 and 2 each have a net electrical generating capacity of 446 MW. Huntington 1 and 2 have a combined net electrical generating capacity of 895 MW.

statutory deadlines and taken years to act.[9] Any contention about the need for timely compliance is belied by EPA's own pace of action on the matter, coupled with the fact that the affected utilities have been complying with the Utah SIP, and were not operating unbridled until EPA acted. For these reasons, UMPA respectfully requests that the Court grant Petitioners' stay requests.

[9] *See* PacifiCorp Motion for Stay, Doc. 01019712752 at 6; Utah Motion for Stay, Doc. 01019712378 at 4.

DATED this 2nd day of November, 2016.

Respectfully submitted,

/s/ Alan I. Robbins

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VERIFICATION OF FACTUAL STATEMENTS

State of Utah,

County of Utah,

SS: Spanish Fork City

Layne Burningham, being duly sworn, deposes and says that he is the General Manager of the Utah Municipal Power Agency, that he has reviewed the foregoing UTAH MUNICIPAL POWER AGENCY'S BRIEF IN SUPPORT OF PETITIONERS' MOTIONS FOR STAY, and that to the best of his knowledge and belief, the facts asserted therein are true and correct.

Signed: Layne Burningham

Subscribed and sworn to before me this 1 day of November, 2016.

Notary Public of Janet Andrews.

My Commission expires 11/10/19.

JANET ANDREWS
NOTARY PUBLIC • STATE of UTAH
COMMISSION NO. 686292
COMM. EXP. 11/10/2019

CERTIFICATE OF DIGITAL SUBMISSION

Pursuant to CM/ECF User Manual Section II (I), I certify that:

(1) all required privacy redactions have been made per 10th Cir. R. 25.5;

(2) if required to file additional hard copies, that the ECF submission is an exact copy of those documents; and

(3) the digital submissions have been scanned for viruses with the most recent version of a commercial virus-scanning program, Sophos Endpoint Security and Control Version 10.6, and according to the program are free of viruses.

DATED this 2nd day of November, 2016.

/s/ Alan I. Robbins
Alan I. Robbins

CERTIFICATE OF COMPLIANCE WITH TYPE-VOLUME LIMITATION AND TYPE-FACE REQUIREMENTS

In accordance with this Court's Order of October 21, 2016, the undersigned counsel states that this Utah Municipal Power Agency's Brief in Support of Petitioners' Motions for Stay contains 1,826 words, exclusive of the items listed in Fed. R. App. P. 32(a)(7)(B)(iii), and complies with the limitation of 3,000 words imposed on the Utah Municipal Power Agency by said Order. Accordingly, UMPA has 1,174 words remaining of the 3,000 provided by the Court for a brief on the merits. This Brief in Support also complies with typeface requirements of Fed. R. App. P. 32(a)(5) because it has been prepared in a proportionally spaced typeface using MS Word 2010 in 14-point Times New Roman.

DATED this 2nd day of November, 2016.

/s/ *Alan I. Robbins*
Alan I. Robbins

CERTIFICATE OF SERVICE

I hereby certify that on this 2nd day of November, 2016, the foregoing **UTAH MUNICIPAL POWER AGENCY'S BRIEF IN SUPPORT OF PETITIONERS' MOTIONS FOR STAY** was filed electronically with the Clerk of the Court for the United States Court of Appeals for the Tenth Circuit by using the appellate CM/ECF system. Participants in the case who are registered CM/ECF users will be served by the CM/ECF system. The following will be served by mail:

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Exhibit A

State of Utah et al. v. U.S. EPA et al., (consolidated)
Nos. 16-9541, 16-9542, 16-9543, 16-9545

Approval, Disapproval and Promulgation of Air Quality Implementation Plans; Partial Approval and Partial Disapproval of Air Quality Implementation Plans and Federal Implementation Plan; Utah; Revisions to Regional Haze State Implementation Plan; Federal Implementation Plan for Region al Haze", 81 Fed. Reg. 43,893 (July 5, 2016)

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Part IV

Environmental Protection Agency

40 CFR Part 52
Approval, Disapproval and Promulgation of Air Quality Implementation Plans; Partial Approval and Partial Disapproval of Air Quality Implementation Plans and Federal Implementation Plan; Utah; Revisions To Regional Haze State Implementation Plan; Federal Implementation Plan for Regional Haze; Final Rule

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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R08–OAR–2015–0463; FRL–9947–42–Region 8]

Approval, Disapproval and Promulgation of Air Quality Implementation Plans; Partial Approval and Partial Disapproval of Air Quality Implementation Plans and Federal Implementation Plan; Utah; Revisions to Regional Haze State Implementation Plan; Federal Implementation Plan for Regional Haze

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency (EPA) is partially approving and partially disapproving a State Implementation Plan (SIP) revision submitted by the State of Utah on June 4, 2015 to implement the regional haze program pursuant to section 169A of the Clean Air Act (CAA or Act). The State's SIP revisions would establish an alternative to best available retrofit technology (BART) controls that would otherwise be required to control nitrogen oxides (NO_X) at PacifiCorp's Hunter and Huntington power plants. The June 2015 SIP revision also includes BART determinations for particulate matter with an aerodynamic diameter of less than 10 micrometers (PM_{10}) at these power plants and provisions for making the NO_X and PM_{10} BART emission limits federally enforceable. The CAA requires states to prevent any future and remedy any existing man-made impairment of visibility in national parks and wilderness areas designated as Class I areas. Air emissions from the four electric generating units (EGUs) at the two plants affected by this action cause or contribute to visibility impairment at nine Class I areas including Grand Canyon, Arches, Black Canyon, Bryce Canyon, Canyonlands, Capitol Reef, Mesa Verde and Zion National Parks and Flat Tops Wilderness Area. The EPA is finalizing the option in our January 14, 2016 co-proposal to partially approve and partially disapprove the June 2015 SIP revision and is promulgating a Federal Implementation Plan (FIP) to address the deficiencies identified in our proposed partial disapproval of Utah's regional haze SIP. The EPA is not taking any final action on a related October 20, 2015 SIP revision. The State retains its authority to submit a revised state plan consistent with CAA and Regional Haze Rule (RHR) requirements. An approvable SIP submission will result in the modification or withdrawal of the FIP.

DATES: This final rule is effective August 4, 2016.

ADDRESSES: EPA has established a docket for this action under Docket ID No. EPA–R08–OAR–2015–0463. All documents in the docket are listed on the *www.regulations.gov* Web site. Publicly available docket materials are available either electronically through *www.regulations.gov,* or in hard copy at the Air Program, Environmental Protection Agency (EPA), Region 8, 1595 Wynkoop Street, Denver, Colorado 80202–1129. EPA requests that if, at all possible, you contact the individual listed in the **FOR FURTHER INFORMATION CONTACT** section to view the hard copy of the docket. You may view the hard copy of the docket Monday through Friday, 8 a.m. to 4 p.m., excluding federal holidays.

FOR FURTHER INFORMATION CONTACT: Gail Fallon, Air Program, EPA, Region 8, Mailcode 8P–AR, 1595 Wynkoop Street, Denver, Colorado, 80202–1129, (303) 312–6281, *Fallon.Gail@epa.gov.*

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I. Introduction

The purpose of federal and state regional haze plans is to achieve the national goal, declared by Congress, of restoring and protecting visibility at 156 federal Class I areas across the United States, most of which are national parks and wilderness areas with scenic vistas enjoyed by the American public. The national goal, as described in CAA section 169A, is the prevention of any future, and the remedying of any existing, impairment of visibility in mandatory Class I federal areas where such impairment results from man-made air pollution. States are required to submit SIPs that, among other things, ensure reasonable progress toward the national goal of remedying anthropogenic visibility impairment in federal Class I areas. Arizona, Colorado, and Utah have a wealth of such areas that are impacted by the Hunter and Huntington power plants, including Grand Canyon, Arches, Black Canyon,

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Bryce Canyon, Canyonlands, Capitol Reef, Mesa Verde and Zion National Parks and Flat Tops Wilderness Area. The four units at the two power plants that are subject to the CAA BART requirements are large sources of NO_X,[1] and the NO_X emissions from these plants affect visibility[2] at some of the countries' most beloved Class I areas that are visited by millions of Americans. The CAA requires that such sources install and operate controls to limit visibility impairing pollutants; in this instance there are very cost-effective controls available for these units, which will operate for many years into the future.

We proposed action on Utah's June 4, 2015 and October 20, 2015 regional haze SIP submittals addressing NO_X and PM_{10} BART requirements on January 14, 2016.[3] The EPA conducted a public hearing for our proposed action in Salt Lake City, Utah on January 26, 2016. Our public comment period closed on March 14, 2016.

In this action, we are partially approving and partially disapproving the SIP submittal submitted by Utah on June 4, 2015, and taking no action on the State's October 20, 2015 SIP submittal. These submittals include actions intended to satisfy the State's obligations for the regional haze program's first planning period, including the obligation to submit a SIP containing emission limitations representing BART for NO_X and PM for each of the four subject-to-BART sources of visibility-impairing emissions. We are also promulgating a FIP to address the deficiencies we have identified in the portions of the SIP submittal that we are disapproving.

Utah's SIP submittal was to address the BART requirements for NO_X in part through reliance on a BART alternative program under 40 CFR 51.308(e)(2), which allows a state to implement such a BART alternative when the clear weight of the evidence demonstrates that it achieves greater reasonable progress than BART.[4] Specifically, rather than installing and operating BART controls for its four subject-to-BART electric generating units (EGUs), Utah's SIP submittal relied on an alternative program, which included the following: (1) The installation of upgraded combustion controls between 2006 and 2014 at the four BART units plus an additional EGU at PacifiCorp's Hunter plant; and (2) the shutdown of the Carbon plant, a non-BART source, to meet the BART requirements for emissions of NO_X. To meet its PM BART requirements, Utah's SIP submittal included the most stringent control technology at each of the four subject-to-BART EGUs. We provided a detailed explanation of the contents of Utah's June and October 2015 submittals along with an overview of earlier Utah regional haze submittals and EPA's actions on these earlier submittals in sections IV and III.E, respectively, of our proposed rule.[5]

EPA takes very seriously a decision to disapprove any state plan. Our intention is to approve a state's exercise of discretion if it can be supported. However, to approve a state plan EPA must be able to find that the plan is consistent with the requirements of the CAA and EPA's regulations. Although these are largely fact-based decisions, we focus strongly on consistently applying the regional haze requirements across this national program. After carefully considering the comments on our proposal, we determined that there is only one permissible outcome. Therefore, for the reasons described in our proposal and in this action, we find that the State's NO_X BART Alternative for the power plants is not consistent with the applicable statutory and regulatory requirements. As a result, EPA has determined that final disapproval is the only path that is consistent with the Act.

Although we are promulgating a federal plan, the State retains its authority to submit a revised state plan consistent with CAA and Regional Haze Rule requirements. If we determine that the SIP revision is approvable, regardless of whether or not its terms match those of our final FIP, we would propose to approve such a SIP revision. An approvable SIP submission will result in the modification or withdrawal of the FIP.[6]

A. Our Co-Proposals

When we reviewed the Utah regional haze SIP, we noted that some of the metrics the State included in its weight-of-evidence analysis presented to support the NO_X BART Alternative appear to support a conclusion that the BART Alternative achieves greater reasonable progress than BART (*i.e.,* selective catalytic reduction (SCR) technology at the four BART units at Hunter and Huntington). However, we also noted that several other metrics in the State's analyses did not appear to support a conclusion that the BART Alternative achieves greater reasonable progress. The collection of information before EPA at the time of proposal presented a close call for us to decide whether to approve or disapprove the State's BART Alternative. Therefore, to allow all interested parties an opportunity to comment on either approach, we proposed and solicited comment on two possible conclusions and courses of action: (1) The State's submittal for NO_X BART meets the test under 40 CFR 51.308(e)(2)(i)(E) and we approve the BART Alternative; or (2) the State's submittal falls short of meeting this test and we disapprove the BART Alternative and promulgate a FIP for NO_X BART. We requested comment on all aspects of each proposal.

1. Summary of Proposed Full Approval of the SIP

In one option of our co-proposal, we proposed to approve the following aspects of the State's June 4, 2015 SIP submittal:

- NO_X BART Alternative, including: NO_X emission reductions from Hunter Units 1, 2, and 3; Huntington Units 1 and 2; and Carbon Units 1 and 2; and sulfur dioxide (SO_2) and PM_{10} emission reductions from Carbon Units 1 and 2.
- BART determinations and emission limits for PM_{10} at Hunter Units 1 and 2 and Huntington Units 1 and 2.
- Monitoring, recordkeeping, and reporting requirements for units subject to the BART Alternative and the PM_{10} emission limits.

We also proposed to approve these elements of the State's October 20, 2015 SIP submittal:

- Enforceable commitments to revise SIP Section XX.D.3.c and State rule R307–150 by March 2018 to clarify emission inventory requirements for tracking compliance with the SO_2 milestone and properly accounting for the SO_2 emission reductions due to the closure of the Carbon plant.

2. Summary of Proposed Partial Approval and Partial Disapproval of the SIP and Proposal of a FIP

In the other option of our co-proposal, we proposed to approve these elements of the State's June 4, 2015 SIP submittal:

- BART determinations and emission limits for PM_{10} at Hunter Units 1 and 2 and Huntington Units 1 and 2.

[1] Annual average NO_X emissions in tons per year for each of the four BART units for the period 2001–2003 were as follows: Hunter Unit 1 [6,380 tons/yr], Hunter Unit 2 [6,092 tons/yr], Huntington Unit 1 [5,944 tons/yr], Huntington Unit 2 [5,816 tons/yr].

[2] Refer to Tables 6 and 7 for visibility impacts.

[3] 81 FR 2004 (Jan. 14, 2016).

[4] For purposes of comparing the proposed BART Alternative to BART, Utah used most stringent NO_X control technology to represent BART, which is referred to as the BART Benchmark.

[5] 81 FR 2004, 2012–2020 (Jan. 14, 2016).

[6] Additionally, as discussed later in section I.B.3, at this time we not taking action on the State's October 20, 2015 enforceable commitment SIP submittal.

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• Monitoring, recordkeeping, and reporting requirements for units subject to the PM_{10} emission limits.

We proposed to disapprove these aspects of the State's June 4, 2015 SIP submittal:

• NO_X BART Alternative, including NO_X emission reductions from Hunter Units 1, 2, and 3; Huntington Units 1 and 2; and Carbon Units 1 and 2; and SO_2 and PM_{10} emission reductions from Carbon Units 1 and 2.

We proposed to disapprove the State's October 20, 2015 SIP submittal.

We proposed promulgation of a FIP to address the deficiencies in the Utah regional haze SIPs that were identified in the proposed action. The proposed FIP included the following elements:

• NO_X BART determinations and emission limits for Hunter Units 1 and 2 and Huntington Units 1 and 2.

• Monitoring, recordkeeping, and reporting requirements for NO_X at Hunter Units 1 and 2, and Huntington Units 1 and 2.

B. Summary of the Basis for Our Final Decision

Based upon comments we received on our proposed action and our evaluation of both the State's submittals and those comments, in this final action we are partially approving and partially disapproving Utah's regional haze SIP submitted on June 4, 2015, and we are taking no action on Utah's regional haze SIP submitted on October 20, 2015. We are promulgating a FIP to address the deficiencies we have identified in the portions of the SIP that we are disapproving. Later we present a summary of the major points of our final decision regarding the Utah regional haze SIP submittal that we are acting on today in which we summarize which parts of the Utah regional haze SIP submittal we are approving and disapproving and which parts are cured by our FIP.

1. NO_X BART

As discussed in depth elsewhere in this document and in our separate Response to Comment (RTC) document, we considered the record before us and comments on both of our co-proposals, and have determined that the evidence does not clearly demonstrate that Utah's BART Alternative makes greater reasonable progress than BART; that is, we have determined that the State's Alternative is not clearly better than BART. Therefore, we are disapproving the BART Alternative contained in Utah's June 4, 2015 submittal and promulgating a FIP to satisfy the regional haze program's NO_X BART requirements.

In our co-proposal, to ensure our final decision was based on the best and most currently available data and information, we asked if interested parties had additional information in a number of areas, including: (1) Analysis related to the modeled visibility benefits of the BART Alternative compared to BART; and (2) other BART alternatives or BART control technology options related to what we proposed and that could be finalized as our FIP. We also asked if interested parties had additional information or comments on the proposed timeline of compliance.[7] We explained that any supplemental information we received could lead us to adopt final SIP and/or FIP regulations that differ somewhat from the co-proposals presented in our proposed rule regarding the BART Alternative, BART control technology option or emission limits, or impact other proposed regulatory provisions.[8] We did not receive any modeling analysis related to the benefits of the BART Alternative compared to BART or any suggestions for consideration of other BART alternatives or BART control technology options. However, we did receive extensive comments on our two possible evaluations of Utah's BART Alternative. As a result of these comments, we have revised some of the aspects of our evaluations of the State's BART Alternative metrics. Based on the revisions to our evaluations of the State's metrics, we have reassessed our co-proposed actions on the State's BART Alternative and determined that it does not demonstrate greater reasonable progress than BART. We provide our reassessment of the State's weight-of-evidence metrics in this section, and provide additional detail in our RTC document.

a. Regulatory Framework for BART Alternatives

To demonstrate that a BART alternative measure achieves greater reasonable progress than the BART requirements, EPA evaluates a SIP submittal to determine whether it demonstrates that the alternative will achieve greater reasonable progress toward natural visibility conditions than BART under 40 CFR 51.308(e)(3) or otherwise based on the *clear* weight of evidence.[9] The BART Alternative rule requires that the alternative program must "clearly" be better than BART, which we have explained is "when there is confidence that the difference in visibility impacts between BART and the alternative scenarios are expected *to be large enough*" [10] to ensure that that the alternative is, in fact, better. Therefore, as part of our evaluation of Utah's SIP we evaluated whether the differences in visibility impacts between BART and the State's BART Alternative are "large enough" to satisfy the *clear* weight-of-evidence requirement. The State of Utah opted to develop its SIP under the clear weight-of-evidence standard, and provided its analysis in the "Greater Reasonable Progress than BART" section of the SIP submittal.[11] As explained in our BART Alternative rule, the clear weight-of-evidence test follows these steps: [12]

(1) *Use information and data that can inform the decision.* Collect information that can be used to assess whether the proposed alternative measure will achieve greater reasonable progress than BART. The information is used to

[7] 81 FR 2004, 2007, Jan. 14, 2016.

[8] *Id.*

[9] 40 CFR 51.308(e)(2)(i)(E).

[10] 71 FR 60622 ("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." (emphasis added)).

[11] This section of the State's SIP submittal presents the BART Alternative rule regulatory requirements, including EPA's description that the clear weight of evidence standard uses information to inform a decision while recognizing the relative strengths and weaknesses of that information. The Utah SIP Section XX that was submitted to EPA, was adopted by the Air Quality Board on June 3, 2015, and included the proposed provisions to address the NO_X BART requirements. Footnote 4 in that Section of the SIP referenced the State's greater reasonable progress demonstration. The document referenced in the footnote was titled "Staff Review 2008 PM BART Determination and Recommended Alternative to BART for NO_X, Utah Division of Air Quality, May 13, 2015" ("Utah Staff Review Report" at 11).

[12] 71 FR 60612, 60622 (Oct. 13, 2006). As we explained in adding to our final RHR the "clear weight of the evidence" standard, "'[w]eight 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. 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." *Id.*

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evaluate whether the *visibility* improvements at the Class I areas will be better under the alternative than under BART. Such information may include, but is not limited to, future projected emissions levels under the BART alternative as compared to under the BART benchmark; 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.

(2) *Recognize the relative strengths and weaknesses of the information.* Evaluate the information and recognize the relative strengths and weaknesses of the metrics used. This process involves assigning weights to each piece of information that indicate the degree to which it supports a finding that the alternative program will achieve greater visibility benefits. Such a weighing system might find that: (i) The information *clearly* shows the alternative will achieve greater reasonable progress than BART; (ii) the information supports the alternative in some way, but not clearly; or (iii) the information does not support the alternative.

(3) *Carefully consider all the information to reach a conclusion.* Collectively consider the weights assigned to the individual pieces of information and consider the total weight of all the information to determine whether the proposed BART alternative will *clearly* provide for greater reasonable progress than BART at the impacted Class I areas.

Additionally, in this document, we occasionally point to the BART Guidelines for authority on the analysis of BART alternatives (*e.g.,* consideration of 98th percentile CALPUFF modeling).[13] We acknowledge that the BART Guidelines are not mandatory for the evaluation of BART alternatives and the Guidelines do not directly address this subject.[14] However, our rules at 40 CFR 51.309 and the preamble for the provisions governing alternatives to source-specific BART determinations[15] do not provide guidance on visibility modeling. We rely on the BART Guidelines here and in other actions involving BART alternatives because they provide a reasonable and consistent approach regarding visibility modeling, as well as other aspects of a BART alternative, conducted as part of a weight-of-evidence analysis.

b. Utah's "Greater Reasonable Progress Than BART" Metrics

The State collected and evaluated information "from a number of different metrics . . . to compare the two scenarios."[16] These nine metrics included: (1) Annual emissions of visibility-impairing pollutants; (2) improvement in the number of days with significant visibility impairment derived from CALPUFF modeling results; (3) 98th percentile modeling impact (deciview [dv]) results derived from CALPUFF modeling; (4) annual average impact (dv) derived from CALPUFF modeling results; (5) 90th percentile impact (dv) results derived from CALPUFF modeling; (6) timing of emissions reductions; (7) results from IMPROVE monitoring data; (8) energy and non-air quality benefits; and (9) costs. The State considered the information from these metrics and concluded that the weight-of-evidence shows that its alternative program will provide greater reasonable progress than BART.[17]

c. EPA's Evaluation of Utah's "Greater Reasonable Progress Than BART" Analysis

We evaluated the information for each of the nine metrics in the State's SIP submittal,[18] as well as additional information submitted by commenters. As part of this evaluation, we assessed the relevance and strength of each metric, that is, we assigned each metric a weight.[19] After determining if, and the extent to which, the information the State relied upon was "of sufficient quality to inform the comparison of visibility impacts between BART and the alternative program,"[20] we assessed the metrics collectively to determine whether the relevant evidence, considered as a whole, clearly demonstrated that the alternative program achieves greater visibility benefits.

Our initial review considered whether each of the nine metrics met the threshold regulatory requirement that information considered in a weight-of-evidence analysis be relevant to an assessment of visibility impacts. We find the State included two metrics, (1) energy and non-air quality impacts and (2) cost, that are inconsistent with the greater reasonable progress analysis in the RHR because the metrics do not evaluate *visibility* benefits at the nine Class I areas impacted by the State's sources. Therefore, as discussed in detail later in sections I.B.1.c.viii and I.B.1.c.ix, we did not give this information any weight in our evaluation of whether the State has demonstrated that its BART Alternative achieves greater reasonable progress than BART.

Additionally, the State included information on the aggregate annual emissions of all three visibility-impairing pollutants emitted by the sources. However, in this particular instance the aggregate emissions data do not provide information on the likely visibility impacts of the State's alternative program as compared to BART. Therefore, as discussed in detail later in section I.B.1.c.i, we found that this information was inconclusive and does not weigh either in favor of or against the BART Alternative.

Next, we evaluated how the State recognized the strengths and weakness of the remaining six metrics. The State placed each metric in one of two categories: The information from the metric supported the BART Alternative, or it did not. The State determined that five of the metrics supported the BART Alternative[21] and one metric, the 98th percentile CALPUFF modeling results, did not support the BART Alternative.[22] However, contrary to the requirement to *weigh* the evidence,[23] which Utah's SIP acknowledged is part of the weight-of-evidence standard,[24] the SIP submittal did not assess the relative strengths and weaknesses of the metrics; that is, it did not explain the *weight* that the State assigned to each of the metrics it found supported the BART Alternative. In evaluating the SIP submittal, we assessed the relative strengths and weakness of each of the State's metrics to determine whether it was reasonable for the State simply to categorize the metrics into the two categories (the metric supported the BART Alternative or did not support the Alternative). In

[13] We also referred to the BART Guidelines as authority in our proposal.

[14] The BART Guidelines are mandatory in this action regarding both the State's determinations of the BART Benchmark pursuant to 40 CFR 51.308(e)(2)(i)(C) and EPA's BART determinations in the FIP pursuant to 40 CFR 51.308(e)(1)(ii)(B).

[15] 71 FR 60612, October 13, 2006.

[16] Utah Staff Review Report at 12.

[17] *Id.* at 27 and Utah's SIP, Section XX, Regional Haze (June 3, 2015) ("2015 SIP").

[18] Utah Staff Review Report at pp. 13–29.

[19] As discussed in this section, Utah did not assign a weight to each metric.

[20] 71 FR 60612, 60622.

[21] See Utah Staff Review Report at p. 27 (listing factors the State suggested to support the BART Alternative in the "Summary of Weight of Evidence" section).

[22] As discussed elsewhere, EPA disagrees with the State's evaluation of the 98th percentile metric.

[23] 40 CFR 51.308(e)(2)(i)(E).

[24] Utah Staff Review Report at 11 (the BART alternative regulatory provisions and EPA's description of the weight-of-evidence standard, including that a demonstration recognize the strengths and weaknesses of the information in arriving at the soundest decision possible, citing 71 FR 60612, 60622).

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addition to information in the submittal, we considered suggestions on the amount of ''weight'' that should be given to each of the metrics that were provided by commenters on our proposal, including the State.[25] As a result of our evaluation, we find that the State's assessment of the metrics was inadequate because it did not recognize the relative strengths and weaknesses of the metrics on an individual basis. We also find that a proper recognition of the relative strengths and weaknesses, including the consideration that some metrics are more meaningful than others, shows that the BART Alternative does not achieve greater reasonable progress than BART.

We evaluated each of the State's nine metrics and included: (1) An assessment of whether we agree as a factual matter with the State's conclusion; and (2) the weight we would give to each metric. Our evaluation below includes the two metrics that we find contain information that is not relevant, and the one to which we did not assign any weight.

i. Annual Emissions Comparison of All Visibility-Impairing Pollutants

The State's regional haze SIP submittal determined that the combined emissions of three key visibility-impairing pollutants will be lower under the BART Alternative scenario and that this supported the weight-of-evidence determination that the BART Alternative will provide greater reasonable progress than BART.[26] [27] We proposed to find that, since Utah's BART Alternative provides greater emission reductions for two pollutants (SO_2 and PM_{10}), but that NOX emissions would be greater under the BART Alternative, it is not appropriate to combine all three pollutants in the annual emissions comparison test to support the BART Alternative. Therefore, we further proposed to find that the annual emissions comparison of all three pollutants does not show that the BART Alternative is better than the BART Benchmark.[28]

As a result of the comments received on our co-proposal, we have further assessed the State's evidence for this metric and while we have clarified our assessment, we have not changed our overall proposed findings. Although emissions of two visibility-impairing pollutants are less under the BART Alternative, emissions of one of the pollutants would be greater. Due to differences in visibility impacts and complex interactions between pollutants, it is not possible to discern the overall visibility impacts of the aggregate emission reductions in this case without modeling; as discussed elsewhere, we disagree with comments to the contrary. Therefore, while we consider that aggregate emission reductions is a relevant concept because it relates to visibility impacts, in this particular case we continue to find that it is not appropriate to combine all three pollutants in the annual emission comparison test. We thus find that this metric is inconclusive and does not weigh either in favor of or against the BART Alternative.

ii. Improvement in Number of Days With Significant Visibility Impairment

In its regional haze SIP submittal, Utah provided modeling results comparing the number of days with significant visibility *impairment* relative to natural visibility under the BART Alternative scenario to the number of days under the BART Benchmark. The State presented this information for two different thresholds of visibility impairment: 1.0 dv of impairment compared to natural visibility, and 0.5 dv of impairment. The State determined that the BART Alternative leads to an average of six fewer days per year with a visibility impact greater than 1.0 dv per year and 58 fewer days per year with a visibility impact greater than 0.5 dv at the nine Class I areas.[29] Utah also provided information in its submittal regarding the number of days with visibility *improvement* relative to baseline visibility (visibility conditions in 2001–2003) using a range of deciview thresholds (0.5 to 5.0 dv improvement compared to baseline visibility conditions).[30]

In EPA's review, we considered this metric in our evaluation of the State's weight-of-evidence analysis because the improvement in the number of days with significant visibility impairment relates to assessing the frequency and duration of visibility impacts. It is relevant to look at the results for the Class I areas individually because visibility impacts are location specific. The results for the average number of days with impacts over 1.0 dv show that seven of the nine Class I areas had the same result or were within one day of having the same result under both the BART Alternative and Benchmark. In the context of an entire year, a difference of one day is not particularly significant. Therefore, we find that the results from the average number of days with visibility impacts over the 1.0 dv threshold do not show the BART Alternative is better. We observe that the results for the average number of days with impacts over 0.5 dv show that the BART Alternative is better at five of nine Class I areas, and at four Class I areas the Alternative results in the same number of days with impacts greater than 0.5 dv as the Benchmark or is within two days of the same result (favoring the BART Alternative at each of the four where there is a two-day difference). Therefore, we find that the results from the 0.5 dv threshold show that the BART Alternative is marginally better.

iii. 98th Percentile Modeling Impact (dv)

In its regional haze SIP, the State determined that while the 98th percentile modeling impact showed greater reasonable progress under the BART Benchmark,[31] several considerations led to the State's conclusion that this metric does not give a complete picture of the visibility improvements that will be seen by visitors to Class I areas.[32] Therefore, the State's summary of the weight-of-evidence did not include the results from the 98th percentile modeling impact.[33] We assessed the State's evidence for this metric and proposed to find that on the whole, when using this method, the results from the BART Benchmark are slightly better on average across all years and nine Class I areas

[25] The State's Comment letter suggested the ''weight'' for several of the metrics.

[26] 2015 SIP at 25, and Utah Staff Review Report at 27.

[27] EPA derived the following emissions reductions for the BART Alternative from the Utah Staff Review Report at 10, by subtracting the total annual emissions for the BART Alternative from the total annual emissions for the BART Benchmark for each of the visibility-pairing pollutants: SO_2 8,005 tpy, PM_{10} 573 tpy, and NO_X ¥5,721 tpy (NO_X is negative because NO_X emissions increase under the BART Alternative). This information is also provided in Table 4 of our proposed rule. (81 FR 2004, 2016.)

[28] 81 FR 2004, 2029.

[29] EPA unintentionally created some confusion with regard to this metric in our proposed rule by expressing this information as the *total* number of days with visibility impairment greater than 1.0 and 0.5 dv in Tables 7 and 8, 81 FR 2004, 2017, based on modeling results presented in SIP TSD Ch. 6, Summary of Visibility Modeling. The State did not highlight these particular modeling results in this manner in its Utah Staff Review Report; rather, the State expressed this metric only as the average number of days per year over the three years modeled. We considered these modeling results, and as discussed in our RTC document, find that the results marginally support the Alternative.

[30] See Utah Staff Review Report, pp. 19–22, and Ch. 6, Summary of Visibility Modeling, and 2015 SIP at 25.

[31] Utah Staff Review Report at 24.

[32] *Id.* at 25.

[33] *See id.* at 27 (''Summary of Weight of Evidence'' section does not include 98th percentile modeling impact results).

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(0.14 dv average difference). Also, this metric shows greater visibility improvement at five of nine Class I areas for the BART Benchmark. We proposed to find, consistent with the State's evaluation, that this metric favors the BART Benchmark and does not show that the BART Alternative is better.[34]

As a result of the comments received on our co-proposal, we have further assessed the State's evidence for this metric and while we have clarified our assessment, we have not changed our overall proposed finding. We considered this metric in our evaluation of the State's weight-of-evidence analysis because the 98th percentile modeling results relate to assessing visibility impacts. We have considered all information, and consistent with the Agency's approach to assessing visibility benefits in both BART determinations and other determinations of ''greater reasonable progress'' using the CALPUFF model, have given most weight to the visibility impacts based on the 98th percentile air quality modeling results.[35]

iv. Annual Average Modeling Impact (dv)

The State's regional haze SIP submittal stated that the average deciview impact metric shows the benefit from the BART Alternative will be achieved day in and day out in the Class I areas.[36] This metric shows greater average visibility improvement at five of nine Class I areas for the BART Alternative.

We assessed the State's evidence for this metric and proposed to find that the BART Alternative is only marginally better than the BART Benchmark based on the difference in overall averages between the two scenarios of 0.009 dv and that it shows less or equal visibility improvement than BART at four of the nine Class I areas. Therefore, we proposed to find that the information from the annual average metric does not support a conclusion that the BART Alternative achieves greater reasonable progress than the BART Benchmark.[37]

As a result of the comments received on our co-proposal, we have further assessed the State's evidence for this metric and we have clarified our assessment and finding about the State's evaluation. We considered this metric in our evaluation of the State's weight-of-evidence analysis because the annual average modeling results relate to assessing visibility impacts. Importantly, we find that the annual average metric is less relevant than the 98th percentile because it does not provide information on visibility benefits on the days most impacted by the sources, which has been the focus of prior BART determinations[38] and other determinations of ''greater reasonable progress'' that relied on CALPUFF modeling.[39] Averaging the modeling results over an entire year dilutes the emission controls' (and BART Alternative emission reductions) potential visibility benefits and is inconsistent with the basis of the CALPUFF modeling approach used by the State. Additionally, the annual average visibility impact metric does not show greater visibility improvements than the Alternative at four of the nine affected Class I areas, and the average difference between BART and the Alternative across all nine of these areas is relatively small (0.009 dv). For these reasons, we find that the annual average impact metric in Utah's weight-of-evidence analysis only marginally supports the BART Alternative.

v. 90th Percentile Modeling Impact (dv)

The State's regional haze SIP submittal determined that the CALPUFF modeling results from the 90th percentile deciview impact show that the BART Alternative will provide greater improvement.[40] We assessed the State's evidence for this metric and proposed to find that although there was greater visibility improvement at seven of nine Class I areas for the BART Alternative, it was questionable if the BART Alternative was better based on the difference in the two scenarios of 0.006 dv. We therefore proposed to find that it is questionable whether the 90th percentile supports a conclusion that the BART Alternative achieves greater reasonable progress.[41]

As the result of the comments received on our co-proposal, we have further assessed the State's evidence for this metric and have clarified our assessment and finding. EPA has never used the CALPUFF 90th percentile results in other RH decisions, and we disapproved the use of the 90th percentile results for subject-to-BART modeling.[42] Here, though, we find it is appropriate to consider the CALPUFF 90th percentile results in evaluating the State's weight-of-evidence analysis because this metric provides some additional information about visibility benefits. However, we note that the 90th percentile metric excludes more than a month's worth of visibility data, which significantly dilutes the overall visibility results achieved from potential control options, and is therefore less relevant than the 98th percentile. Furthermore, while the 98th percentile day reflects visibility benefits on the days on which the sources have the largest impacts, the State has not indicated that the 90th percentile day has any particular significance other than to provide an additional metric to consider. We also acknowledge that the difference between BART and the BART Alternative using the 90th percentile is relatively small (0.006 dv). Additionally, we disagree with commenters that suggested the 90th percentile metric is similar to the 20% worst day metric; the 90th percentile relates to a single value, the 110th highest impact day across three years for the scenario considered (*i.e.,* BART Alternative or BART Benchmark), whereas the 20% worst days metric describes visibility impacts from all sources on the average of the 20% worst visibility days. Therefore, while we considered the results from the 90th percentile to evaluate the State's weight-of-evidence analysis, we placed a very small amount of weight on this metric, and therefore find that this metric only marginally supports the BART Alternative.

vi. Timing of the Emissions Reductions

The State's regional haze SIP submittal included statements in the greater reasonable progress than BART analysis that the NO_X reductions from Huntington Units 1 and 2 and Hunter

[34] 81 FR 2004, 2030.

[35] *See* 81 FR 2004, 2021; 40 CFR part 51, appendix Y, section IV.D.5; 70 FR 39104, 39129 (July 6, 2005). *See, e.g.,* 78 FR 79344 (Dec. 30, 2012) (proposed rule, FIP for Tesoro Refining and Intalco Refinery BART Alternatives); 79 FR 33438 (June 11, 2014) (final rule, FIP for Tesoro Refining and Intalco Refinery BART Alternatives); 79 FR 56322, 56328 (Sept. 19, 2014) (proposed approval of Arizona Apache BART Alternative); 80 FR 19220 (Apr. 10, 2015) (final approval of Arizona Apache BART Alternative). We provide examples of use of the 98th modeling results for BART determinations in the RTC.

[36] Utah Staff Review Report at 23.

[37] 81 FR 2004, 2030.

[38] 40 CFR part 51, appendix Y, section IV.D.5; 70 FR 39104, 39129 (July 6, 2005). We provide examples of use of this information for BART determinations in the RTC.

[39] See, *e.g.,* 78 FR 79344, 79355 (Dec. 30, 2013) (proposed rule, FIP for Tesoro Refining and Intalco Refinery BART Alternatives in Washington), 79 FR 56322, 56328 (Sept. 19, 2014) (proposed approval of Arizona Apache BART Alternative).

[40] Utah Staff Review Report at 23–24, and 2015 SIP at 25.

[41] 81 FR 2004, 2030.

[42] In our North Dakota final action we explained that EPA addressed the appropriate interpretation of CALPUFF modeling results in the BART Guidelines within the context of subject-to-BART modeling and we rejected the use of the 90th percentile because it would be inconsistent with the Act. We explained that the use of the 90th percentile value would effectively allow visibility effects that are predicted to occur at the level of the threshold (or higher) on 36 or 37 days a year. 70 FR 39121.

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Units 2 and 3 occurred earlier than was required by the rule, providing corresponding early and ongoing visibility improvement under the Alternative as compared to the BART Benchmark, citing to *WildEarth Guardians* v. *EPA*. 770 F.3d 919, 938 (10th Cir. 2014).[43]

The State further asserted that the timing of emission reductions provided support for the weight-of-evidence determination that the BART Alternative will provide greater reasonable progress than BART. We assessed the State's evidence for this metric and recognized that the reductions from the BART Alternative would occur before the BART Benchmark because the controls at the Hunter and Huntington facilities have been achieving significant NO_X reductions since the time of their installation between 2006 and 2014.[44]

As a result of the comments received on our co-proposal, we have further assessed the State's evidence for this metric. We considered the State's early emission reduction statement in our evaluation of the State's weight-of-evidence analysis because the reductions relate to assessing visibility impacts. We note that the State's weight-of-evidence analysis presents and considers only the early timing of emission reductions from the Hunter and Huntington units at which controls were installed before 2014.[45]

We find that the timing of emissions reductions metric, which considers the early reductions from Hunter Units 2 and 3 and Huntington Units 1 and 2, supports a finding that the BART Alternative is better than BART.

vii. Monitoring Data at the Class I Areas (IMPROVE Network)

The State's regional haze SIP submittal determined that the BART Alternative provides greater reductions of SO_2 [46] and that SO_2 is the most significant anthropogenic pollutant affecting Class I Areas that impacts visibility year-round, including throughout the high visitation seasons at the National Parks in spring, summer, and fall.[47] The State thus concluded, working from assumptions regarding sulfate and nitrate formation based on historical trend data,[48] that the BART Alternative will provide greater reasonable progress than BART.

We assessed the State's evidence for this metric and proposed to concur with one of the State's findings. We proposed to find that visibility benefits associated with NO_X reductions are much more likely to occur in the winter months because this is when aerosol thermodynamics favors nitrate formation, while SO_2 emissions reductions should provide visibility benefits in all seasons. We also proposed to find that, as concluded by the Grand Canyon Visibility Transport Commission (GCVTC), and supported by the IMPROVE monitoring data presented by Utah, anthropogenic visibility impairment on the Colorado Plateau is dominated by sulfates. Therefore, we proposed to concur with Utah's statement that sulfate is the largest contributor to visibility impairment at the affected Class I areas.

We proposed to disagree with the State's findings related to park visitation. While we explained that the BART Guidelines do mention visitation as something that can inform a control decision, EPA proposed to place little weight on the State's correlation of emissions reductions and park visitation because nothing in the CAA suggests that visitors during busy time periods are entitled to experience better visibility than visitors during off-peak periods.

As the result of the comments received on our co-proposal, we have further assessed the State's evidence for this metric and while we have clarified our assessment, our overall findings remain the same. We considered this metric in our evaluation of the State's weight-of-evidence analysis because the monitoring data relate to assessing visibility impacts. We conducted an analysis of 2013 and 2014 IMPROVE monitoring data for Canyonlands, the most impacted Class I area,[49] considering seasonal averages and the 20% best and worst days.[50] Our analysis confirms that sulfate is a large contributor to light extinction year round and that nitrate contributions are highest in the winter season. Nonetheless, overall nitrate extinction at the affected areas is significant, particularly on the 20% worst days. We have taken the strength of the modeling results for winter months into consideration; however, contrary to the State's and other's suggestions that visibility improvements during seasons of peak Class I area visitation should carry more weight, we evaluate the visibility impacts for an entire year, regardless of the season. Therefore, we decided to place little weight on this metric and find that the monitoring data analysis metric in Utah's weight-of-evidence analysis only marginally shows the BART Alternative is better than the BART Benchmark.

viii. Energy and Non-Air Quality Benefits

The State's regional haze SIP submittal indicated in its weight-of-evidence assessment that the BART Alternative would avoid the energy penalty associated with operating the SCR units, *i.e.,* the controls assumed under the BART Benchmark. The State also cited non-air quality benefits of its Alternative, including lower fly ash production and reduced water usage associated with the shutdown of Carbon. However, the State's ''Summary of the Weight of Evidence,'' which presented a summary and short evaluation of each of the metrics, did not reference this assessment.[51]

We assessed the State's evidence for this metric and proposed to find that because the benefits do not have direct bearing on whether the BART Alternative achieves greater reasonable progress, it is not material to our action whether we agree or disagree with Utah's assessment that the Alternative would reduce energy and non-air quality impacts relative to BART.

As a result of the comments received on our co-proposal, we have further assessed the State's evidence for this metric; however, we have decided not to alter our proposed finding. The purpose of a weight-of-evidence analysis is to determine whether a BART Alternative would achieve greater reasonable progress, which is measured in terms of visibility improvement.[52] Thus, only metrics that are indicative of improvements in visibility are relevant in a weight-of-evidence analysis. Energy

[43] Utah Staff Review Report at 11, 27 (''The NO_X reductions at Huntington 1 and 2 and Hunter 2 and 3 occurred between 2006 and 2011, earlier than was required by the rule, providing an early and on-going visibility improvement'' and offering in footnote 14 that ''[the] U.S. Circuit Court of Appeals for the 10th Circuit explicitly acknowledged that the consideration of early reductions was proper as part of a qualitative or clear weight of evidence approach to determining greater reasonable progress.'' (citing *WildEarth Guardians* v. *EPA,* 770 F.3d 919, 938 (10th Cir. 2014)). EPA agrees that it is appropriate to consider the timing of emission reductions for the Utah BART Alternative.

[44] 81 FR 2004, 2030.

[45] Utah Staff Review Report at 11.

[46] *Id.* at 27.

[47] *Id.* at 27.

[48] *Id.* at 12–19.

[49] Canyonlands was the most impacted Class I area in the State's BART Alternative modeling that assessed the visibility impacts from all three power plants (*i.e.,* Hunter, Huntington, and Carbon), as well as most impacted in EPA's modeling assessing the visibility impacts for the BART Benchmark for Hunter and Huntington.

[50] See spreadsheet entitled, EPA Analysis of 2013 and 2014 IMPROVE Monitoring Data for Canyonlands, in the docket. More detailed information regarding this analysis is available in section II.E of this document and in our RTC document.

[51] Utah Staff Review Report at 27.

[52] 40 CFR 51.308(d)(1), (e)(2)(i)(E).

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and non-air quality impacts do not provide relevant information on the relative visibility benefit of a BART Alternative as compared to BART. We, therefore, did not assign this metric any weight in our evaluation of the State's weight-of-evidence conclusion.

ix. Cost

The State's regional haze SIP indicated in its weight-of-evidence assessment that, although the State had not officially determined the cost of BART, it is clear that the BART Alternative would have significant capital cost savings to PacifiCorp and its customers. The submittal noted that the Carbon Plant has already been closed and the cost to ratepayers of replacing the power generated by that facility have already occurred. However, the State's ''Summary of the Weight of Evidence,'' which presented a summary and short evaluation of each of the metrics, did not reference the cost comparison.[53]

We assessed the State's evidence for this metric and proposed to find that because the described cost difference does not have a direct bearing on whether the BART Alternative achieves greater reasonable progress, it is not material to our action whether we agree or disagree with Utah's conclusion that the BART Alternative would have a lower cost impact to PacifiCorp than the BART Benchmark (*i.e.,* costs provided by PacifiCorp in its BART analyses of August 5, 2014, SIP TSD Chapter 2).

As a result of the comments received on our co-proposal, we have further assessed the State's evidence for this metric; however, we have decided not to alter our proposed finding. The purpose of a weight-of-evidence analysis is to determine whether a BART Alternative would achieve greater reasonable progress, which is measured in terms of visibility improvement.[54] The difference in the capital costs between BART and the BART Alternative does not provide information relevant to the scenarios' relative visibility benefits.[55] We therefore did not assign this metric any weight in our evaluation of the State's weight-of-evidence conclusion.

x. EPA's Evaluation of the State's Conclusions

The State's regional haze SIP submittal suggested that eight of the nine metrics considered by Utah support the BART Alternative, finding that one metric, the 98th percentile CALPUFF modeling metric did not support its BART Alternative. As explained earlier in this section, evidence in the SIP and from commenters demonstrates that four of these metrics have documented weaknesses and only marginally support the BART Alternative: Improvement in the number of days with significant visibility impairment predicted by modeling (analyzed using different thresholds); the annual average visibility impacts predicted by modeling; monitoring data trends collected at the Class I areas; and the 90th percentile impacts predicted by modeling. Additionally, while the timing of emission reductions metric does favor the State's BART Alternative, the emission reductions at issue are only a portion of the overall emission reductions claimed under the Alternative. The timing of these emission reductions does not alter our conclusion that, on balance, the Alternative has not been shown to result in greater visibility benefits than would BART. Finally, we did not assign any weight to three metrics in our evaluation of the State's weight-of-evidence analysis because we determined that the metrics for energy and non-air quality and cost considerations are not related to visibility and have no bearing on whether the BART Alternative achieves greater reasonable progress than the BART Benchmark, and that information from the annual emissions comparison of all visibility-impairing pollutants metric was inconclusive.

When we weighed the State's metrics (excluding the energy and non-air quality and cost metrics) that evaluate visibility collectively, considering the strengths and weaknesses of each metric and the magnitude of the differences in visibility benefit between BART and the Alternative, we find that it was not reasonable for the State to determine that the clear weight of the evidence favors the BART Alternative for the following reasons. We find that the State's characterization of the 98th percentile modeling results, the one metric that did not support its BART Alternative, was contrary to EPA's established interpretation of and reliance on that metric. The 98th percentile CALPUFF modeling metric takes into account peak visibility impacts and carries the most weight. The 98th percentile visibility impact is a key metric recommended by the BART Guidelines and EPA has relied on this metric in evaluating prior regional haze actions that have included BART alternatives.[56] Furthermore, two factors which marginally support the BART Alternative (annual average modeled impact and 90th percentile modeled impact) are given little weight because they are considered to be less relevant metrics and show very small differences between the BART Alternative and the BART Benchmark, while another factor which marginally supports the BART Alternative (results from IMPROVE monitoring data) is also given little weight because of the need to consider visibility impacts during all times of the year, not just during peak visitation periods. Another factor which marginally supports the BART Alternative (improvement in number of days with significant visibility impairment) is given little weight because even though the BART Alternative is favored using a 0.5 dv threshold, the 1.0 dv threshold does not show that the BART Alternative is better. In addition, although a portion of the emission reductions under the Alternative were achieved prior to 2014, this does not diminish our fundamental finding that the quantity of reductions available under the Alternative would not result in greater visibility improvements than the emission reductions under BART. Therefore, the visibility metrics that favor the BART Alternative neither individually nor collectively clearly demonstrate that the BART Alternative will achieve greater reasonable progress at the nine Class I areas when weighed against visibility benefits predicted by the 98th percentile modeling results under BART.

In summary, we have relied on the standards contained in the RHR and the authority that Congress granted us to review SIPs to determine whether the State's SIP submittal complies with the minimum statutory and regulatory requirements. In determining SIP adequacy, we must exercise our judgment and expertise regarding complex technical issues, and it is entirely appropriate that we do so. Courts have recognized this necessity and deferred to our exercise of

[53] Utah Staff Review Report at 27.

[54] 40 CFR 51.308(d)(1), (e)(2)(i)(E).

[55] We also note that, consistent with our statements in the BART Guidelines, the capital cost of controls would not be a relevant consideration because it does not take into account the degree of visibility improvement associated with those controls. 40 CFR part 51, appendix Y, section IV.D.4.g. Therefore, even if we did consider cost as relevant in a weight-of-evidence analysis, which we do not, the capital cost of controls would not be the appropriate metric.

[56] *See, e.g.,* 78 FR 79344 (Dec. 30, 2012) (proposed rule, FIP for Tesoro Refining and Intalco Refinery BART Alternatives); 79 FR 33438 (June 11, 2014) (final rule, FIP for Tesoro Refining and Intalco Refinery BART Alternatives); 79 FR 56322, 56328 (Sept. 19, 2014) (proposed approval of Arizona Apache BART Alternative); 80 FR 19220 (Apr. 10, 2015) (final approval of Arizona Apache BART Alternative).

discretion when reviewing SIPs.[57] We thus review a state's SIP submittal with the understanding that the state's discretion in developing an alternative measure "is subject to the condition that it must be reasonably exercised and that its decision is supported by adequate documents of its analysis." [58] In the present circumstance—as discussed in more detail in the proposed action and this final action—EPA was not able to find that the weight-of-evidence analysis satisfied the relevant regulatory requirements. Specifically, we find:

(1) The State's assessment of the metrics it found to support its BART Alternative was inadequate because it did not evaluate the relative strengths and weaknesses of the visibility metrics on an individual basis;

(2) The State did not consider the 98th percentile CALPUFF modeling metric, which did not support its BART Alternative, in a manner consistent with EPA's established interpretation of and reliance on that metric;

(3) The State's assessment of the metric that considered aggregate annual emissions of visibility-impairing pollutants was contrary to EPA's established interpretation of and reliance on that metric;

(4) The State's assessment relied on two metrics that are not consistent with the "greater reasonable progress" analysis because they are not related to visibility (energy and non-air quality and cost considerations);

(5) The State did not satisfy the requirement that it assess the collective weight of its evidence in a reasonable and adequately supported manner; and

(6) The SIP submittal lacked an explanation of why the information from all the metrics demonstrated that the difference in visibility impacts between BART and the Alternative was large enough to "clearly" demonstrate that the BART Alternative would achieve greater reasonable progress than BART.[59]

Based on this evaluation, we find that, on balance, the evidence does not show that the Alternative clearly achieves greater visibility benefits than BART. Thus, the State has not satisfied the regulatory requirement in 40 CFR 51.308(e)(2) that a state's submittal of a BART alternative include a "determination . . . based on the clear weight of evidence that the . . . alternative measure achieve greater reasonable progress than would be achieved through the installation and operation of BART at the covered sources." Therefore, we are disapproving the State's NO_X BART Alternative contained in its June 4, 2015 SIP submittal, including the NO_X emission limits for Hunter Units 1, 2, and 3; and the NO_X emission limits for Huntington Units 1 and 2; and the requirements for permanent closure of Carbon Units 1 and 2.[60]

d. Remaining BART Alternative Criteria

The RHR establishes a number of additional regulatory criteria to be included in any demonstration that an alternative will provide for greater reasonable progress than BART. These criteria are set out at 40 CFR 51.308(e)(2)(i)(A)–(D) and (e)(2)(iii)–(v). In both co-proposals, we proposed to find that Utah's SIP submittal addressing the BART Alternative met these requirements.[61] We received adverse and supportive comments on our proposed finding that the State had met these remaining requirements. We respond to these comments in our RTC document.

Having carefully considered the comments received, we have concluded that the State's SIP submittal generally met most of these requirements, as explained in our RTC document. As a result, our partial disapproval of the State's SIP submittal is based on our assessment that Utah failed to demonstrate based on the weight of evidence that the BART Alternative would provide for greater reasonable progress and not on any deficiencies in the state's demonstration that it had met the additional regulatory criteria in 40 CFR 51.308(e)(2).

e. Monitoring, Recordkeeping and Reporting for Utah's BART Alternative

Section IV.B.3 of Utah's June 2015 regional haze SIP included enforceable measures and monitoring, recordkeeping and reporting requirements for the Utah BART Alternative and the State's PM_{10} BART determinations. In our co-proposal we proposed to disapprove (in other words, to not make federally enforceable as part of the SIP) the monitoring, recordkeeping and reporting requirements located in SIP Sections IX.H.22 associated with the BART Alternative. This includes SIP Section IX.H.22, subsections a.ii, a.iii, b.ii, and c.i.[62]

While we did not receive any comments on this element of Utah's regional haze SIP submittal in our co-proposal, the monitoring, recordkeeping, and reporting provisions in the submittal are linked directly to the emission limitations under the Alternative, which we are disapproving.[63] Our partial disapproval of the State's SIP submittal is based on our assessment that Utah failed to demonstrate based on the weight of evidence that the BART Alternative would provide for greater reasonable progress and not on any deficiencies in the State's demonstration that it had met the monitoring, recordkeeping, and reporting requirements under the RHR.

f. Basis for Our NO_X BART Determinations and FIP

Based upon comments we received on our proposed FIP, we revised our analysis of the cost of installing and operating NO_X BART controls at the four subject-to-BART EGUs. In particular, and as discussed at length in our RTC document, we revised the costs in response to comments from PacifiCorp that we incorrectly re-designed the SCR reactors. Having carefully considered the comments received, we concluded it was unnecessary to revise our analysis of visibility improvement or the other statutory BART factors. Our proposed action contains a full description of the five step BART analysis, the five BART factors, and our proposed BART determination. Because we have revised

[57] See, *e.g.*, Connecticut Fund for the *Env't., Inc.* v. *EPA*, 696 F.2d 169 (2d Cir. 1982); *Michigan Dep't. of Envtl. Quality* v. *Browner*, 230 F.3d 181 (6th Cir. 2000); *Montana Sulphur & Chem. Co.* v. *EPA*, 2012 U.S. App. LEXIS 1056 (9th Cir. Jan. 19, 2012).

[58] 71 FR 60612, 60621 (Oct. 13, 2006).

[59] The State's assessment of the overall weight of evidence states only that "[t]he weight of evidence shows that the alternative will provide greater reasonable progress than BART." Utah Staff Review Report at 27.

[60] We are disapproving SIP Sections IX.H.21, subsection (c), IX.H.22, subsections:.a.iii–iii., b.ii. and c. We are also disapproving SIP Section XX,D subsections: 6.a. (the provisions in the "Regional Haze Rule BART Requirements" that cover the NO_X alternative measure); 6.c. ("BART for NO_X," including footnote 4 that references the State's Analysis in a separate document); 6.d. (the provisions in the "BART Summary" that cover NO_X and SO_2 emissions, including the references to use of approval orders and permitted limits to establish the emission limits, the statement that "the four EGUs also met the presumptive emission rates for both NO_X and SO_2 established in Appendix Y independently of the alternative programs", and references in Table 5 to "Permitted" (and the NO_X and SO_2 limits in that column), "Hunter 3", all provisions in the "Presumptive BART Rates" column NO_X and SO_2 emissions); 6.e. (the provisions in "Schedule for Installation of Controls" as the dates refer to emissions for sources that are in the proposed BART Alternative; and the discussion immediately following Table 6 that presents information about the emission limits also appearing in State-issued permits). Additional discussion appears in our RTC document.

[61] 81 FR at 2021, 2025–26, 2027–28, 2032

[62] As explained later, our co-proposal proposed to approve or conditionally approve the remainder of the monitoring, recordkeeping and reporting requirements associated with Utah's PM_{10} BART determinations.

[63] However, we note that we are proposing conditional approval of the following regulations in Section IX.H.21(e), as discussed in section I.B.2.

our cost analysis, we provide updated tables containing the results of the cost analyses, including the summary tables that also show the visibility improvements associated with the controls under consideration (which we did not revise). Following these tables, we provide our final BART determination. Because the Hunter and Huntington BART units are similar, our reasoning for the final BART determination applies to all four units. Table 1 shows the NO_X BART control technologies, associated cost, emission reductions, and the BART emission limitation for each source that is subject to the FIP. The costs in Table 1 reflect EPA's revised cost analysis. Please note that the cost-effectiveness values for SCR with low-NO_X burners and separated overfire air (SCR + LNB/SOFA) were computed using an assumed emission rate of 0.05 lb/MMBtu on an annual basis, but for compliance purposes the NO_X emission limit for each unit is 0.07 lb/MMBtu, 30-day rolling average.

TABLE 1—EMISSION LIMITS, COSTS, AND COST EFFECTIVENESS FOR LNBS/SOFA WITH SCR FOR THE SOURCES SUBJECT TO THE FIP

Source	Technology*	NO_X Emission limit—lb/MMBtu (30-day rolling average)	Total capital cost ($)	Total annualized cost ($)	Average cost-effectiveness ($/ton)
Hunter Unit 1	SCR + LNB/SOFA	0.07	$130.6M	$14.8M	$2,697
Hunter Unit 2	SCR + LNB/SOFA	0.07	128.5M	14.5M	2,774
Huntington Unit 1	SCR + LNB/SOFA	0.07	128.3M	14.6M	2,871
Huntington Unit 2	SCR + LNB/SOFA	0.07	130.0M	14.7M	2,928

*The technology listed is the technology evaluated as BART, but sources can choose to use another technology or combination of technologies to meet established limits.

Tables 2 and 3 provide summaries of EPA's NO_X BART analysis of all feasible control options for Hunter Units 1 and 2, including the costs of compliance and visibility impacts. Please refer to our discussion in section I.B.1.f in regard to how we selected BART from among these control options.

TABLE 2—SUMMARY OF EPA'S HUNTER UNIT 1 NO_X BART IMPACTS ANALYSIS

Control option	Annual emission rate (lb/MMBtu)	Emission reduction (tpy)	Total annual costs (million$)	Average cost effectiveness ($/ton)	Incremental cost effectiveness ($/ton)	Visibility impacts*		
						Improvement (dv)	Days > 0.5 dv	Days > 1.0 dv
LNB with SOFA	0.21	3,042	$1.2M	$382		0.846	330 (29)	218 (22)
LNB with SOFA and SNCR	0.16	3,735	3.8M	1,016	3,796	1.041	322 (37)	202 (38)
LNB with SOFA and SCR	0.05	5,500	14.8M	2,697	6,255 (compared to LNB with SOFA and SNCR) 5,561 (compared to LNB with SOFA).	1.545	311 (48)	188 (52)

*At the most impacted Class I area, Canyonlands National Park. The improvement in days over 0.5 and 1.0 dv provided by the control option relative to the baseline is presented in parentheses. See Table H.9. Air Quality Modeling Protocol: Utah Regional Haze Federal Implementation Plan, US EPA Region 8 (Nov. 2015); Docket Id. EPA–R08–OAR–2015–0463–0012.

TABLE 3—SUMMARY OF EPA'S HUNTER UNIT 2 NO_X BART IMPACTS ANALYSIS

Control option	Annual emission rate (lb/MMBtu)	Emission reduction (tpy)	Total annual costs (million$)	Average cost effectiveness ($/ton)	Incremental cost effectiveness ($/ton)	Visibility impacts*		
						Improvement (dv)	Days > 0.5 dv	Days > 1.0 dv
LNB with SOFA	0.20	2,902	$0.9M	$298		0.658	336 (23)	221 (19)
LNB with SOFA and SNCR	0.16	3,562	3.5M	968	3,913	0.822	331 (28)	218 (22)
LNB with SOFA and SCR	0.05	5,230	14.5M	2,774	6,632 (compared to LNB with SOFA and SNCR) 5,861 (compared to LNB with SOFA).	1.250	317 (42)	198 (42)

*At the most impacted Class I area, Canyonlands National Park. The improvement in days over 0.5 and 1.0 dv provided by the control option relative to the baseline is presented in parentheses. See Table H.10. Air Quality Modeling Protocol: Utah Regional Haze Federal Implementation Plan, US EPA Region 8 (Nov. 2015); Docket Id. EPA–R08–OAR–2015–0463–0012.

Tables 4 and 5 provide summaries of EPA's NO_X BART analysis of all feasible control options for Huntington Units 1 and 2, including the costs of compliance and visibility impacts.

TABLE 4—SUMMARY OF EPA'S HUNTINGTON UNIT 1 NO_X BART IMPACTS ANALYSIS

Control option	Annual emission rate (lb/MMBtu)	Emission reduction (tpy)	Total annual costs (million$)	Average cost effectiveness ($/ton)	Incremental cost effectiveness ($/ton)	Visibility impacts*		
						Improvement (dv)	Days > 0.5 dv	Days > 1.0 dv
LNB with SOFA	0.22	2,440	$0.8M	$332		0.851	249 (28)	153 (22)
LNB with SOFA and SNCR	0.17	3,185	3.5M	1098	3,609	1.113	244 (33)	143 (32)
LNB with SOFA and SCR	0.05	5,092	14.6M	2,871	5,830 (compared to LNB with SOFA and SNCR) 5,206 (compared to LNB with SOFA).	1.881	210 (67)	117 (58)

*At the most impacted Class I area, Canyonlands National Park. The improvement in days over 0.5 and 1.0 dv provided by the control option relative to the baseline is presented in parentheses. See Table H.11. Air Quality Modeling Protocol: Utah Regional Haze Federal Implementation Plan, US EPA Region 8 (Nov. 2015); Docket Id. EPA–R08–OAR–2015–0463–0012.

TABLE 5—SUMMARY OF EPA'S HUNTINGTON UNIT 2 NO_X BART IMPACTS ANALYSIS

Control option	Annual emission rate (lb/MMBtu)	Emission reduction (tpy)	Total annual costs (million$)	Average cost effectiveness ($/ton)	Incremental cost effectiveness ($/ton)	Visibility impacts*		
						Improvement (dv)	Days > 0.5 dv	Days > 1.0 dv
LNB with SOFA	0.21	2,576	$0.9M	$365		0.776	254 (23)	153 (22)
LNB with SOFA and SNCR	0.17	3,264	3.5M	1,075	3,730	1.016	244 (33)	149 (26)
LNB with SOFA and SCR	0.05	5,023	14.7M	2,928	6,368 (compared to LNB with SOFA and SNCR) 5,626 (compared to LNB with SOFA).	1.657	220 (57)	126 (49)

*At the most impacted Class I area, Canyonlands National Park. The improvement in days over 0.5 and 1.0 dv provided by the control option relative to the baseline is presented in parentheses. See Table H.12. Air Quality Modeling Protocol: Utah Regional Haze Federal Implementation Plan, US EPA Region 8 (Nov. 2015); Docket Id. EPA–R08–OAR–2015–0463–0012.

In our final BART determinations, we have taken into consideration all five of the statutory factors required by the CAA: Costs of compliance, energy and non-air quality environmental impacts of compliance, any existing pollution control technology in use at the source, remaining useful life of the source, and degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology.

We received some comments on our proposed consideration of remaining useful life and energy and non-air quality environmental impacts. However, we have not changed our evaluation from the proposal of the energy and non-air quality environmental impacts of compliance and the remaining useful lives of the sources. We find that the remaining useful life of the Hunter and Huntington units of at least twenty years is considerable and does not require us to revise our amortization period for the costs of controls. We also find that the energy and non-air quality environmental impacts of the various control options do not significantly favor one option over another. Please see the proposal action and our RTC document for details.

We also received comments on our proposed consideration of existing pollution control technology in use at the source, in this case LNB/SOFA at all four BART units. For reasons explained later in the preamble and in our RTC document, we continue to use a baseline period for emissions (2001–2003) that predates the installation of LNB/SOFA at the four BART units. We have considered the existing LNB/SOFA in several other ways. First, we considered them in selecting the control options to analyze for BART. Second, we considered them in determining the impacts of the control options, both by taking the LNB/SOFA into account in determining the proper NO_X rates for the post-combustion control options (selective non-catalytic reduction (SNCR) and SCR), and in computing the incremental cost-effectiveness values in the tables earlier. We also consider the existing LNB/SOFA in our discussion of incremental visibility benefits later. As explained later in the preamble and in our RTC document, this is a reasonable approach and consistent with other actions.

We now discuss the remaining factors, the costs of compliance and the degree of visibility improvement, and how we are weighing them in determining BART. At this point in time, EPA and the states have made a number of BART determinations for large coal-fired EGUs. EPA is taking into account the BART decisions made in other states to help frame our assessment of the cost and visibility benefits of control options in this action.[64] Specifically, we have compared the average cost-effectiveness, incremental cost-effectiveness, visibility improvement, and incremental visibility improvement for the selected BART controls, SCR + LNB/SOFA, with BART determinations for coal-fired EGUs where the EPA and states have based those determinations on the same or similar metrics.

The most comparable determination is in EPA's final action on Wyoming's regional haze SIP, in which EPA promulgated a FIP for three units at Laramie River Station and determined NO_X BART to be SCR + LNB/SOFA for the three units.[65] On a per-unit basis, the visibility improvement at the most impacted Class I area from this control option ranged from 0.52 to 0.57 dv, and across all three units the sum of the improvement was 1.62 dv.[66] Thus, applying this control option to all three units of Laramie River Station was estimated to have a visibility benefit

[64] As discussed in our proposal action, in the context of reasonable progress determinations, a comparison with another reasonable progress determination has been upheld by the Ninth Circuit Court of Appeals as a rational explanation for that determination. Nat'l Parks Conserv. Ass'n v. U.S. EPA, 788 F.3d 1134, 1148–49 (9th Cir. 2014).

[65] 79 FR 5032, 5047 (Jan. 30, 2014).

[66] As explained in our proposal, the BART Guidelines require consideration of the visibility improvement from the use of BART controls applied to the collection of emissions units that make up the BART source. Although this requires consideration of the visibility improvement from BART applied to the subject-to-BART source as a whole, states (and EPA) may also include the visibility benefits on a per unit basis as well in their evaluation of the BART factors. In this action we have considered both the per-unit visibility benefits as well as the source-wide visibility benefits. The source-wide visibility benefits of our selected BART control, SCR + LNB/SOFA, at all nine impacted Class I areas are presented and discussed later.

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about the same as applying the same control option to just one of the Hunter and Huntington BART units (the visibility benefits in today's action at the most impacted Class I area range from 1.25 dv at Hunter Unit 2 to 1.881 dv at Huntington Unit 1). The visibility benefits of SCR + LNB/SOFA at Hunter or Huntington as a whole (2.948 dv for Hunter, 3.848 dv for Huntington) are significantly greater than at Laramie River Station.

The average cost-effectiveness for SCR + LNB/SOFA at Laramie River Station ranged from $4,375/ton to $4,461/ton, considerably higher than the corresponding values of $2,697/ton to $2,928/ton for the Hunter and Huntington BART units. The incremental cost-effectiveness for SCR + LNB/SOFA at Laramie River Station as compared to SNCR + LNB/SOFA ranged from $5,449 to $5,871/ton, which is generally in line with the corresponding values for the Hunter and Huntington BART units, $5,830/ton to $6,632/ton. Finally, the incremental visibility improvement for SCR + LNB/SOFA at the most impacted Class I area as compared to SNCR + LNB/SOFA for Laramie River Station was significant (0.25 dv to 0.29 dv), but is even more so for the Hunter and Huntington BART units (0.428 dv at Hunter Unit 2 to 0.748 dv at Huntington Unit 1). Thus, the selection of SCR + LNB/SOFA at the Hunter and Huntington BART units is very much in line with the selection of SCR + LNB/SOFA at Laramie River Station. This is particularly true given that Laramie River Station impacts four Class I areas, while the Hunter and Huntington BART units impact nine Class I areas.

In the same Wyoming action, our BART determinations for Dave Johnston Units 3 and 4 also provide a useful comparison. At Unit 3, we selected SCR + LNB/OFA as BART based on an assumed 20-year remaining useful life. Under that assumption, the average cost-effectiveness and incremental cost-effectiveness (as compared to SNCR + LNB/OFA) were $2,635/ton and $7,583/ton, respectively. We found these costs reasonable in light of a 0.51 dv improvement and a 0.12 dv incremental improvement at the most impacted Class I area. The average cost-effectiveness of SCR + LNB/SOFA at the Hunter and Huntington BART units, $2,697/ton to $2,928/ton, is comparable, while the incremental cost-effectiveness of SCR + LNB/SOFA at the Hunter and Huntington BART units, $5,830/ton to $6,830/ton, is less than at Dave Johnston Unit 3. On the other hand, the visibility benefit and incremental visibility benefit of SCR + LNB/SOFA at the Hunter and Huntington BART units is considerably higher than that at Dave Johnston Unit 3, and the Hunter and Huntington BART units impact nine Class I areas as compared to five for Dave Johnston Unit 3. Thus, the selection of SCR + LNB/SOFA for the Hunter and Huntington BART units is very much in line with our BART determination for Dave Johnston Unit 3 (assuming a remaining useful life of 20 years).

In the Wyoming action, at the request of PacifiCorp we also analyzed an alternative compliance scenario for Dave Johnston Unit 3 that assumed a shutdown in 2027 and correspondingly a 9-year remaining useful life. As explained in the BART Guidelines, for BART units with a relatively short remaining useful life—in other words, less than the time period used for amortizing costs, which in this case was 20 years—the shorter time period can be used to amortize costs instead. Effectively, this increases the cost-effectiveness values; in the case of Dave Johnston Unit 3, the average and incremental cost-effectiveness of SCR + LNB/OFA increased to $3,742/ton and $11,781/ton, respectively. Considering these values against the visibility benefits, we found that the incremental cost-effectiveness of SCR + LNB/OFA in this instance was not reasonable. Of course, for the Hunter and Huntington BART units the incremental cost-effectiveness is much lower than this scenario and in line with the previous scenario assuming a 20-year remaining useful life, for which we selected SCR + LNB/OFA as BART. Similarly, for Dave Johnston Unit 4, as for the 9-year remaining useful life scenario for Unit 3, we rejected SCR + LNB/OFA due to a high incremental cost-effectiveness of $13,312. This is again consistent with our determination here, given the much lower incremental cost-effectiveness numbers for SCR + LNB/SOFA at the Hunter and Huntington BART units.

There are other BART determinations in which SCR has been selected as BART (either alone or in conjunction with LNB and SOFA) based on similar metrics, although those determinations may not have explicitly discussed incremental cost-effectiveness and incremental visibility benefits on a per-unit basis. First, the State of Colorado selected, and the EPA approved, SCR as NO_X BART for Public Service Company's Hayden Station, Units 1 and 2.[67] Hayden Units 1 and 2 were equipped with first generation LNB and over-fire air (OFA) installed in 1999 as the result of a consent decree to address other CAA requirements.[68] In its BART determination, Colorado considered these existing controls as given and included them in the baseline emissions, which is consistent with our approach here: Colorado included the Hayden combustion controls in the baseline because they were not installed for a proposed BART determination but for other CAA purposes. In contrast, we do *not* include the combustion controls at Hunter and Huntington because they *were* installed pursuant to a proposed BART determination.[69]

Colorado analyzed as feasible controls upgraded LNB, SNCR, and SCR. Based on an average cost-effectiveness of $3,385/ton and $4,064/ton, incremental cost-effectiveness (as compared with SNCR + the existing LNB/OFA) of $5,326/ton and $7,331/ton, and visibility improvement of 1.12 dv and 0.85 dv at the most impacted Class I area, respectively, Colorado selected SCR (added to the existing LNB/OFA) as BART for Units 1 and 2. The average cost-effectiveness of SCR + LNB/SOFA at the Hunter and Huntington BART units, $2,697/ton to $2,928/ton, compares favorably with the average cost-effectiveness of SCR at the Hayden units, and the incremental cost-effectiveness of SCR + LNB/SOFA at the Hunter and Huntington BART units, $5,830/ton to $6,632/ton, is generally in line with the incremental cost-effectiveness of SCR at the Hayden units. The visibility improvement from SCR + LNB/SOFA at the most impacted Class I area for the Hunter and Huntington BART units, from 1.25 dv to 1.881 dv, compares favorably with the Hayden units. While Colorado appears to have not considered the incremental visibility benefits, these are also favorable for our selection of SCR + LNB/SOFA: 0.428 dv to 0.768 at the Hunter and Huntington units, as compared to 0.37 dv and 0.43 dv at Hayden Units 1 and 2, respectively. We also note that Hayden Station impacts eleven Class I areas, slightly more than Hunter and Huntington; however for six of those areas the impacts from Hayden Station are less than the impacts from Hunter and Huntington at the least

[67] 77 FR 18069 (Mar. 26, 2012) (proposal); 77 FR 76871 (Dec. 31, 2012) (final).

[68] Colorado Department of Health and Environment, Air Pollution Control Division, Technical Review Document, Renewal/Modification of Operating Permit 96OPRO132, Public Service Company—Hayden Station, Colorado, at 2 (2007–2008).

[69] We respond later in this action and in our RTC document about comments that this comparison should not be used because the baseline for Hayden included the existing controls.

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impacted Class I area, Zion National Park.[70]

Another comparable determination can be found in EPA's FIP for Arizona Public Service's Cholla Power Plant, Units 2, 3, and 4, in which EPA determined that NO_X BART was SCR for all three units.[71] Similar to Colorado's determination for Hayden, EPA included the existing controls, LNB and OFA, in the baseline for the three units.[72] EPA estimated average cost-effectiveness values for SCR (as added to the existing LNB/OFA) of $3,114/ton, $3,472/ton, and $3,395/ton; and incremental cost-effectiveness values (as compared to SNCR + LNB/OFA) of $3,257/ton, $3,811/ton, and $3,661/ton, respectively, for Units 2, 3, and 4. EPA's modeling showed a source-wide visibility improvement for SCR of 1.34 dv at the most impacted Class I area. In comparison, the source-wide visibility improvements at the most impacted Class I area for Hunter and Huntington from SCR + LNB/SOFA are much larger: 2.948 dv and 3.848 dv, respectively. While the average cost-effectiveness values at Cholla are somewhat higher than those for the Hunter and Huntington BART units, the incremental cost-effectiveness of SCR at the Hunter and Huntington BART units is considerably higher, at $5,830/ton to $6,632/ton. Despite that disparity in incremental cost-effectiveness, this comparison still supports selection of SCR + LNB/SOFA for the Hunter and Huntington BART units, given the much greater magnitude of the visibility benefits and the fact that our other comparisons show the incremental cost-effectiveness of SCR + LNB/SOFA is still reasonable. Finally, Cholla Power Plant does impact somewhat more Class I areas, thirteen as opposed to nine for Hunter and Huntington; however, were we to sum the baseline impacts of Hunter and Huntington, they would be greater than those for Cholla.

Based on these comparisons to Laramie River Station, Hayden Station, Dave Johnston Units 3 and 4, and Cholla Power Plant Units 2, 3, and 4, the selection of LNB and SOFA with SCR as BART for the Hunter and Huntington BART units is fully justified.[73] For these four units, LNB and SOFA with SCR is very cost-effective, at $2,697/ton to $2,928/ton on an average basis (counting the costs and emission reductions from the combination of the three control technology elements), and at $5,830/ton to $6,632/ton on an incremental basis compared to LNB with SOFA and SNCR. Compared to LNB with SOFA, the incremental cost effectiveness of LNB and SOFA with SCR ranges from $5,206/ton to $5,861/ton, which is in line with the incremental cost effectiveness that supported the selection of LNB with SOFA and SCR for Laramie River Station. For the Hunter and Huntington BART units, LNB and SOFA with SCR provides substantial visibility benefits at several Class I areas that are similar in magnitude to those from Laramie River Station. For example, the visibility improvement from that control option installed on a single unit is 1.342 dv at Arches National Park, 1.545 dv at Canyonlands National Park, and 1.113 at Capitol Reef National Park. These comparisons show that costs are justified in light of the substantial visibility benefits, both total and incremental. In addition, for each unit, SCR + LNB/SOFA provides a significant improvement in the number of days over 0.5 dv as compared to the baseline (ranging from 42 days improvement at Hunter Unit 2 to 67 days improvement at Huntington Unit 1).

As mentioned earlier, the BART Guidelines require consideration of the visibility improvement from the use of BART controls applied to the collection of emissions units that make up the BART source. Tables 6 and 7 summarize the source-wide visibility improvements from the installation of SCR + LNB/SOFA at both BART units at Hunter and both BART units at Huntington, as well as the visibility improvements from the installation of SCR + LNB/SOFA at the other impacted Class I areas.

TABLE 6—SUMMARY OF SOURCE-WIDE VISIBILITY IMPACTS AND IMPROVEMENTS FOR HUNTER

Class I area	Baseline visibility impacts			BART (SCR + LNB/SOFA) Impacts (Improvements over baseline shown in parentheses)		
	Impacts (dv)	Days > 0.5 dv	Days > 1.0 dv	Impacts (dv)	Days > 0.5 dv	Days > 1.0 dv
Arches National Park (NP)	4.601	293	170	1.981 (2.62)	158 (135)	71 (99)
Black Canyon NP	1.097	68	22	0.481 (0.616)	14 (54)	1 (21)
Bryce Canyon NP	1.833	42	22	0.811 (1.022)	20 (22)	6 (16)
Canyonlands NP	5.356	359	240	2.408 (2.948)	223 (136)	111 (129)
Capitol Reef NP	4.606	175	118	2.171 (2.435)	114 (61)	55 (63)
Flat Tops Wilderness	1.281	77	31	0.537 (0.744)	22 (55)	1 (30)
Grand Canyon NP	1.891	49	32	0.730 (1.161)	25 (24)	9 (23)
Mesa Verde NP	1.327	82	32	0.514 (0.813)	21 (61)	4 (28)
Zion NP	0.963	29	14	0.369 (0.594)	10 (19)	4 (10)

Note: The baseline impacts are the combined impacts from all three units at Hunter, while the BART source is comprised of only units 1 and 2. EPA's evaluation of visibility under BART relies only on the visibility benefits associated with controls on the two BART units.

[70] See BART CALPUFF Class I Federal Area Individual Source Attribution Visibility Impairment Modeling Analysis for Public Service Company of Colorado Hayden Station Units 1 and 2, Colorado Department of Public Health, at 48 (Nov. 1, 2005).

[71] 77 FR 42834 (July 20, 2012) (proposal); 77 FR 72512, 72514–15 (Dec. 5, 2012) (final).

[72] In response to a comment about the use of this baseline, EPA explained that the three Cholla units had installed LNB/OFA and switched to a new source of coal with a much higher potential for NO_X emissions. Thus, the LNB/OFA had not been installed pursuant to a proposed state BART determination; instead they appear to have been installed to accommodate the use of the new coal. This is again distinguishable from the situation for Hunter and Huntington.

[73] As explained later and in our RTC document, we reject the comparisons to BART determinations in Montana, Florida, and Nebraska.

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TABLE 7—SUMMARY OF SOURCE-WIDE VISIBILITY IMPACTS AND IMPROVEMENTS FOR HUNTINGTON

Class I area	Baseline visibility impacts			BART (SCR + LNB/SOFA) impacts (improvements shown in parentheses)		
	Impacts (dv)	Days > 0.5 dv	Days > 1.0 dv	Impacts (dv)	Days > 0.5 dv	Days > 1.0 dv
Arches NP	3.887	237	146	0.848 (3.039)	67 (170)	18 (128)
Black Canyon NP	0.773	45	16	0.196 (0.577)	1 (44)	0 (16)
Bryce Canyon NP	1.221	36	19	0.326 (0.895)	4 (32)	0 (19)
Canyonlands NP	5.130	277	175	1.282 (3.848)	89 (188)	31 (144)
Capitol Reef NP	3.389	131	91	0.986 (2.403)	42 (89)	9 (82)
Flat Tops Wilderness	0.926	64	17	0.216 (0.710)	2 (62)	0 (17)
Grand Canyon NP	1.107	40	19	0.190 (0.806)	4 (36)	0 (19)
Mesa Verde NP	1.115	63	22	0.261 (0.854)	0 (63)	0 (22)
Zion NP	0.820	21	11	0.211 (0.609)	3 (18)	0 (11)

As can be seen from these tables, the baseline visibility impacts in dv at all nine Class I areas are large: Even at the least impacted Class I area, Zion National Park, Hunter and Huntington are each above the 0.5 dv threshold for contributing to visibility impairment. For Hunter, at the three most impacted Class I national park areas, Arches, Canyonlands and Capitol Reef, the baseline visibility impacts range from 4.601 dv to 5.356 dv. At these three Class I areas, the number of days with impacts over 0.5 dv and 1.0 dv range from 175 to 359, and from 118 to 240, respectively. The visibility benefits of BART (SCR + LNB/SOFA) at the three Class I areas are correspondingly large, ranging from 2.435 dv to 2.948 dv. The improvement in the number of days over 0.5 dv and 1.0 dv at these three Class I areas are large as well, ranging from an improvement of 61 to 136 days in the number of days over 0.5 dv and 63 to 129 days in the number of days over 1.0 dv. Even at the least impacted Class I area, Zion National Park, the visibility benefits of BART are significant, 0.594 dv, and 19 and 10 days in the number of days over 0.5 dv and 1.0 dv, respectively. Consideration of these source-wide visibility benefits confirms that SCR + LNB/SOFA at Hunter is fully justified in light of its reasonable costs.

For Huntington, at the three most impacted Class I national park areas, Arches, Canyonlands and Capitol Reef, the baseline visibility impacts range from 3.389 dv to 5.130 dv. At these three Class I areas, the number of days with impacts over 0.5 dv and 1.0 dv range from 131 to 271, and from 91 to 175, respectively. The visibility benefits of BART (SCR + LNB/SOFA) at the three Class I areas are correspondingly large, ranging from 2.063 dv to 3.538 dv. The improvement in the number of days with impacts from Huntington over 0.5 dv and 1.0 dv at these three Class I areas are similar to those of Hunter. Huntington has 89 fewer days with impacts over 0.5 dv at Capitol Reef, 170 fewer days with such impacts at Archers, and 188 fewer days at Canyonlands. The number of days Huntington has impacts over 1.0 dv at these areas falls by 82 to 144 days. Even at the least impacted Class I area, Zion National Park, the visibility benefits of BART are significant. BART is projected to result in a 0.609 dv improvement at Zion the number of days with impacts over 0.5 dv and 1.0 dv fall by 18 and 11 days, respectively. Consideration of these source-wide visibility benefits confirms that SCR + LNB/SOFA at Huntington, as at Hunter, is fully justified in light of its reasonable costs.

Accordingly, for the Hunter and Huntington BART units, we find that BART for NO_X is SCR + LNB/SOFA, represented by an emission limitation of 0.07 lb/MMBtu (30-day rolling average). The BART emission limitation of 0.07 lb/MMBtu allows for a sufficient margin of compliance for a 30-day rolling average limit that would apply at all times, including startup, shutdown, and malfunction.[74] We are also finalizing our proposed monitoring, recordkeeping, and reporting requirements in our regulatory text for 40 CFR 52.2336; these requirements will ensure that the BART emission limitation is enforceable.

Under 40 CFR 51.308(e)(1)(iv), ''each source subject to BART [is] required to install and operate BART as expeditiously as practicable, but in no event later than five years after approval of the implementation plan revision.'' In light of the considerable effort involved to retrofit SCR, we determine that five years is as expeditiously as practicable. Therefore, the compliance deadline for the BART requirements will be five years from the date our final FIP becomes effective.

2. PM_{10} BART

We are finalizing our proposed approval of Utah's PM_{10} BART determinations for Hunter Units 1 and 2 and Huntington Units 1 and 2. We have determined that Utah's PM_{10} BART determinations, emission limitations, and associated monitoring, recordkeeping and reporting for Hunter Units 1 and 2 and Huntington Units 1 and 2 meet the requirements of 40 CFR 51.309(d)(4)(vii) and the linked BART requirements in 40 CFR 51.308(e)(1).[75] We are approving SIP Section IX, Part H.21 subsections a through d and f (related to applicability, definitions, recordkeeping, and stack testing), and conditionally approving Subsection e (emission limitations shall apply at all times). We are approving SIP Section IX, Part H.22 subsections a.i and b.i. We considered and rejected comments on the validity of the State's BART analyses for PM_{10} and the State's emission limitation of 0.015 lb/MMBtu on a 30-day rolling basis for the Hunter and Huntington BART units. For PM_{10} reporting, we are finalizing our proposed conditional approval of this element in accordance with CAA section 110(k)(4), based on Utah's commitment to submit specific measures to address the reporting requirement.[76] Utah's letter commits to adopt and submit rule language that would require sources to report any deviation from the requirements of the regional haze SIP provisions, which would include the PM_{10} emission limitations. The specific language is

[74] Emission limits such as BART are required to be met on a continuous basis. *See* 70 FR 39104, 39172 (July 6, 2005) (stating that emissions limits including BART are to be met on a ''continuous basis'' in the BART Guidelines, section V); 42 U.S.C. 7602(k) (noting that emission limits are to be on ''a continuous basis'').

[75] As discussed elsewhere, while we are approving the PM_{10} emission limits in SIP Section IX, Part H.21, we are not approving into the SIP the ''approval orders'' (*i.e.,* State-issued permits) that are referenced in SIP Section XX.D.6.d at 25 and 29).

[76] Letter from Department of Environmental Quality, State of Utah to EPA, DAQP–120–15 (Dec. 10, 2015).

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detailed in Utah's commitment letter. We did not receive any adverse comments on our conditional approval of the recordkeeping requirements for the PM_{10} emission limitations.

Pursuant to CAA section 110(k)(4), the State has one year from the date of this action to adopt and submit the necessary SIP revisions for SIP Section IX.H.21.e. If the State does not meet its commitment within the one year period, the conditional approval is treated as a disapproval. EPA finds that the necessary SIP revisions meet EPA's criteria for conditional approvals,[77] as the revisions appear to involve a limited amount of technical work, are anticipated to be non-controversial, and can reasonably be accomplished within the length of time for the State's adoption process.

3. Enforceable Commitment SIP

We are taking no action on Utah's enforceable commitment SIP, submitted on October 20, 2015. In its enforceable commitment SIP submittal, the State resolved to address double counting certain emissions reductions from the Carbon power plant closure under both the Utah BART Alternative and the SO_2 backstop trading program under 40 CFR 51.309. As we explained in our proposal, we interpret our authority to enable us to approve enforceable commitment SIPs under section 110(a)(2)(A) of the Act and other applicable sections as relevant (for our NO_X BART action, this is section 169A). However, since we are not approving the State's NO_X BART Alternative SIP submittal, which included emissions reductions from the Carbon power plant, there is no need for the elements of the enforceable commitment SIP. Additionally, because we are not taking action on the enforceable commitment SIP package submitted on October 20, 2015 we are not responding to comments on that SIP in this action.

II. Summary and Analysis of Major Issues Raised by Commenters

We received both written and oral comments at the public hearings we held in Salt Lake City. We also received comments by the Internet and mail. The full text of comments received from these commenters is included in the publicly posted docket associated with this action at *www.regulations.gov.* Our RTC document, which is also included in the docket associated with this action, provides detailed responses to all significant comments received. In total, we received approximately 4,900 pages of significant comments. Later we provide a summary of the more significant comments received and a summary of our responses to them. Our RTC document is organized similarly to the structure presented in this section (*e.g.,* Cost of Controls, BART Alternative CALPUFF Modeling, etc.). Therefore, if additional information is desired concerning how we addressed a particular comment, the reader should refer to the appropriate section in our RTC document.

PacifiCorp, conservation organizations (HEAL Utah, National Parks Conservation Association, and Sierra Club) and the National Parks Service (NPS) submitted detailed comments that include new cost and visibility modeling information.[78] Several government, tourism and industry organizations also submitted comments. Many general comments were made at the public hearing. We received approximately 400 comments through email and the *www.regulations.gov* Web site. We also received approximately 70,000 mass mailer comments from private citizens.

A. General Comments

Comment: Several commenters expressed concern over the accommodations provided at the public hearing. Several commented on the large number of attendees, and how this made it difficult for them to make their comments as well as hear those who were speaking. Commenters noted that many attendees were intimidated by the size of the hearing and by some of the other attendees, and suggested that many attendees left the hearing without commenting on the issues. There was concern that these departures may have led to an imbalance in opinions presented. Some commenters noted that some of the attendees at the hearing were not being cordial with the others and were unkind to those who expressed different opinions. Several commenters made requests for additional hearings, suggesting that additional hearings be located closer to the affected Class I areas and at locations that could accommodate a larger number of attendees.

Response: Several commenters expressed their dissatisfaction with EPA's public hearing arrangements. As required by section 307(d)(5) of the CAA the EPA provided an opportunity for the public to submit written comments and voice concerns at the public hearing. In arranging the logistics for the public hearing, EPA's intent was to provide an opportunity for all members of the public to voice their opinions about the proposed rulemaking. The Salt Lake City library was chosen as the public hearing site because: (1) The library had reasonable accommodations to hold approximately 100 attendees; (2) the library was centrally located, and would be convenient for many members of the public to access; and (3) the library did not require a fee. The size of the venue was consistent with other hearings the EPA has conducted across the country.[79] Based on these considerations, the EPA had no reason to believe the venue could not accommodate the anticipated level of public participation or that it would not fulfill the purposes of and the Act's requirements for the hearing.

While the number of individuals attending the public hearing exceeded what we anticipated, we made adjustments throughout the day to accommodate the large numbers. For example, the library staff worked with us and set up broadcast speakers in the hallway so that those in the hallway could hear what was said during the hearing. The EPA could not allow the meeting room used for the public hearing to exceed its capacity limit in order to comply with the library's policies to comply with the fire code occupancy requirements. In response to the unkind statements made by some participants, the Hearing Officer reminded the crowd that the purpose of the meeting was to allow people to testify comfortably without being intimidated, and that people causing distractions would be asked to leave. In fact, some attendees who were causing distractions were asked to leave. Additionally, even though the turnout was larger than expected, EPA scheduled the opportunity for the public to speak based on their arrival time (with those arriving first, first allowed to speak); and the EPA accommodated all the potential speakers at the end of the scheduled hearing time, by extending the hearing until everyone who was present at that time and wanted to speak had done so. As a result the hearing was extended by approximately 20 minutes.

[77] *See* Memorandum from John Calcagni to EPA Regional Directors. ''Processing of State Implementation Plan (SIP) Submittals'' (July 1992), available at *http://www3.epa.gov/ttn/oarpg/t1/memoranda/siproc.pdf.*

[78] On May 19, 2015, PacifiCorp submitted late comments. These comments are included in the docket for this action and we address them in our RTC document.

[79] Examples include: (1) The public hearing on FIP proposal on May 1, 2012 at the Lewis and Clark Library in Helena, MT; (2) the public hearing on FIP proposal on July 27, 2013 at the Laramie County Library in Cheyenne, WY; and (3) the public hearing on FIP proposal on October 13–14, 2011 at the North Dakota Department of Health Training Center in Bismarck, ND.

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The EPA determined that additional hearings were unnecessary, because the written comment period continued for approximately seven weeks after the public hearing, allowing for additional comments to be submitted. As explained in the proposed rule,[80] in addition to the public hearing, the EPA accepted written comments provided those comments were received on or before March 14, 2016. Therefore, while some of the members of the public may have left before they had an opportunity to speak at the hearing, they still had the opportunity to submit their comments either online or via mail to EPA for approximately seven weeks after the public hearing, as demonstrated in 81 FR 2004. The EPA gives just as much consideration to comments we receive in writing as we do to those we receive at public hearings.

B. EPA Authority and State Discretion

Comment: The State of Utah commented that EPA should approve its BART Alternative because it meets all of the current requirements of the CAA and the RHR found at 40 CFR 51.300 through 51.309. EPA is obligated to approve a SIP that meets all of the applicable requirements of the CAA. See 42 U.S.C. 7410(k)(3) (''In the case of any submittal on which the Administrator is required to act under paragraph (2), the Administrator shall approve such submittal as a whole if it meets all of the applicable requirements of this chapter.''). The Section 308 regulation grants states full discretion as to whether to adopt the BART Alternative. In the current proposed rule, EPA also acknowledges a state's discretion in approving alternative measures: Finally, in . . . responding to concerns regarding ''impermissibly vague'' language in §51.308(e)(3) that would allow a State to ''approve alternative measure that are less protective than BART,'' we explained that ''[t]he State's discretion in this area is subject to the condition that it must be reasonably exercised and that its decision be supported by adequate documentation of its analyses.'' 81 FR 2004, 2012 (quoting 71 FR 60612, 60621 (Oct. 13, 2006)). Therefore, the alternative measure is within the state's discretion, as long as it is adequately supported.

Response: We agree that states have discretion to adopt BART alternatives; however, as the commenter explains, the state's discretion is subject to a number of requirements, including that it be reasonably exercised and adequately supported and that the state's Alternative clearly provides greater reasonable progress than BART. The CAA requires that states submit SIPs that contain such measures as may be necessary to make reasonable progress toward achieving natural visibility conditions, including the BART requirements. As EPA explained when promulgating the regional haze regulations, ''[t]he overarching requirement of the visibility protection provisions of section 169A is to make reasonable progress toward the national goal of eliminating visibility impairment. If greater reasonable progress can be made through an approach that does not require source specific application of BART, EPA believes that approach would comport with this statutory goal.'' [81] States have the opportunity to adopt alternative measures in lieu of BART where the agency *reasonably concludes* that more reasonable progress will thereby be attained toward the national visibility goal.[82] We explained these requirements in our co-proposal as follows: ''[a]s described in our 2006 revisions to the RHR, concerning BART alternatives, '[t]he State's discretion in this area is subject to the condition that it must be reasonably exercised and that its decisions be supported by adequate documentation of its analyses.''' [83]

While states have discretion to decide whether to adopt a BART alternative in a SIP, such discretion does not extend to the authority to adopt SIPs that will not ensure reasonable progress toward the national visibility goal of preventing any future and remedying of any existing visibility impairment in Class I areas. Such an interpretation is also inconsistent with the legislative history, which stresses the importance of the ''national goal'' [84] of clear air quality in Class I areas and ''preventing impairment of visibility,'' noting that ''the millions of Americans who travel thousands of miles each year to visit Yosemite or the Grand Canyon or the North Cascades will find little enjoyment if . . . upon reaching the Grand Canyon it is difficult if not impossible to see across the great chasm.'' [85]

Thus, we do not agree that Congress assigned states full discretion in developing SIPs, because it is not clear how EPA's limited role under such a scenario would assure attainment of the national goal or imposition of the [better than] BART requirements where a state's BART alternative demonstration does not demonstrate that the alternative achieves greater reasonable progress. In view of the statutory requirements, it is logical that EPA would evaluate the reasonableness of the State's BART Alternative analysis in light of the purpose of the regional haze program.

As detailed in the sections in our co-proposal and based on our evaluation and findings as detailed in Section I.B.1 of this document and in our RTC document, we determined that, on balance, the evidence does not show that the Alternative clearly achieves greater visibility benefits than BART. Because the State's BART Alternative is not approvable, we are obligated to disapprove it, develop BART analyses, and then arrive at our own BART determinations for the four EGUs that are subject-to-BART.

Furthermore, this is a SIP review action, and we believe that EPA is not only authorized, but required to exercise independent technical judgment in evaluating the adequacy of the State's regional haze SIP, including its BART Alternative analyses, just as EPA must exercise such judgment in evaluating other SIPs. In evaluating other SIPs, EPA is constantly exercising judgment about SIP adequacy, not just to meet and maintain the NAAQS, but also to meet other requirements that do not have a numeric value. In this case, Congress did not establish a specific numeric value by which to measure visibility improvement; instead, it established a reasonable progress standard and required that EPA assure that such progress be achieved via implementation, *inter alia,* of the Act's BART requirement. Here, we are exercising judgment within the parameters laid out in the CAA and our regulations.

Our evaluation of the State's BART Alternative is presented in section I.B.1 and in our RTC document.

Comment: The State commented that EPA mistakenly imposes additional inapplicable requirements in its evaluation of Utah's regional haze SIP. Greater reasonable progress under Section 308(e)(2) can be demonstrated using either one of two methods: (1) Greater emission reductions than under BART (Section 308(e)(3)); or (2) the weight-of-evidence test, consisting of a number of requirements that the state weighs to conclude which option achieves greater reasonable progress (section 308(e)(2)). *See* 40 CFR 51.308(e)(2) and (3). The state has discretion to choose one method over the other. *See WildEarth Guardians* v. *E.P.A.,* 770 F.3d 919, 935–37 (10th Cir.

[80] 81 FR 2004 (Jan. 14, 2016).

[81] 64 FR 35714, 35739 (July 1, 1999).

[82] *Id.* (emphasis added).

[83] 81 FR 2004, 2006 (Jan. 6, 2016) (citing 71 FR 60612, 60621 (Oct. 13, 2006)).

[84] 42 U.S.C. 7491(a)(1).

[85] H.R. Rep. No. 95–294, at 137 (1977).

2014). The Tenth Circuit characterized the former approach as ''quantitative'' and the latter as ''qualitative,'' ultimately ruling that EPA can properly rely on qualitative factors in applying the ''weight-of-evidence test.'' *See id.* at 934–35 (EPA's choice of qualitative standard was ''permissible under the EPA's interpretation of its regulations.'').

Utah submitted its BART Alternative under Section 308(e)(2), purposefully electing to make its determination that the alternative program achieves greater reasonable progress under the ''weight-of-evidence'' test. EPA analyzed Utah's BART Alternative in both co-proposals under the section 308(e)(3) ''greater emissions reductions test'' in addition to the ''weight-of-evidence'' analysis. See 81 FR 2004, 2021, 2028. EPA proposed that Utah's BART Alternative does not result in greater emission reductions because ''the total NO_X emissions are greater under the BART Alternative than the BART Benchmark,'' even though ''in the aggregate there are fewer SO_2 and PM_{10} emissions for the BART Alternative . . . .'' *Id.* at 2028. EPA erroneously imposed Section 308(e)(3) requirements on Utah's BART Alternative in addition to the Section 308(e)(2) weight-of-evidence test. EPA must withdraw its analysis of Utah's BART Alternative under the greater emissions reductions test because, as Utah clearly explained, the State never intended its data to satisfy this test.

Response: We agree in part and disagree in part with this comment. In developing a BART Alternative SIP, we agree that a state has the discretion to choose between the ''greater emission reduction'' test (section 308(e)(3)) and the ''weight-of-evidence'' test (section 308(e)(2)). Utah's comments clarify that they elected the weight-of-evidence test, and so we clarify and modify our evaluation of the State's SIP submittal. We therefore clarify that we are not disapproving the SIP under the elements of the section 308(e)(3) test as we had proposed.[86]

The State's submittal, however, asserted that the BART Alternative is better than BART based in part on the metric that compared annual emissions of the three visibility impairing pollutants in the aggregate. There is no requirement in section 308(e)(2) for the State to compare annual emissions of visibility pollutants in the aggregate. Rather, as we explained in our proposal, we have addressed this issue under section 308(e)(3); our interpretation under that provision also applies under section 308(e)(2). Specifically, if under section 308(e)(2) a state compares annual emissions of visibility in the aggregate to determine whether a BART alternative ''results in greater emission reductions,'' we examine whether each of the visibility causing pollutants is less under the alternative. For the reasons explained in our proposal and in section I.B.1.c.i of this document, we have not approved a BART alternative where one or more of the specific pollutants under the BART alternative is greater than it would be under the BART benchmark.[87]

Therefore, as we did in our proposal, it is reasonable to apply our interpretation of the section 308(e)(3) ''greater emission reductions'' element under section 308(e)(2) as well, because the same concerns regarding the relationship between reductions of multiple pollutants and visibility improvements are also relevant in the weight-of-evidence context.

Comment: PacifiCorp asserted that EPA is not empowered under the CAA to require compliance with both the SIP proposal and the FIP proposal. As a practical matter, that is precisely what EPA proposes to do to the extent it approves the FIP proposal. This is because PacifiCorp already has implemented the SIP proposal as required by Utah law. If EPA were to select the FIP proposal, it would do so knowing[88] that PacifiCorp would be required to implement both the SIP proposal and the FIP proposal. Nothing in CAA or regional haze rules allows EPA to require such a result when the proposed action itself states that EPA ''intends to finalize only one proposal.'' See 81 FR 2004, 2006.

For all of the reasons stated earlier, EPA should approve the Utah SIP as stated in the SIP proposal, and should reject the FIP proposal. What EPA cannot do, and indeed is not empowered under the CAA to require, is compliance with both the SIP proposal and the FIP proposal.

Response: We disagree with this comment. As explained elsewhere, the CAA requires that states submit SIPs that contain such measures as may be necessary to make reasonable progress toward achieving natural visibility conditions, including the BART requirements. EPA is acting under its authority pursuant to the CAA in disapproving portions of the SIP submittal and promulgating the FIP. We have the duty to ensure that regional haze SIP submittals meet the requirements of the Act and the RHR.[89] While states have the opportunity to adopt alternative measures in lieu of

[86] 81 FR 2004, 2028 (''Therefore, we propose to disapprove Section XX.D.6.c. of the Utah SIP under the test in 40 CFR 51.308(e)(3).'').

[87] EPA's interpretation of the requirement under 40 CFR 51.308(e)(3) that the alternative measure ''results in greater emission reductions'' has been that the emission reduction comparisons are pollutant specific. We have applied this interpretation in evaluating BART alternatives and we have not looked at a total emissions profile that combines emissions of multiple pollutants to determine whether a BART benchmark or a BART alternative is ''better,'' except where every visibility impairing pollutant is reduced by a greater amount under the BART alternative. See 79 FR 9318, 9335 (Feb. 18, 2014) (proposed approval of Arizona BART Alternative for Sundt Unit 4); 79 FR 52420 (Sept. 3, 2014) (final approval of Arizona BART Alternative for Sundt Unit 4); 77 FR 18052, 18073–75 (Mar. 26, 2012) (proposed approval of Colorado BART Alternative, no modeling required where the 40 CFR 51.308(e)(3) test was met); 77 FR 76871 (Dec. 31, 2012) (final approval of Colorado BART Alternative). EPA has not relied on a total emissions profile that combines emissions of multiple pollutants together to determine that either BART or a BART alternative is ''better,'' because visibility modeling is the most appropriate method to assess the overall improvements in visibility impacts from control scenarios where reductions of multiple pollutants are considered, except where every visibility impairing pollutant is reduced by a greater amount under the alternative. As we have explained, ''[e]ach of the five pollutants which cause or contribute to visibility impairment has a different impact on light extinction for a given particle mass, making it therefore extremely difficult to judge the equivalence of interpollutant trades in a manner that would be technically credible, yet convenient to implement in the timeframe needed for transactions to be efficient. This analysis is further complicated by the fact that the visibility impact that each pollutant can have varies with humidity, so that control of different pollutants can have markedly different effects on visibility in different geographic areas and at different times of the year.'' See 64 FR 35714, 35743(July 1, 1999). As other Agency actions on BART alternatives have explained, modeling assesses ''both pollutants' chemical aerosol formation mechanisms and impacts on visibility,'' (see 78 FR 79344, 79355; Dec. 30, 2013) which allows evaluation of the ''relative visibility impacts from the atmospheric formation of visibility impairing aerosols of sulfate and nitrate.'' See 79 FR 33438, 33440 (June 11, 2014).

[88] EPA is well aware that the Utah SIP, as it has been implemented over time, became binding state law in regard to the Utah BART Units and ultimately the other units covered by the BART Alternative. This makes it particularly egregious that, even though EPA knew that PacifiCorp was required to expend hundreds of millions of dollars to fully implement the BART Alternative under state law, EPA said nothing about its intention to issue a competing co-proposal until after PacifiCorp had completed all of the emission reductions required under the Utah SIP. *See* Letter from Carl Daly to Bryce Bird, Re. EPA Region 8 Comments on Utah's February 2015 Draft Regional Haze SIP Revision, at 1 (May 1, 2015) (commenting on the then-proposed Utah SIP including the BART Alternative). This secretive approach by EPA also caught the Utah Division of Air Quality off guard as explained in their oral comments during the January 26, 2016 hearing: ''Throughout the SIP development process, we worked as regulatory partners, closely and extensively with EPA staff to ensure that Utah's Alternative to BART SIP revision met all the requirements of the Clean Air Act and was approvable by EPA. The EPA should approve the option that Utah developed while in close consultation with EPA and not the option that Utah was not even aware was being prepared or under consideration until it was proposed in the **Federal Register**.''

[89] *See* CAA sections 169A and 110(k)(3).

BART, their discretion in this area is subject to the condition that it must be reasonably exercised and that their decisions be supported by adequate documentation of its analyses.

Therefore, we do not agree that we are prohibited from identifying deficiencies in the Utah SIP submittal after the State rulemaking process is complete, and the commenter cites nothing in the Act to the contrary. While a state may adopt regulations that are effective as a matter of state law before EPA goes through its rulemaking process to evaluate the proposed SIP elements, those state rules are not federally enforceable because any SIP submittal ''shall not be treated as meeting the requirements of this chapter until the Administrator approves the entire plan revision as complying with the applicable requirements.'' 42 U.S.C. 7410(k)(3). The State's and EPA's roles in this process were understood in PacifiCorp statements. For example, in response to a question provided during rebuttal testimony that asked whether the regional haze rules are final, the Company explained that the 2011 Utah and Wyoming SIP submittals ''are final insofar as state action is considered'' and recognized that ''these submittals have not yet been approved by the Environmental Protection Agency.'' [90]

The commenter suggests that measures in Utah's SIP submittal became ''binding state law in regard to the Utah BART Units'' and ''the other units covered by the BART Alternative'' prior to EPA's final action. The commenter merely suggests there are state law provisions but does not provide citations to any state law specific provisions.[91] It appears, however, that the commenter may be referring to measures established pursuant to the State's permit process. If this is, indeed, what the commenter is referring to, both the CAA and our regulations require that emission limits be established pursuant to a BART or BART alternative determination, and be contained in an EPA-approved SIP.[92] The fact that Utah chose to use its permit process to establish emission limits for its BART sources before EPA completed its review of the State's SIP submittal has no bearing on EPA's authority and obligation to conduct this review and to approve or, if necessary, disapprove the State's submittal.

Finally, EPA's comment letter on the State's proposed SIP clearly explained that ''we will only come to a final conclusion regarding the regional haze program for Utah when we take action on the program through our own public notice-and-comment rulemaking.'' [93] Our letter further explained to the State that, ''we are working towards meeting our legal obligations that have resulted from our January 2013 partial disapproval action for Utah's May 2011 regional haze SIP.'' EPA comment letters are intended to help improve any SIP revision that is under development, but they do not constitute agency action on that SIP revision or constitute any assurance of positive action on that revision upon submission and review. Instead and always, EPA has to formally discharge its responsibilities to review any SIP submittal. Moreover, the CAA does not require EPA to participate in state proceedings related to a state's SIP submission, nor does it preclude EPA from carrying out its statutory duty to disapprove an inadequate SIP if EPA does not voice concerns during state proceedings. The CAA requires EPA to issue a FIP when states have not met their obligations under the CAA. Therefore, EPA is promulgating this FIP to fill the regulatory gap created by the partial disapproval of Utah's SIP submittals. Despite the existence of a FIP, the State retains its authority to submit future regional haze SIPs consistent with CAA and RHR requirements; we do not discount the possibility of a future, approvable SIP submission that results in the modification or withdrawal of the FIP.

C. Reasonableness Standard

Comment: One commenter asserted that EPA arbitrarily and capriciously applies two inappropriate standards to the Utah SIP proposal. The commenter stated that, in an attempt to replace Utah's determination with its own, EPA imposes a ''Reasonableness Standard'' without concluding the Utah SIP contains data or methodological flaws—the limited circumstances under which courts have upheld use of this standard—and also imposes a ''Complexity of Evaluation'' standard which finds no support in the CAA or applicable regulations.

The commenter also asserted that EPA is prohibited from imposing additional requirements upon its approval/disapproval of a SIP that do not qualify as ''applicable requirements.'' EPA is not correct in its attempt in the proposed action to impose additional requirements on its evaluation of the BART Alternative and Utah SIP that are different than the applicable BART alternative requirements.

1. Reasonableness Standard –EPA asserts that Utah ''has several options for making the greater reasonable progress determination [and it] elected to use two separate approaches.'' [94] See 81 FR at 2006. EPA further states that it will evaluate both of those approaches in deciding whether to approve the Utah SIP. EPA then makes the blanket assertion that ''the State's discretion in this area is subject to the condition that it must be reasonably exercised and that its decisions be supported by adequate documentation of its analysis.'' (''Reasonableness Standard.'') See 81 FR at 2006. Although the use of words like ''reasonable'' and ''adequate'' have common sense appeal in the abstract, EPA may not apply this standard in a way that allows EPA to discard the state's discretion and instead impose EPA's own will.

In addition, the present circumstances regarding the SIP proposal are far different than those circumstances in

[90] Rebuttal Testimony of Cathy S. Woolums, at 26. (June 30, 2011). (Available in the docket at *https://www.regulations.gov/#!documentDetail;D=EPA-R08-OAR-2015-0463-0167*).

[91] Utah's Effective rule explains that ''[w]hile Utah has chosen to meet the NO_X BART requirement through alternative measures . . . the enforceable emission limits for both NO_X and SO_2 established in the approval orders and in the SIP for the four EGUs also met the presumptive emission rates for both NO_X and SO_2 established in Appendix Y independently of the alternative program.'' Effective Rule at page E–12, Section XX, p. 168 (adopted by the Board on June 3, 2015), available in the docket at *https://www.regulations.gov/#!documentDetail;D=EPA-R08-OAR-2015-0463-0002*. The presumptive emission limits in the BART Guidelines are rebuttable. The presumptive emission limits apply to power plants with a total generating capacity of 750 MW or greater insofar as these sources are required to adopt emission limits at least as stringent as the presumptive limits, unless after considering the five statutory factors, the State determines that the presumptive emission limits are not appropriate.

[92] Congress required EPA to promulgate regulations to assure ''reasonable progress'' toward meeting the national goal and compliance with section 169A. The regulations require the submission of regional haze SIPs for states with Class I areas within their borders and states whose emissions ''may reasonably be anticipated to cause or contribute to any impairment of visibility'' in a Class I area outside their borders. 42 U.S.C. 7491(b)(2), 7491(e)(2). All SIPs must include ''enforceable emission limitations and other control measures, means, or techniques . . . as well as schedules and timetables for compliance, as may be necessary or appropriate to meet the applicable requirements of [the Act].'' CAA section 110(a)(2)(A). Regional haze SIPs must include emission limits, compliance schedules, and other measures ''as may be necessary to make reasonable progress toward meeting the national goal.'' 42 U.S.C. 7491(b)(2).

[93] Letter from Carl Daly to Bryce Bird, Re. EPA Region 8 Comments on Utah's February 2015 Draft Regional Haze SIP Revision, at 1 (May 1, 2015). (Available in the docket at *https://www.regulations.gov/#!documentDetail;D=EPA-R08-OAR-2015-0463-0160*).

[94] As explained below [referring to PacifiCorp's comment document], EPA is simply wrong in concluding that Utah used two separate approaches to demonstrate greater reasonable progress. Therefore, EPA's stated basis for imposing the Reasonableness Standard does not support EPA's effort to do so.

which courts have upheld EPA's use of a similar Reasonableness Standard in other regional haze settings. For example, in *North Dakota* v. *EPA,* 730 F.3d 750, 760 (8th Cir. 2013), the court allowed EPA's use of the Reasonableness Standard under those circumstances where the state's BART determination contained ''data flaws that led to an overestimated costs of compliance.'' Also, *Oklahoma* v. *EPA,* 723 F. 3d 1201, 1212 (10th Cir. 2013) reached a similar conclusion based on ''methodological flaws.''

In the case of the SIP proposal, however, EPA proposes to approve the BART Alternative based on compliance with the applicable BART alternative requirements[95] and without also concluding that the BART Alternative contains ''data flaws'' or ''methodological flaws.'' Therefore, the factual bases for allowing EPA to apply a Reasonableness Standard do not exist in regard to the BART Alternative and EPA should not attempt to apply such a standard here—particularly as a basis for rejecting the BART Alternative.[96]

2. Complexity of Evaluation Standard—EPA also is wrong in its attempt to count among applicable requirements the unsupported conclusion that the ''complexity of our evaluation'' somehow necessitates EPA soliciting comments not only on the SIP proposal, but also on the competing FIP proposal. See 81 FR 2006.[97] Even taking at face value the assertion that analyzing the Utah SIP is ''complicated,'' that alone does not require EPA to evaluate the Utah SIP differently than any other regional haze SIP, nor does it justify EPA in presenting dueling co-proposals.[98] In other words, EPA has simply conjured up this new ''complexity'' requirement[99] out of thin air in an attempt to support its offering of the competing FIP proposal. EPA is acting arbitrarily and without legal authority by seeking comment on the FIP proposal based on what EPA calls the ''complexity of our evaluation'' and for this reason EPA should withdraw the FIP proposal and approve the SIP proposal as proposed.

Response: We disagree with most of these comments. First, we disagree that we have used a ''reasonableness standard'' in a manner that is inconsistent with our prior actions or as a way to limit the State's discretion. As discussed elsewhere, EPA has a duty to review Utah's regional haze SIP, including its BART Alternative, for compliance with the applicable requirements of the CAA and the RHR. Based on our review of the SIP, we proposed to determine that certain elements of Utah's regional haze SIP met the applicable requirements, and we proposed to approve those elements. However, for the reasons explained in detail in our proposed action and elsewhere in this document, we have concluded that, with regard to other elements, the State did not exercise its discretion in a reasonable manner, *i.e.,* in a manner consistent with the requirements and goals of the CAA and RHR. Based on these findings, we are required to partially disapprove Utah's regional haze SIP submittal.

As discussed in detail elsewhere, the CAA provides EPA with the authority to review and reject an inadequate regional haze SIP submittal. *Oklahoma* v. *EPA,* 723 F.3d 1201, 1207–08 (10th Cir. 2013) (EPA may not approve a submittal that does not adhere to applicable statutory and regulatory requirements). Contrary to the commenter's assertions, our analysis and decision here is entirely consistent with the *North Dakota* and *Oklahoma* decisions. The RHR requires a state to demonstrate that its BART alternative achieves greater reasonable progress than BART, 40 CFR 51.308(e)(2), and Utah chose to make this demonstration using a weight-of-evidence analysis. In our review, EPA found a number of flaws in this analysis. Based on this evaluation and findings as detailed in Section I.B.1 of this document and in our RTC document, we determined that, on balance, the evidence does not show that the Alternative clearly achieves greater visibility benefits than BART.

Second, we disagree with the assertions regarding creation of a new complexity standard. The commenter misunderstands and misconstrues our proposed action. We did not create a new complexity standard, rather we explained that we were considering complex information and that it was a close call for EPA to decide whether the evidence presented by the State clearly demonstrated that the BART Alternative would achieve greater reasonable progress than BART (the complexity of our evaluation leads us to propose and solicit comment on two conclusions and courses of action because several of the metrics *appear to* support the State's analyses, while others do not appear to support the Alternative).[100] Contrary to the commenter's assertions, we merely explained that the information in the State's SIP submittal was complex; we did not create a new standard by which to evaluate SIP submittals. Our proposed action clearly explained that some metrics appeared to support approval, while others metrics appeared to support a disapproval.

Therefore, given that EPA's evaluation of the information before us presented a close call, and in order to provide a fair and meaningful process for *all* members of the public, we used the co-proposal approach. This approach provided an opportunity for the public to comment on both potential courses of action, *i.e.,* approval or disapproval of the State's BART Alternative. Recognizing the

[95] *See* generally 81 FR 2004, 2021–26.

[96] This is not to say that EPA lacks any role in reviewing and approving the Utah SIP. Indeed, the latest court to weigh in on EPA's review authority makes clear that ''Congress intended that EPA, not the states alone, ultimately ensure that state determinations as to regional haze comply with the [Clean Air] Act. . ..'' Arizona ex rel. Darwin v. EPA, Nos. 13–70366, 13–70410, 2016 U.S. App. LEXIS 3196, at *19–20 (9th Cir. Feb. 24, 2016). Although PacifiCorp agrees that EPA has a role to play in making sure the Utah SIP complies with the CAA and applicable requirements, it also notes that EPA must do so in a way that does not undermine the role of states like Utah to which ''Section 169A [of the CAA] gives. . .substantial responsibility in determining appropriate BART [and BART Alternative] controls.'' The court goes on to make clear that ''EPA may not disapprove reasonable state determinations that comply with the relevant statutory and regulatory requirements.'' *Id.* at *22. Such is the case with the Utah SIP.

[97] EPA attempts to further support this contrived ''complexity'' requirement by repeatedly stating that such a requirement exists, as if repetition alone somehow can bring an imaginary requirement into existence (*i.e.,* ''In light of the variety of metrics Utah used, this is a complicated analysis. . . ;'' ''The complexity of our evaluation leads us to propose and solicit comments on two conclusions and two courses of action . . . . ;'' ''Given the complexities in evaluating these co-proposals, EPA wants to ensure that our final decision is based on the best and most currently available data and information, and is taken with the fullest possible consideration of public input.'') See 81 FR 2004, 2006.

[98] The Tenth Circuit Court of Appeals, which considered whether EPA's approval of a BART Alternative for SO_2 emissions was appropriate, did not conclude that EPA's analysis of the alternative program was, by its nature, more complicated than a BART analysis. See generally WildEarth Guardians v. EPA, 770 F.3d 919 (10th Cir. 2014).

[99] EPA further attempts to justify its rationale for considering the FIP proposal by asserting, as explained in footnote 3, the need to ''ensure that our final decision is based on the best and most currently available data and information, and is taken with the fullest possible consideration of public input.'' EPA already is charged with ensuring that any final decision is based on the best current data and information available. See 71 FR 60612, 60622 (Oct. 13, 2006) (final rule on revisions to provisions governing alternative source-specific BART determinations); see also 5 U.S.C. 706(2). EPA already is required to make a decision based on the fullest possible consideration of public input. See 5 U.S.C. 553(c). Re-stating these fundamental principles does not allow EPA to bootstrap itself into also considering a competing coproposal (the FIP proposal) when the SIP proposal already meets all Applicable BART Alternative Requirements as EPA itself has proposed to conclude. Arizona ex rel. Darwin at *22 (stating that ''EPA may not second-guess reasoned, legally compliant state decisions'') (internal citations and quotations omitted).

[100] 81 FR 2004, 2006 (Jan. 14, 2016) (emphasis added).

information before the Agency was possibly susceptible to both interpretations, our two proposed conclusions and courses of action were as follows: ''(1) The State's submittal meets the test above and we approve the BART Alternative; or (2) the State's submittal falls short of meeting this test and we disapprove the BART Alternative and promulgate a FIP for NO_X BART.''

We exercised our rulemaking discretion and structured the action using the co-proposal approach so that our action would enable all interested parties to have the opportunity to provide meaningful and timely comment on either or both approaches. In structuring the action in this way, the interested public had notice of the proposals under consideration and whether they had interests at stake. This balanced approach was fair in that it provided all interested parties with the options EPA contemplated in taking final action, as well as providing an opportunity to comment on the full range of potential actions. The commenter cites to no CAA provision that restricts EPA's authority to present co-proposals. EPA often provides alternative approaches for final Agency action in our SIP rulemaking proposals, as we did here. Additionally, even assuming that EPA's proposed action on the Utah regional haze SIPs articulated new ''complexity'' grounds for evaluating a regional haze SIP, the proposed action provided the public with the opportunity to comment. As evidenced by the commenter's submission, the commenter had the opportunity to provide input on this purported new standard to evaluating the Utah regional haze SIP and to identify any concerns associated with the statements at issue. Therefore, even if we had created a new complexity standard, which we did not, it would have been properly proposed and applied in this instance.

As explained above, the EPA proposal identified several weaknesses and flaws in the State's SIP submittal in the proposed rulemaking,[101] and as explained in this final action, other commenters have made us aware of additional weaknesses and uncertainties in the SIP submittal.[102] Therefore, EPA is finalizing our co-proposal to disapprove the BART Alternative and promulgate a FIP for NO_X BART, which this commenter recognizes EPA has a role and authority to do.

Furthermore, as explained elsewhere, we appreciate and clarify in this final action that the State did not intend to have its BART Alternative evaluated under both the 40 CFR 51.308(e)(2) and section 308(e)(3) tests. We, therefore, based our final action on our evaluation of the State's submittal under §51.308(e)(2)'s weight-of-evidence test.

Finally, regarding the commenter's cross-reference to comments dated August 26, 2013, we explained in our final action in the Wyoming regional haze rulemaking that we disagreed with the comments in that context and we continue to disagree here.[103]

D. Compliance With 40 CFR 51.308

Comment: Two commenters noted that EPA's FIP proposal is unnecessary because EPA already found Utah is making the required ''reasonable progress.'' The goal of the RH program is to make ''reasonable progress'' towards the statute's national visibility goal. Accordingly, EPA promulgated regulations ''to assure . . . reasonable progress toward meeting'' the national visibility goal, section 7491(b)(2), and mandated that EPA's regulations contain ''such emission limits, schedules of compliance and other measures as may be necessary'' to assure such progress towards meeting that goal, ''including'' a requirement that states make BART determinations. Id. As EPA has stated, ''BART is one component of long term strategies to make reasonable progress.'' Regional Haze Regulations and Guidelines, 70 FR 39137.

Because BART's purpose is to make reasonable progress, EPA adopted regulations exempting states from making BART determinations if they can show that other measures for large stationary sources will achieve greater reasonable progress. 40 CFR 51.308(e)(2) (2012). EPA defended those regulations in court by arguing that BART is one of a number of ''emission limits, schedules of compliance and other measures'' that ''must'' be included in a SIP '''as may be necessary to make reasonable progress toward national visibility goals.''' *Ctr. for Energy and Econ. Dev.* v. *EPA,* 398 F.3d 653, 659–60 (D.C. Cir. 2005) (confirming BART is but one measure for achieving ''reasonable progress''); *Cent. Arizona Water Conservation Dist.* v. *EPA,* 990 F.2d 1531, 1534 (9th Cir. 1993) (same). If an alternative can better achieve those

[101] Our proposal evaluated the State's use of the information from the metrics and identified weaknesses and flaws, for example: (1) The State's characterization of the 98th percentile modeling results that did not support its BART Alternative, was inconsistent with EPA's interpretation of and reliance on that metric; (2) the comparison of the results from the total annual emissions reductions was inconsistent with how we have interpreted our regulations; (3) the results from the modeling for the number of days the Alternative provided significant visibility impairment showed mixed results, with some results favoring the Alternative, while other results did not support the Alternative; (4) the annual average metric only marginally supported the Alternative, and showed less or equal visibility at four of nine Class I areas; and (5) the energy and non-air quality and cost metrics do not have a direct bearing on whether the Alternative achieves greater reasonable progress.

[102] Our RTC document provides details on the additional weaknesses and uncertainties that commenters brought to our attention.

[103] ''As explained in our proposed rulemaking for section 51.309(d)(4)(viii), we explained that the provision 'is intended to clarify that if EPA determines that the SO_2 emission reductions milestones and backstop trading program submitted in the section 51.309 SIP makes greater reasonable progress than BART for SO_2, this will *not* constitute a determination that BART for PM or NO_X is satisfied for any sources which would otherwise be subject to BART for those pollutants' (emphasis added). 70 FR 44169 (Aug. 1, 2005). EPA does not interpret this rule to mean that there are different BART requirements for section 308 and 309 regional haze SIPs. EPA's rulemaking made no finding that BART determinations conducted for a state submitting a SIP under section 51.309 should be conducted any differently than a state submitting a FIP under only section 308. The use of the word 'necessary' in section 51.309(d)(4)(viii) was to explain that some states may have BART NO_X emission limitations, while others may not. As already explained elsewhere in proposal and our response to other comments, Wyoming did not conduct a proper evaluation of the five statutory factors, as required by 40 CFR 51.308(e)(1)(ii)(A) and section 169A(g) of the CAA.

EPA also disagrees with the commenter's assertion that a BART submission is discretionary. 40 CFR 51.309(d)(4)(viii) is clear in that the implementation plan 'must' contain BART requirements. The proposed rulemaking explained that the provision that provides that '[a]ny such BART provisions may be submitted pursuant to either Section 51.308(e)(1) or 51.308(e)(2),' was included to 'allow States the flexibility to address these BART provisions either on a source-by-source basis under Section 51.308(e)(1), or through an alternative strategy under Section 51.308(e)(2).' 70 FR 44169 (Aug. 1, 2005).

Moreover, EPA's proposal made clear that '[i]n limited circumstances, it may be possible for a State to demonstrate that an alternative program which controls only emissions from SO_2 could achieve greater visibility improvement than application of source-specific BART controls on emissions of SO_2, NO_X and/or PM. We nevertheless believe that such a showing will be quite difficult to make in most geographic areas, given that controls on SO_2 emissions alone in most cases will result in increased formation of ammonium nitrate particles.' 70 FR 44169 (Aug. 1, 2005). Wyoming's RH SIP does *not* include a demonstration that the backstop SO[2] trading program under Section 51.309 achieves greater visibility improvement than application of source-specific PM BART controls. Therefore, Wyoming's Section 51.309 SIP does not provide the adequate level of visibility improvement to meet the BART requirements

With respect to the relationship of BART and requirements for reasonable progress under *40 CFR 51.308*, EPA interprets the reasonable progress requirements to apply to BART sources. As explained in our guidance, due to the similarity of the BART and reasonable progress factors, states may reasonably rely on their BART determinations to show reasonable progress for those sources for the first planning period. However, BART is an independent requirement of the statute and the RHR. We have disapproved certain BART determinations by Wyoming not due to a failure to make reasonable progress, but due to a failure to consider the BART factors appropriately.'' 79 FR 5032, 5098, 5099 (Jan. 30, 2014).

goals, EPA has stated that BART would not be ''necessary to make reasonable progress.'' *Id.* The court agreed with EPA's analysis, although it overturned EPA on other grounds. *Id.* As the court said, ''the focus of the Clean Air Act was to achieve 'actual progress and improvement in visibility,' 42 U.S.C. 7492(b), not to anoint BART the mandatory vehicle of choice.'' *Id.* at 660.

As EPA recognizes, in some circumstances no BART controls may be necessary to make reasonable progress. It follows that in other circumstances, depending on a state's reasonable-progress goals and expected non-BART emission reductions, BART controls of varying stringency may be necessary. Consistent with this goal, EPA has approved Utah's ''reasonable progress'' determination for its RH SIP in its entirety. *See* ''Approval, Disapproval and Promulgation of State Implementation Plans; State of Utah; Regional Haze Rule Requirements for Mandatory Class I Areas Under 40 CFR 51.309,'' published at 77 FR 74355, 74367–68 (Dec. 14, 2012). EPA found that ''the State met all reasonable progress requirements for the Class I areas,'' including by implication any required NO_X BART limits. In fact, EPA stated that Utah's 2008 RH SIP, including BART controls identified in that 2008 RH SIP, would result in ''a significant decrease in stationary source NO_X and SO_2 emissions.'' *Id.* EPA further found that the NO_X BART controls adopted by Utah for the Hunter and Huntington EGUs at issue would decrease NO_X emissions by ''6,200 tons [annually] between 2002 and 2018.'' *Id.* Therefore, EPA acknowledged that Utah's NO_X BART limits and controls are all that are required to achieve ''reasonable progress,'' and no further NO_X BART requirements should be imposed by EPA through its FIP proposal.

Thus, EPA cannot validly judge a state's BART determination outside of its reasonable progress context. *Owasso Indep. Sch. Dist. No. I–011* v. *Falvo,* 534 U.S. 426, 434 (2002) (''the words of a statute must be read in their context and with a view to their place in the overall statutory scheme.'').

Response: EPA disagrees with these comments. The commenters appear to be asserting that, since EPA approved Utah's 2011 SIP submission as meeting the reasonable progress requirements of 40 CFR 51.309 with regard to SO_2, no further controls are necessary to meet the RHR's requirements for NO_X and PM. However, this assertion ignores our statements in the BART Alternatives rulemaking that an EPA determination that a backstop trading program satisfies a state's reasonable progress obligations for SO_2 under 40 CFR 51.309 does not satisfy that state's obligation to address NO_X and PM requirements under 40 CFR 51.308(e)(1) or (2). In this rulemaking, EPA proposed amendments to the stationary source NO_X and PM provisions within §51.309 precisely in order to ''clarify that if EPA determines that the SO_2 emission reductions milestones and backstop trading program in the §51.309 SIPs makes greater reasonable progress than BART for SO_2, this will *not* constitute a determination that BART for PM or NO_X is satisfied for any sources which would otherwise be subject to BART for those pollutants.'' [104] The final rulemaking reinforced that a reasonable progress determination for SO_2 under §51.309's backstop trading program does not satisfy the emission reductions requirements for non-SO_2 pollutants.[105]

We also took this position in another recent regional haze action, in which we found that the state's approved SO_2 alternative under §51.309 did ''not provide the adequate level of visibility improvement to meet the [non-SO_2] BART requirements.'' [106] We then reiterated that ''BART is an independent requirement of the statute and the RHR.'' [107] Our statements in both the national and regional contexts make it clear that a reasonable progress determination for an SO_2 backstop trading program under §51.309 does not relieve a state of its obligation to satisfy NO_X and PM BART. EPA thus *can* judge a state's BART determination outside the reasonable progress context, as they are independent requirements.

The commenters' claim that EPA's approval of Utah's §51.309 program in our December 2012 final action means that the State met its reasonable progress requirements ''in its entirety'' is thus clearly incorrect. In that action we determined that the State met the requirements of §51.309 and therefore satisfied its reasonable progress obligation *with regard to the particular pollutants covered in the State's alternative, i.e.,* SO_2. This determination has no bearing on the State's independent NO_X and PM obligations. To comply with the RHR, the state must still address any BART obligations for pollutants not included in the BART alternative analysis and therefore not covered by the ''better than BART'' determination.

EPA similarly disagrees that it acknowledged that the NO_X controls in Utah's 2011 SIP submission are all that are required to achieve reasonable progress and that EPA should therefore not require further NO_X BART requirements. As explained earlier, EPA's determination that Utah's 2011 submission satisfied reasonable progress requirements does not constitute implicit evaluation and action on Utah's NO_X and PM SIP submittal as meeting the BART requirements. Furthermore, the commenter overlooks EPA's explicit disapproval of Utah's NO_X and PM BART determinations in our December 2012 partial approval/disapproval.[108] EPA's disapproval of Utah's NO_X and PM control determinations necessarily precludes finding that these same controls are all that are required to satisfy the RHR's requirements. EPA is thus required to promulgate a NO_X BART FIP, which we are now doing. Commenters also take EPA's statements regarding the quantity of anticipated NO_X reductions from Utah's rejected BART determination out of context. These statements were offered as reasons why Utah satisfied the RHR's requirement to address impacts on Class I areas in other states by achieving previously agreed upon emission reductions, which is a separate consideration from whether the State has satisfied its independent NO_X and PM BART obligations.

EPA also disagrees that the statements in the cited cases have any bearing on this action. In *Center for Energy and Economic Development* v. *EPA* (*CEED*),[109] the issue was whether EPA's BART alternative provisions in §51.309 were consistent with CAA section 169A(b)(2) given that they used a methodology for establishing the BART benchmark that the D.C. Circuit had previously vacated in *American Corn Growers Ass'n* v. *EPA.*[110] As part of its challenge to EPA's BART alternative provisions, CEED argued that section 169A(b)(2) requires all states' SIPs to include BART, meaning EPA could not allow BART alternatives in place of source-specific BART. EPA argued that section 169A(b)(2) allows either BART or an alternative to BART submitted pursuant to §51.309 if that alternative would achieve greater reasonable progress than BART, *i.e.,* if the alternative is ''better than BART.'' The statements the commenter cites express EPA's view on the narrow issue of whether and when we may allow states to substitute an SO_2 trading program for

[104] 70 FR 44154, 44169 (Aug. 1, 2005) (emphasis added).

[105] 71 FR 60612, 60626 (Oct. 13, 2006).

[106] 79 FR 5032, 5099 (Jan. 30, 2014) (final partial approval/partial disapproval of Wyoming regional haze SIP submission).

[107] *Id.*

[108] 77 FR 74355, 74357 (Dec. 14, 2012).

[109] 398 F.3d 653 (D.C. Cir. 2005).

[110] 291 F.3d 1 (D.C. Cir. 2002).

source-specific BART under §51.309. Because these statements address only the relationship between BART and BART alternatives for SO_2 under §51.309; they have no bearing on whether we believe a state's submission of an SO_2 trading program satisfies its independent obligation to address NO_X and PM, as these obligations were not at issue in this case.

In our December 14, 2012 action we approved Utah's BART Alternative for SO_2 under 40 CFR 51.309, finding that it achieved greater reasonable progress than SO_2 BART. As explained earlier, this determination has no bearing on Utah's outstanding NO_X and PM BART obligations. We, therefore, disagree that today's action to address these obligations is unnecessary.

Comment: Several commenters asserted that Utah's BART Alternative does not achieve greater reasonable progress based on the ''clear weight-of-evidence.'' Utah's Regional Haze SIP also must be rejected under 40 CFR 51.308(e)(2)(i)(E) because it does not achieve ''greater reasonable progress'' based on the ''clear weight-of-evidence.'' [111]

At the outset, Utah's proposed reliance on the ''clear weight-of-evidence'' test is improper. In promulgating regulations allowing for the test, 40 CFR 51.308(e)(2)(i)(E), offered the following example of when the test might be appropriate: ''(1) The alternative program achieves emissions reductions that are within the range believed achievable from source-by-source BART at affected sources, (2) the program imposes a firm cap on emissions that represents meaningful reductions from current levels and, in contrast to BART, would prevent emissions growth from new sources, and (3) the State is unable to perform a sufficiently robust assessment of the programs using the two pronged visibility test due to technical or data limitations.'' [112] None of those conditions are met here. Most importantly, Utah's BART Alternative does not drive any meaningful reductions from ''current levels'' and does not prevent emissions growth from new sources, and Utah is not hindered by any technical or data limitations preventing a sufficiently robust visibility assessment. EPA further noted that ''a weight-of-evidence comparison may be warranted'' ''when there is confidence that the difference in visibility impacts between BART and the alternative scenarios are expected to be large enough.'' [113] Here, as EPA correctly observed, even Utah's flawed modeling demonstrated the superiority of BART using the most relevant visibility metric and only minimal benefits of the BART Alternative compared with BART using other metrics.

Several commenters also raised concerns regarding emission shifting from the power plants covered by the SIP to existing sources that are not included in this SIP. They suggested that due to the nature of the electrical generation market, with the adjustments to the overall system to add capacity elsewhere to accommodate the Carbon power plant shutdown (and perhaps also to accommodate the emission limit reductions at the Hunter and Huntington power plants), those shifts in capacity could result in increases in emissions at power plants outside the BART Alternative. The commenters further suggested that if those emission increases had been considered in the State's weight-of-evidence analysis, the BART Alternative may not provide greater reasonable progress than BART if the emission reductions assessment under the Alternative are not permanent and were to shift to other power plants. As an example, one of the commenters provided an analysis for a Utah power plant (not covered by the BART Alternative) that based on its proximity to the nine Class I areas analyzed under the BART Alternative, if emission increases were to occur at that plant the increases could impact visibility impairment at the Class I areas. Other commenters expressed concern that the lost capacity from the BART Alternative sources could shift to new sources, and explained that the emissions from new sources are not evaluated in the State's weight-of-evidence analysis. One commenter suggested that this Alternative appears to be more like a ''trading'' program and that other regulations apply. One commenter expressed concern that a non-BART source is included in the BART Alternative, and further, that not all the sources in the State that are part of this source category are included.

Response: We agree in part and disagree in part with these comments. First, as explained elsewhere, we agree with the commenter that the State's analysis for the BART Alternative does not show that the Alternative clearly achieves greater visibility benefits than BART. Second, the four examples cited by the commenter from our RHR preamble were *examples,* rather than an exclusive list of circumstances under which a state may use a weight-of-evidence analysis. Therefore, the State was not required to fall into one of these categories in order to select the weight-of-evidence approach to support its BART Alternative. Third, we disagree that emission reductions must occur from current levels, because, consistent with the RHR, the baseline date for regional haze SIPs is 2002.[114]

Next we respond to the commenters' concerns about potential shifting of production and emissions from the sources in the BART Alternative to sources outside the BART Alternative. We acknowledge that the State's BART Alternative has the following characteristics: (1) It includes all the BART sources in the State; (2) it accounts for emission reductions from a non-BART source; and (3) it includes some, but not all, sources in the source category within the State. The RHR provides that BART alternative programs may include non-BART sources.[115] We disagree with commenters that suggested the RHR trading requirements apply to the Utah BART Alternative.[116] The RHR trading provisions apply to SIPs that establish a cap on total emissions from sources that are subject to the BART program, and further require the owners and operators of the sources to hold allowances to purchase, sell, and transfer allowances. Utah's SIP contains rate-based emission limits on the sources that are subject to the BART Alternative and therefore does not include a cap on emissions or trading provisions. Therefore, the Utah SIP does not contain the elements of a trading program as described in the RHR, which include provisions to prevent significant emission shifting.[117]

Although the State's SIP explained that the Carbon power plant had already closed and electricity generated from the Carbon power plant has been replaced (and the associated costs already have been absorbed by Utah rate payers and those in other states served by PacifiCorp),[118] the SIP submittal neither identified what electrical generating facilities increased capacity

[111] 40 CFR 51.308(e)(2)(i)(E).

[112] 71 FR 60612, 60621 (Oct. 13, 2006).

[113] *Id.* at 60622.

[114] *See* Memorandum from Lydia Wegman and Peter Tsirigotis, 2002 Base Year Emission Inventory SIP Planning: 8-hr Ozone, $PM_{2.5}$, and Regional Haze Programs (November 18, 2002).

[115] The preamble to the RHR provides for inclusion of BART and non-BART sources in a BART alternative. 64 FR 35714, 35743 (July 1, 1999).

[116] 40 CFR 51.308(e)(2)(E)(v) (containing requirements for a state to demonstrate that a trading program prevent any significant, potential shifting within the state of production and emissions from the sources in the program to sources outside the program).

[117] *Id.*

[118] Utah Staff Review Report at 27.

to accommodate the Carbon shut down, nor did it provide an analysis of whether the capacity replacement resulted in increases in visibility impairing pollutants. Furthermore, in addition to seeking and receiving authorization to recover costs associated with retirement of the Carbon plant, the Company also received authorization from state utility commissions to recover additional costs, including ''installation of equipment necessary to ensure voltage stability, along with various communications upgrades and protection and control equipment.'' [119] It is unclear whether the activities associated with these additional costs resulted in capacity and emissions shifting and increased visibility impairment at the affected Class I areas. Therefore, while the record before us indicates that capacity has shifted, it is unclear how the shift was accommodated, and whether there are any emission increases and associated visibility impairment.[120]

It is therefore unclear whether the shift in capacity as a result of the Carbon plant retirement results in increased emissions and visibility impairment at the affected Class I areas. Because the record lacks information on these questions, we agree with the commenters that there is additional uncertainty as to whether the BART Alternative is better than BART.

E. Overarching Comments on BART Alternative Demonstration

Comment: The State of Utah commented that EPA should approve the option that Utah developed in close consultation with EPA and not the option that Utah was not even aware was being prepared or under consideration until it was signed by the Regional Administrator. Utah worked closely and in good faith with the EPA and the FLMs to evaluate and implement the appropriate controls for improving visibility. Up to the point of the current proposal, the EPA has indicated to Utah that the alternative to BART approach and analysis were acceptable. During the RH SIP development process, Utah and EPA worked as regulatory partners—Utah working closely and extensively with EPA's staff to ensure that Utah's BART Alternative was approvable. EPA's concurrence with Utah's RH SIP proposal is also supported by EPA's comments submitted during the state rulemaking public comment period on the current revision of the Utah's RH SIP. EPA did not point to any substantive flaws in Utah's RH SIP, but only requested minor clarifications and revisions in its 3-page comment letter.

Response: While we agree that EPA worked in close consultation with Utah on the BART Alternative within the limitations of what the State and PacifiCorp were willing to offer in the plan, EPA is not required to approve the option developed by Utah. As stated elsewhere in this document, EPA's comment letter on the State's proposed SIP explicitly explained the following: ''[p]lease note that we will only come to a final conclusion regarding the regional haze program for Utah when we take action on the program through our own public notice-and-comment rulemaking.'' [121] Our May 1, 2015 letter further explained to the State that, ''[i]n addition, we wish to inform you that we are working towards meeting our legal obligations that have resulted from our January 2013 partial disapproval action for Utah's May 2011 regional haze SIP.'' [122] EPA's assistance to states and our comment letters are intended to be helpful to the improvement of any SIP revision that is under development, but they do not constitute agency action on that SIP revision or constitute any assurance of positive action on that revision upon submission and review.

Additionally, the State's efforts to involve the FLMs did not adequately meet the requirements for FLM consultation in developing plan revisions. The State could have satisfied the consultation requirements by providing more time for FLM review so that the FLMs would have received the full number of 60 days for their review. However, in developing the co-proposals, consulting with the FLMs, and by taking this final action, EPA has considered the FLMs' concerns.

Comment: Several commenters asserted that both Utah and EPA imply that nitrate formation in non-winter months is not significant,[123] or that NO_X reductions will not meaningfully reduce nitrates in non-winter months.[124] Both are untrue. Based on IMPROVE data, light extinction attributable to ammonium nitrate in non-winter months is roughly 20% of that attributable to ammonium sulfate. Despite the preferential formation of ammonium sulfate year round and higher ammonium nitrate formation in winter months, it is clear that significant levels of ammonium nitrate also form in non-winter months, and that these are likely to be lowered by reductions in NO_X emissions. Furthermore, while EPA notes that wintertime conditions favor nitrate formation (versus non-winter),[125] this is accounted for in modeling and cannot be used to discount those results.

Response: We partially agree with the comment. While EPA did not suggest that nitrate in non-winter months is not significant, IMPROVE monitoring data do show that nitrate light extinction is highest in winter and substantially smaller in the other seasons. For example, in 2014, the most recent year of IMPROVE data available at the Canyonlands monitor, nitrate contributed an average of 31% of total light extinction in December to February compared to an average of 5% of total light extinction from March to November. In 2013, nitrate contributed an average of 45% of total light extinction in December to February compared to an average of 7.5% of total light extinction from March to November. By contrast, sulfate light extinction is relatively constant across the four seasons.[126]

Nonetheless, overall nitrate extinction at the affected areas is significant, particularly on the 20% worst days. For example, at Canyonlands on the 20% worst days, nitrate contributed 33% and 17% of total extinction in 2013 and

[119] *The Application of Rocky Mountain Power for Approval of a General Rate Increase,* No. 20000–446–ER–14, Wyoming Public Service Commission, (Jan. 23, 2015) (Findings of Fact, Conclusions of Law, Decision and Order Nunc Pro Tunc) (Available in docket at *https://www.regulations.gov/#!documentDetail;D=EPA-R08-OAR-2015-0463-0167*). An order from the Idaho Public Commission also discussed the impacts from Carbon's retirement on the transmission system and noted that ''[t]he Company states that retiring Carbon may pose a complication with potential transmission system impacts.'' *See The Application of PacifiCorp DBD DBA Rocky Mountain Power,* Case No. PAC–E–12–08, Order No. 32701, at 1, Idaho Public Utilities Commission (Dec. 27, 2012) (Available in the docket at *https://www.regulations.gov/#!documentDetail;D=EPA-R08-OAR-2015-0463-0167*).

[120] Utah's BART Alternative has the characteristics of an ''open market'' program where some, but not all, sources in a source category are covered by the SIP measure. EPA Guidance, ''Improving Air Quality with Economic Incentive Programs,'' at 48, 96, 112–118, EPA–452/R–01–001 (Jan. 2001), available at *https://www3.epa.gov/ttn/caaa/t1/memoranda/eipfin.pdf*); 77 FR 11928 (Feb. 28, 2012); 77 FR 46952 (Aug. 7, 2012).

[121] Letter from Carl Daly to Bryce Bird, Re. EPA Region 8 Comments on Utah's February 2015 Draft Regional Haze SIP Revision, at 1 (May 1, 2015). (Available in the docket at *https://www.regulations.gov/#!documentDetail;D=EPA-R08-OAR-2015-0463-0160*).

[122] *Id.*

[123] Utah Staff Review Report at 17, Exhibit 15. Winter months in this context are December, January, and February.

[124] 81 FR 2004, 2023 (EPA says that based on a computational model, ''We propose to find that visibility benefits associated with NO_X reductions are much more likely to occur in the winter months because this is when aerosol thermodynamics favors nitrate formation'').

[125] *Id.*

[126] See EPA spreadsheet entitled, Canyonlands IMPROVE Monitoring Data for 2013 and 2014 (Available in the in the docket).

2014, respectively. Given the focus of the reasonable progress provisions of the RHR on the 20% worst days, we consider the monitoring data for these days to be more informative than seasonal trends in monitoring data.

We also agree with the commenter that the modeling performed by Utah and EPA accounts for the fact that wintertime conditions favor nitrate formation (versus non-winter). In particular, the CALPUFF modeling performed by Utah and EPA both show that, while there will be some benefits from NO_X controls outside of the winter season, the largest benefits in nitrate reductions occur in winter months.[127] We have taken the strength of the modeling results for winter months into consideration; however, contrary to suggestions that visibility improvements during seasons of peak Class I area visitation should carry more weight, we have evaluated the visibility impacts throughout the entire year, regardless of the season and have given the most weight to those times when the sources in question have the largest impacts. In particular, as explained elsewhere in this document and our RTC document, we have given greater weight to the 98th percentile CALPUFF metric, which captures these highest impact days.

F. Cost of Controls

Comment: Several commenters submitted comments regarding the costs to install SCR at the Hunter and Huntington BART EGUs. PacifiCorp submitted a technical report developed by its consultant, Sargent & Lundy, which criticized numerous aspects of EPA's cost analysis developed by our contractor, Andover Technology Partners (ATP), including catalyst volume, SCR design, project and process contingency costs, and others. The conservation organizations' consultant reviewed PacifiCorp's cost analyses from 2012 and 2014 and provided comments about the validity of PacifiCorp's analyses. The National Park Service supported EPA's cost estimates in the proposed rule and indicated the estimates show that both the combined cost of LNB and SOFA plus SCR (SCR + LNB/SOFA) and the incremental cost of adding SCR to LNB/SOFA are cost-effective and represent BART. The conservation organizations also supported EPA's cost estimates in the proposed rule.

Response: EPA has provided a revised cost analysis to support our final rulemaking. We again used Andover Technology Partners (ATP) for conducting the analysis. We have carefully reviewed the analysis and determined that it appropriately estimates the costs to install SCR at Hunter and Huntington. Of particular note is that in our revised cost analysis, EPA has accepted both the catalyst volume and SCR design suggested by Sargent & Lundy. However, we continue to reject process and project contingency costs and other costs that are double counted, not permissible under the CCM, or are otherwise not justified. The final Andover report and spreadsheet provide further details regarding how each of these costs was addressed in the revised analysis supporting this rulemaking.[128] Also, in our RTC document, we have addressed the specific comments concerning the capital costs that Sargent & Lundy alleges that Andover incorrectly excluded from its analysis, as well as all other comments regarding our cost estimates.

We concur with the National Park Service's and conservation organizations' supportive comments regarding the cost effectiveness of SNCR and SCR. In addition, the revised cost effectiveness estimates that we prepared to support this final rule, when considered along with the other five BART factors, continue to support selection of SCR + LNB/SOFA as BART.

The conservation organizations' comments pertain to the costs that PacifiCorp submitted to the Utah Department of Air Quality, and which Utah included in its SIP submittal to EPA. However, EPA developed separate costs to support our FIP, and has updated those costs in support of our final action. Our RTC document contains additional detail concerning our consideration of these comments.

G. Comparison With Other Regional Haze Actions

Comment: Two commenters agreed with the comparisons we provided in our proposed rule to other BART determinations that EPA used to support our proposed FIP. One commenter disagreed with the comparisons. These comparisons included Cholla,[129] Hayden,[130] and Laramie River Station.[131] The commenter who disagreed asserted that different methodologies were involved in all three cases and that EPA failed to provide comparisons to other actions that did not support the FIP. The commenter provided additional examples from EPA actions in Florida, Montana, and Nebraska that they asserted do not support EPA's Utah FIP decision.

Response: We continue to find that the Cholla, Hayden and Laramie River Station comparisons are among the best to use considering the specifics of our Utah action. The commenter who disagreed with these comparisons did not show that it would make a significant difference to use precisely the same methodology in each of the determinations that EPA chose to rely on. Furthermore, we disagree that the methodology involved in the BART analyses necessarily must be precisely the same for each BART determination in order to use the determinations for comparison purposes. For example, a state may choose to use a slightly different methodology to analyze the BART factors and select BART, which is acceptable so long as the methodology is reasonable and consistent with the statute, RHR, and BART Guidelines. For details, please see the RTC document.

We also disagree that the cited BART determinations in Montana, Florida, and Nebraska are useful comparisons or show that our BART determination here is unreasonable. First, with respect to the Florida action, the cited NO_X BART determination at FPL's Manatee Plant involved two 800 MW oil and natural-gas fired steam turbines. 77 FR 73369, 73377 (Dec. 10, 2012) (proposal). As the two units were equipped with FGR, overfire air systems, staged combustion, LNB, and reburn, SCR was the only available additional control option identified. The total annualized cost of SCR at the two units would be $31 million, from which the state computed a dollar-per-deciview cost of $66 million/dv. *Id.* at 73377. Using these figures, the total (*i.e.* source wide) visibility improvements at the most impacted Class I area, Chassahowitzka NWA, would be 0.47 dv, which is considerably below the source-wide visibility improvement for SCR + LNB/SOFA at Hunter and Huntington of 2.948 dv and 3.848 dv, respectively.[132]

[127] Both Utah and EPA CALPUFF modeling results can be viewed in or obtained from the EPA Region 8 offices by contacting the individual listed in the **FOR FURTHER INFORMATION CONTACT** section of this document.

[128] Andover Technology Partners, *Cost of NO_X BART Controls on Utah EGUs to: EC/R Inc.* (May 13, 2016). Andover Technology Partners is a subcontractor to EC/R Incorporated.

[129] 77 FR 42834 (July 20, 2012) (proposal); 77 FR 72512, 72514–15 (Dec. 5, 2012) (final).

[130] 77 FR 18069 (Mar. 26, 2012) (proposal); 77 FR 76871 (Dec. 31, 2012) (final).

[131] 79 FR 5032, 5099 (Jan. 30, 2014) (final partial approval/partial disapproval of Wyoming regional haze SIP submission).

[132] See also our response to comments on existing controls and the baseline, in which we look at the cost and visibility benefits at Hunter and Huntington of SCR apart from the LNB/SOFA, to

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In addition, the Manatee Plant impacted only one other Class I area, Everglades NP, at nearly twice the distance of Chassahowitzka NWA. In comparison, Hunter and Huntington significantly impact nine Class I areas. Furthermore, the Manatee Plant received a permit to increase natural gas utilization from 5,670 MMBtu/hr to 8,650 MMBtu/hr, which would displace the use of oil and provide additional NO_X reductions. All of these must be considered when examining the state's conclusion that SCR would not be cost-effective for these units, which was primarily based on the dollar-per-deciview cost of $66 million/dv and not on the raw cost-effectiveness number of $3,776/ton. While we are not basing our BART determinations on the dollar-per-deciview metric, for purposes of comparison to Manatee, the dollar-per-deciview cost for Hunter and Huntington would be considerably less than at Manatee, about $23.7 million/dv and $15.8 million/dv, respectively, at the most impacted Class I area, and as mentioned earlier Hunter and Huntington impact many more Class I areas than Manatee.

With respect to the Montana action, EPA stated for PPL Colstrip Units 1 and 2, ''we estimated the incremental cost effectiveness of SCR + SOFA (over SNCR + SOFA) to [be] $5,770/ton and $5,887/ton, respectively. Given these costs, we continue to find that SCR + SOFA is not justified *by the visibility improvement that would be provided.*'' 77 FR 57864, 57889 (Sept. 18, 2012) (emphasis added). The commenter omits the emphasized language. The visibility improvements for the various NO_X control options for Colstrip Units 1 and 2 can be seen in our proposal action and in general are much lower than those for Hunter and Huntington. See 77 FR 23988, 24026–27, 24034–35 (Apr. 20, 2012). In particular, at Colstrip Unit 1, the visibility improvements from SCR + SOFA at the five impacted Class I areas (which is less than the nine impacted by Hunter and Huntington) ranged from 0.081 to 0.404 dv. At Colstrip Unit 2, the visibility improvements from SCR + SOFA at the same class I areas ranged from 0.091 dv to 0.423 dv. These values are all much less than for the Hunter and Huntington BART units. In any case, our NO_X BART determinations for Colstrip Units 1 and 2 were vacated by the Ninth Circuit Court of Appeals. *Nat'l Parks Conserv. Ass'n* v. *U.S. EPA,* 788 F.3d 1134 (9th Cir. 2014).[133] Finally, commenter's citation to the Nebraska proposal is fully addressed by our response to a similar comment on our Wyoming regional haze action. 79 FR 5032, 5178 (Jan. 30, 2014). Please refer to our RTC document for additional discussion of our comparisons to other BART determinations.

H. CALPUFF Modeling

Comment: We received many comments related to both EPA's modeling for the FIP and Utah's modeling for the BART Alternative. In particular, PacifiCorp and its consultant asserted that EPA failed to account for the margin of error in the CALPUFF model and other material limitations of CALPUFF. PacifiCorp also asserted that we should have used CALPUFF version 6.42 in our FIP analysis instead of version 5.8.4. We partially respond to these comments here. Our full responses are contained in our RTC document.

Response: We do not agree with the commenter's criticism of the use of CALPUFF. In promulgating the 2005 BART Guidelines, we responded to comments concerning the limitations and appropriateness of using CALPUFF. In 2005 we explained that CALPUFF is the only EPA-approved model for use in estimating single source pollutant concentrations resulting from the long range transport of primary pollutants. In addition, it can also be used for other purposes such as visibility assessments to account for the chemical transformations of SO_2 and NO_X. As explained earlier, simulating the effect of precursor pollutant emissions on $PM_{2.5}$ concentrations requires air quality modeling that not only addresses transport and diffusion, but also chemical transformations. CALPUFF incorporates algorithms for predicting both. At a minimum, CALPUFF can be used to estimate the relative impacts of BART-eligible sources. *We are confident that CALPUFF distinguishes, comparatively, the relative contributions from sources such that the differences in source configurations, sizes, emission rates, and visibility impacts are well-reflected in the model results.*[134]

EPA also recognized the uncertainty in the CALPUFF modeling results when EPA made the decision (in the final BART Guidelines) to recommend that states use the 98th percentile visibility impairment rather than the highest daily impact value. We made the decision to consider the 98th percentile primarily because the chemistry modules in the CALPUFF model are simplified and likely to provide conservative (higher) results for peak impacts. Since CALPUFF's simplified chemistry could lead to model over predictions, EPA recommended the use of the 98th percentile to avoid giving undue weight to the extreme tail of the distribution.[135] Therefore, in recognizing some of the limitations of the CALPUFF model, we determined that use of the maximum modeled impact may be overly conservative and recommended the use of the 98th percentile value. While recognizing the limitations of the CALPUFF model in the BART Guidelines preamble, EPA concluded that, for the specific purposes of the RHR's BART provisions, CALPUFF is sufficiently reliable to inform the decision making process.[136]

It is further worth noting that the CALPUFF model can both predict higher and lower visibility impacts compared to a photochemical grid model. For example, the 2012 ENVIRON report on *Comparison of Single-Source Air Quality Assessment Techniques for Ozone, $PM_{2.5}$, other criteria pollutants and AQRVs* found that CALPUFF's predictions of the highest 24-hr nitrate and sulfate concentrations were lower than those predicted by the CAMx photochemical grid model in some areas within the modeling domain.[137] Thus, while there is some uncertainty in the absolute visibility impacts and benefits due to the model and some of the simplifications and assumptions used in the BART Guidelines modeling approach, the relative level of impact has been a reliable assessment of the degree of visibility impacts and benefit from controls. Any uncertainties in meteorological conditions that govern the transport and diffusion of pollutants are less important in comparing impacts between two control scenarios, since the

show that even if we agreed with this commenter that the baseline should reflect the installation of LNB/SOFA—which we do not—the selection of SCR as BART would still be reasonable. The numbers used there also compare favorably with Manatee.

[133] The same commenter notes that the Wyoming and Arizona BART determinations we used for comparison purposes are currently under litigation; however the commenter fails to note that the Montana BART determination they propose for comparison was actually litigated and vacated. With respect to the pending litigation over the Wyoming and Arizona BART determinations, there are other BART determinations such as Colorado's Hayden Station that are comparable, support our selection of SCR + LNB/SOFA, and are not under litigation.

[134] 70 FR 39122 (Jul. 6, 2005) (emphasis added).

[135] ''Most important, the simplified chemistry in the model tends to magnify the actual visibility effects of that source. Because of these features and the uncertainties associated with the model, we believe it is appropriate to use the 98th percentile—a more robust approach that does not give undue weight to the extreme tail of the distribution.'' 70 FR 39104, 39121 (Jul. 6, 2005).

[136] 70 FR 39123 (Jul. 6, 2005).

[137] Comparison of Single-Source Air Quality Assessment Techniques for Ozone, $PM_{2.5}$, other Criteria Pollutants and AQRVs, ENVIRON, September 2012.

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same effects will be included in both the base and the control scenario model simulations.

We also do not agree with the commenter's calculation of a ''margin of error'' for CALPUFF. The notion of a calculated ''margin of error'' is not part of any modeling guidance and has no legal or regulatory basis or applicability here. In addition, the commenter's suggestion that a 2012 report titled ''Documentation of the Evaluation of CALPUFF and Other Long Range Transport Models Using Tracer Field Experiment Data'', EPA–454/R–12–003 (ENVIRON Report) establishes a standard ''margin of error'' for CALPUFF is unfounded. The ENVIRON Report illustrated how well various types of modeling systems are able to capture regional transport. It does not provide any information about the accuracy of any models for predicting secondary $PM_{2.5}$ or visibility, nor does it indicate that the quantitative performance results provided are a presumptive globally applicable ''margin of error.'' Rather, these results are simply a way to compare various modeling systems in terms of performance for skill in long range transport. Thus, we do not agree that the ENVIRON Report provides a presumptive margin of error that can be applied to the modeling results in Utah's SIP or EPA's FIP.

With regard to Utah's use of CALPUFF in its SIP revision specifically, we note that the State was not required to use CALPUFF for purposes of its BART Alternative Demonstration under 40 CFR 51.308(e)(2)(i). Utah or PacifiCorp could have used other EPA-approved models with more advanced chemistry and dispersion techniques to support the BART Alternative demonstration but chose not to do so.

With regard to our use of CALPUFF for purposes of the FIP modeling, as explained in more detail in our RTC document, the legal deadline for challenging EPA's recommendation to use CALPUFF in BART analyses has passed. Furthermore, although the EPA proposed revisions to 40 CFR part 51, appendix W, Guideline on Air Quality Models (''Guideline'') in 2015, these proposed changes to the Guideline do not affect our recommendation in the 2005 BART Guidelines to use CALPUFF in the BART determination process.[138] Rather, as explained in the preamble to the proposed Guideline revisions, we consider it appropriate to continue using CALPUFF for BART determinations, given that the vast majority of BART determinations have been made using CALPUFF.[139]

In particular, for our FIP modeling, we used the current EPA-approved version of CALPUFF (Version 5.8.4, Level 130731). We disagree with the commenters that a new CALPUFF version should be used for the BART determinations. We relied on version 5.8 of CALPUFF because it is the version approved by EPA through a public notice-and-comment rulemaking, in accordance with the Guidelines (40 CFR part 51, appendix W, section 6.2.1.e). Later versions of CALPUFF are not approved by EPA for regulatory purposes, and we do not agree that the changes made to this most recent version of CALPUFF were simple model updates to address bugs. A full evaluation of a new model such as CALPUFF version 6.4 is needed before it should be used for regulatory purposes as errors that are not immediately apparent can be introduced along with new model features.

In response to comments, EPA performed additional modeling analysis to assess the combined benefit of SCR when applied to each of the two BART units at the Hunter facility. We did the same for the Huntington facility. These modeling results are shown in Tables 6 and 7 earlier in this document. Otherwise, we did not receive any comments that convinced us to alter our CALPUFF modeling analysis, and the comments we received do not justify a change in our BART determinations or our evaluation of the State's BART Alternative. We discuss these and other modeling comments in detail in our RTC document.

I. Consideration of Existing Controls

Comment: Several commenters asserted that EPA did not properly take into account the existing pollution control technology in use at the Hunter and Huntington BART units, as required by CAA section 169A(g)(2) and the BART Guidelines. Two of these commenters alleged that EPA was required to consider updated combustion controls, which were installed to comply with Utah's regional haze SIP. The commenters said EPA improperly used 2001–2003 emissions data to establish the baseline emissions for the Utah BART Units and that this is neither realistic nor provides the anticipated emissions as required by the BART Guidelines. The commenters asserted that had EPA relied on more recent emissions data, which reflect the NO_X reductions achieved by some of these newly installed controls, the cost-effectiveness values for SCR would have been higher, while the visibility improvement associated with SCR would have been lower.

Commenters pointed to an 8th Circuit court decision on EPA's final action on the North Dakota regional haze SIP where the Court found that EPA had failed to properly consider the existing pollution control technology at the Coal Creek Station. Commenters also asserted that in other EPA regional haze actions, EPA had adjusted baseline emissions to account for recently installed controls, such as EPA's final actions on the Arizona and Colorado regional haze SIPs, and settlement agreement with EPA Region 8 for the Deseret Bonanza plant. This commenter argued that because EPA had adjusted baseline emissions for some Arizona and Colorado EGUs to account for controls recently installed to satisfy consent decrees obligations or CAA requirements unrelated to regional haze, EPA was required to do so for Utah's EGUs as well.

Two final commenters submitted supportive comments regarding the need for using a standard baseline period to provide for greater national consistency. One of these commenters noted examples where EPA has evaluated NO_X BART based on a baseline period from before the installation of the pollution controls, for the Navajo regional haze plan and the Wyoming regional haze plan.

Response: We disagree with comments that EPA failed to consider or unreasonably considered the existing pollution control technology at the Hunter and Huntington BART units. One of the statutory factors EPA is to consider for BART is ''any existing pollution control technology in use at the source.'' 42 U.S.C. 7491(g)(2). The CAA and the BART Guidelines do not specify how states or EPA must ''take into consideration'' this factor. Nor did the Eighth Circuit Court of Appeals specify how existing controls must be taken into account; instead it only examined the meaning of the word ''any,'' holding that EPA misinterpreted the term. *North Dakota* v. *U.S. EPA,* 730 F.3d 750, 762–64 (8th Cir. 2013). The Court did not examine the meaning of the phrase ''take into consideration.'' *See id.* As the statute is silent on how to take into consideration existing controls, under *Chevron U.S.A.* v. *NRDC,* 467 U.S. 837, 843–44 (1984), this silence creates a gap for EPA to fill. As next summarized and detailed in our RTC document, we are reasonably considering existing controls in several ways.

[138] 80 FR 45340, 45350 (July 29, 2015).

[139] *Id.*

First, the BART Guidelines state that existing pollution control technology in use at the source affects the availability of control options and their impacts. 40 CFR part 51, appendix Y, at IV.A. The Guidelines go on to explain that ''[f]or emission units subject to a BART review, there will often be control measures or devices already in place. For such emission units, it is important to include control options that involve improvements to existing controls and not to limit the control options only to those measures that involve a complete replacement of control devices.'' 40 CFR part 51, appendix Y, at IV.D.1.6. We have followed this recommendation. We find that the existing combustion controls, LNB/SOFA, cannot be reasonably upgraded, and we are not considering a control option that involves their complete replacement. The post-combustion control options, SNCR and SCR, by their nature can operate independently of combustion controls and without changes to the combustion controls, another way in which we considered the existing controls when evaluating SNCR and SCR.

Consistent with the Guidelines' statement that existing pollution control equipment in use at the source affects the impacts of the control options, we used the sources' current NO_X emission rates when we evaluated the size, design, and reagent/catalyst cost of SNCR and SCR. For example, in the case of Hunter Unit 1, we did not use the baseline emission rate of 0.40 lb/MMBtu, but rather the current emission rate of 0.21 lb/MMBtu that appropriately reflects the installation of LNB/SOFA. Due to the lower NO_X emission rate, the size of the SNCR and SCR systems and the amount of reagent/catalyst necessary to operate them are lower than if we had simply assumed the baseline emission rate. This is a reasonable way in which to consider existing pollution control technology.

As discussed in our Wyoming action and in additional detail in our RTC document for this action, baseline emissions should be ''a realistic depiction of anticipated annual emissions'' *before* the installation of BART. 40 CFR part 51, appendix Y, at IV.D.4.d. Because the LNB/OFA were installed pursuant to Utah's proposed BART determination, we used the period 2001–2003, prior to the installation of LNB/OFA at the Hunter and Huntington BART units, for baseline emissions, which in turn we used to evaluate the cost-effectiveness and visibility of control options. As a result, the existing LNB/OFA were not included in the baseline. According to the commenter, this skewed EPA's analysis.

We disagree. Because we have also considered the existing controls in our final BART determination by examining the cost-effectiveness and visibility benefit of SNCR and SCR relative to the existing LNB/SOFA as well as in tandem with LNB/SOFA, we have avoided any possibility that exclusion of the LNB/OFA from the baseline could result in an unreasonable BART selection. The cost-effectiveness values of SCR and SNCR relative to the existing LNB/SOFA are presented in the per-unit tables for Hunter and Huntington (Tables 2–5) under ''Incremental cost-effectiveness.'' In other words, the cost-effectiveness value for SCR alone (assuming the existing LNB/SOFA) is essentially the same as the incremental cost-effectiveness of SCR + LNB/SOFA as compared to LNB/SOFA that is presented in the tables. As can be seen, the incremental cost-effectiveness values of SCR + LNB/SOFA relative to LNB/SOFA are, for all four units, somewhat lower than the incremental cost-effectiveness of SCR relative to SNCR. As explained in the section giving the rationale for our final action, we find the incremental cost-effectiveness of SCR to be reasonable relative to SNCR; therefore it is also reasonable relative to the existing LNB/SOFA.

Another way to make the same point is to, for the sake of argument, accept (which we do not) commenter's position that the baseline should reflect the LNB/SOFA. In that case, the values in the tables for the incremental cost-effectiveness of SCR + LNB/SOFA relative to LNB/SOFA can serve as a proxy for the average cost-effectiveness of SCR (assuming LNB/SOFA in the baseline). As shown by our comparisons, the incremental cost-effectiveness of SCR + LNB/SOFA is generally reasonable given the visibility benefits. This in turn shows that, even accepting for the sake of argument that LNB/SOFA should be reflected in the baseline, the average cost-effectiveness of SCR remains reasonable. Similar considerations apply to the incremental visibility benefits of SCR + LNB/SOFA relative to LNB/SOFA, which can be used as a proxy for the visibility benefits of SCR alone assuming that LNB/SOFA are reflected in the baseline. As shown by our comparisons, the incremental visibility benefits of SCR + LNB/SOFA relative to SNCR + LNB/SOFA are substantial and justify the costs of SCR. Since the incremental visibility benefits of SCR + LNB/SOFA relative to LNB/SOFA are necessarily larger than the incremental benefits relative to SNCR + LNB/SOFA, the incremental visibility benefits of SCR + LNB/SOFA relative to LNB/SOFA will also justify the costs of SCR. This in turn shows that even if we accepted the commenter's position—which we do not—the visibility benefits of SCR would justify its selection. For our detailed responses, please see our RTC document.

Finally, we acknowledge the supportive comments from two commenters on this issue and agree with many of the points that were made, for reasons explained elsewhere in this document and in our RTC document.

J. PM_{10} BART

Comment: We received several minor comments on Utah's PM_{10} BART determinations. One commenter in particular asserted that Utah underestimated the control effectiveness of baghouses, which should be able to achieve a limit of 0.010 lb/MMBtu or even lower.

Response: EPA agrees that baghouses have very high PM control efficiency capabilities. However, due to the low contribution of direct PM emissions from point sources such as Hunter Units 1 and 2 and Huntington Units 1 and 2[140] to visibility impairment and, consequently, the low anticipated visibility benefits from small PM reductions, lowering the emission limit to 0.010 is unlikely to result in any meaningful visibility improvement. We agree with Utah that the existing PM_{10} emission limit adopted for these sources in Section IX, Part H.22 of Utah's SIP satisfies BART for these units. We are finalizing our approval of Utah's PM_{10} BART determination at Hunter Units 1 and 2 and Huntington Units 1 and 2. We find that an emission limit of 0.015 lb/MMBtu represents what can be continuously achieved with a properly operated baghouse on these units. The fabric filters (*i.e.,* baghouses) at Hunter and Huntington are all new since they were installed after 2008. Recent PSD BACT limits for coal-fired EGUs with new baghouses have typically ranged from 0.01 to 0.015 lb/MMBtu using Method 5.

In addition, we note that the latest revision to the EGU New Source Performance Standards (NSPS) requires modified units to meet a PM limit of 0.015 lb/MMBtu.[141] Also, the EGU MATS rule set a PM emissions standard

[140] See Western Regional Air Partnership Regional Haze Rule Reasonable Progress Summary Report, Air Resource Specialist, Inc., State and Class I Area Summaries, Appendix p. 6–29, Table 6.13–19 (June 28, 2013). Available in the docket and at *http://www.wrapair2.org/RHRPR.aspx*.

[141] 77 FR 9450 (Feb. 16, 2012) (codified at 40 CFR 60.42Da).

of 0.03 lb/MMBtu as MACT for existing EGUs, and the BART Guidelines provide that, ''unless there are new technologies subsequent to the MACT standards which would lead to cost-effective increases in the level of control, you may rely on the MACT standards for purposes of BART.'' [142] Therefore, we are finalizing our proposed approval of Utah's BART determination for PM_{10} at Hunter Units 1 and 2 and Huntington Units 1 and 2.

K. Environmental Justice

Comment: One commenter requested that EPA's FIP address any disproportionately high and adverse human health, economic, and environmental impacts on minority and low-income communities in Utah due to the regional haze plan. The commenter noted that this may be accomplished consistent with federal Executive Order 12898, which establishes environmental justice policy. The commenter also noted that societal costs such as general public health costs associated with poor air quality should be considered in the environmental justice analysis.

Response: In making a final determination in this case, EPA considered Executive Order 12898, which establishes federal executive policy on environmental justice. This Executive Order directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States. EPA has determined that this final rule will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations. The installation of SCR at the two facilities will ensure greater emissions reductions of NO_X resulting in overall increases in the level of environmental protection for all affected populations.

EPA disagrees with the comment that societal costs such as general public health costs associated with poor air quality should be considered in the environmental justice analysis for this action. As addressed elsewhere in our RTC document, neither section 169A of the CAA, nor the BART Guidelines, require the BART analysis to include or quantify benefits to health, as health impacts are appropriately addressed under other CAA programs. Moreover, an analysis of societal costs is unlikely to alter the impact relating to environmental justice concerns because the final rule will result in greater protection for all affected populations as a result of the installation of the most stringent control technology available for NO_X.

III. Final Action

For the reasons discussed more fully in sections I and II and detailed in our proposal and its accompanying supporting materials, in this action, we are partially approving and partially disapproving revisions to the Utah SIP submitted by the State of Utah on June 4, 2015. We are taking no action on the Utah SIP submittal of October 20, 2015.

Section 110(k)(3) of the Act addresses the situation in which an entire submittal, or a separable portion of a submittal, meets all applicable requirements of the Act. In the case where a separable portion of the submittal meets all the applicable requirements, partial approval may be used to approve that part of the submittal and disapprove the remainder. Since the portions of the regional haze SIP submittal we are approving are separable from the portions we are disapproving as explained earlier, each approved PM_{10} BART determination for a particular pollutant for a given source will have an enforceable date of five years from the date of EPA's approval.

Under section 110(k)(4) of the Act, EPA may approve a submittal based on a commitment of the State to adopt specific enforceable measures no later than one year after the date of approval of the submittal. We are conditionally approving the State's recordkeeping requirements for the PM BART emission limitations based on Utah's commitment to adopt and submit certain measures to address the deficiencies in the recordkeeping requirements. If the State fails to adopt and submit these measures within one year of this action, our conditional approval will be treated as a disapproval.

Under section 110(c)(1)(B) of the Act, within two years of disapproving a required submittal in whole or in part, EPA must promulgate a FIP to address the deficiencies, unless the State corrects the deficiencies through a submittal and EPA approves the submittal before we promulgate a FIP. As a result of our prior disapproval of Utah's PM and NO_X BART submittals in 2012, there was a pending obligation for EPA to promulgate a FIP for PM and NO_X BART. In this action, we are promulgating a FIP for NO_X BART. Because we are approving Utah's revised PM BART submittal, which corrects the previous deficiencies in the original PM BART submittal, there is no longer an obligation for EPA to promulgate a FIP for PM BART. Thus, EPA has discharged its FIP obligations with respect to PM and NO_X BART for the State of Utah.

A. Final Partial Approval

1. We are approving these elements of the State's SIP submittals, which rely on elements from prior approvals: [143]

- BART determinations and emission limits for PM_{10} at Hunter Units 1 and 2 and Huntington Units 1 and 2.
- Monitoring, recordkeeping, and reporting requirements for units subject to the PM_{10} emission limits, including conditional approval of the recordkeeping requirements for the PM_{10} emission limits.

B. Final Partial Disapproval and Federal Implementation Plan

1. We are disapproving these aspects of the State's June 4, 2015 SIP submittal:

- NO_X BART Alternative that includes NO_X, and SO_2 emission reductions from Hunter Units 1 through 3, Huntington 1 and 2, and Carbon Units 1 and 2, and PM_{10} emission reductions from Carbon Units 1 and 2.
- Monitoring, recordkeeping and reporting requirements for units subject to the BART Alternative.

2. We are promulgating a FIP to address the deficiencies in the Utah regional haze SIP. The FIP includes the following elements:

- NO_X BART determinations and limits for Hunter Units 1 and 2, Huntington Units 1 and 2.
- Monitoring, recordkeeping, and reporting requirements applicable to Hunter Units 1 and 2, and Huntington Units 1 and 2.

C. No Action

1. We are taking no action on the State's October 20, 2015 SIP submittal which includes the following:

- The enforceable commitments to revise, at a minimum, SIP Section XX.D.3.c and State rule R307–150 by March 2018.

[142] 40 CFR part 51, appendix Y, section IV.C. While the Supreme Court reversed the D.C. Circuit's judgment on the MATS rule, the Supreme Court did so based on EPA's approach to the ''appropriate and necessary'' finding, not EPA's determination of MACT for EGUs. *Michigan* v. *EPA*, 135 S. Ct. 2699 (2015).

[143] As necessary for our approval, we are filling gaps in the 2015 Utah regional haze RH SIP submittals with the following already-approved sections from the 2011 Utah RH SIP: Section XX.B.8, Figures 1 and 2, Affected Class I Areas, pp. 8–9; Section XX.D.6.b, Table 3, BART-Eligible Sources in Utah, p. 21; Section. XX.D.6.c, Sources Subject to BART, pp. 21–23.

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IV. Incorporation by Reference

In this rule, the EPA is finalizing regulatory text that includes incorporation by reference. In accordance with requirements of 1 CFR 51.5, the EPA is finalizing the incorporation by reference of the Utah Administrative Code discussed in section III, Final Action of this preamble. The EPA has made, and will continue to make, these documents generally available electronically through *www.regulations.gov* and/or in hard copy at the appropriate EPA office (see the **ADDRESSES** section of this preamble for more information).

V. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action is exempt from review by the Office of Management and Budget (OMB) because this final rule applies to only two facilities containing four BART units. It is therefore not a rule of general applicability.

B. Paperwork Reduction Act

This action does not impose an information collection burden under the provisions of the Paperwork Reduction Act (PRA).[144] Because this final rule applies to just two facilities, the PRA does not apply.

C. Regulatory Flexibility Act

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. This action will not impose any requirements on small entities.

EPA is partially disapproving the State's SIP submittal and promulgating a FIP that consists of imposing federal controls to meet the BART requirement for emissions on four specific BART units at two facilities in Utah. The net result of this action is that EPA is requiring direct emission controls on selected units at only two sources, and those sources are large electric generating plants that are not owned by small entities, and therefore the owners are not a small entities under the RFA.

D. Unfunded Mandates Reform Act (UMRA)

This action does not contain an unfunded mandate of $100 million or more as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments.

[144] 44 U.S.C. 3501 *et seq.*

EPA has determined that Title II of the UMRA does not apply to this rule. In 2 U.S.C. 1502(1) all terms in Title II of UMRA have the meanings set forth in 2 U.S.C. 658, which further provides that the terms ''regulation'' and ''rule'' have the meanings set forth in 5 U.S.C. 601(2). Under 5 U.S.C. 601(2), ''the term 'rule' does not include a rule of particular applicability relating to . . . facilities.'' Because this rule is a rule of particular applicability relating to all four BART units at the Hunter and Huntington plants, EPA has determined that it is not a ''rule'' for the purposes of Title II of the UMRA. The private sector expenditures that result from promulgating a FIP include BART controls for all four units at the Hunter and Huntington plants are $58.6 million[145] per year. Additionally, we do not foresee significant costs (if any) for state and local governments. Thus, because the annual expenditures associated with promulgating a FIP are less than the threshold of $100 million in any one year, this final rule is not subject to the requirements of sections 202 or 205 of UMRA. This final rule is also not subject to the requirements of section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments.

E. Executive Order 13132: Federalism

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This action does not have tribal implications as specified in Executive Order 13175. It will not have substantial direct effects on tribal governments. Thus, Executive Order 13175 does not apply to this action.

G. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

The EPA interprets Executive Order 13045 as applying only to those regulatory actions that concern environmental health or safety risks that the EPA has reason to believe may disproportionately affect children, per the definition of ''covered regulatory action'' in section 2–202 of the Executive Order. This action is not subject to Executive Order 13045 because the EPA does not believe the environmental health or safety risks addressed by this action present a disproportionate risk to children. Moreover, ''regulation'' or ''rule,'' is defined in Executive Order 12866 as ''an agency statement of general applicability and future effect.'' E.O. 12866 does not define ''statement of general applicability,'' but this term commonly refers to statements that apply to groups or classes, as opposed to statements, which apply only to named entities. The FIP therefore is not a rule of general applicability because its requirements apply and are tailored to only the Hunter and Huntington plants, which are individually identified facilities. Thus, it is not a ''rule'' or ''regulation'' within the meaning of E.O. 12866. However, as this action will limit emissions of NO_X, it will have a beneficial effect on children's health by reducing air pollution.

[145] Andover Technology Partners, *Cost of NO_X BART Controls on Utah EGUs*, to EC/R, Inc. (May 13, 2016). Andover Technology Partners is a subcontractor to EC/R Incorporated.

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not subject to Executive Order 13211, because it is not a significant regulatory action under Executive Order 12866.

I. National Technology Transfer and Advancement Act

This rulemaking does not involve technical standards.

J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

The EPA believes that this action does not have disproportionately high and adverse human health or environmental effects on minority populations, low-income populations and/or indigenous peoples, as specified in Executive Order 12898 (59 FR 7629, February 16, 1994).

The documentation for this decision is contained within the docket in a document entitled ''Environmental Justice Analysis, November 2015.'' This final rule will result in overall emission reductions for NO_X, and PM_{10} and therefore an increase in the level of environmental protection for all affected populations.

K. Congressional Review Act

This action is not subject to the CRA because this is a rule of particular applicability. Additionally, this action

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is not a ''major rule'' as defined by 5 U.S.C. 804(2).

L. Judicial Review

Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by September 6, 2016. Pursuant to CAA section 307(d)(1)(B), this action is subject to the requirements of CAA section 307(d) as it promulgates a FIP under CAA section 110(c). Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements. See CAA section 307(b)(2).

Authority: 42 U.S.C. 7401 *et seq.*

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Nitrogen dioxide, Particulate matter, Sulfur oxides.

Dated: June 1, 2016.

Gina McCarthy,

Administrator.

40 CFR part 52 is amended as follows:

PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

* 1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

Subpart TT—Utah

* 2. Section 52.2320 is amended by:

* a. In the table in paragraph (c), under the heading ''R307–110. General Requirements: State Implementation Plan'' revising the entry ''R307–110–17.''

* b. In the table in paragraph (e), under the heading ''XVII. Visibility Protection'' adding in numerical order the entry ''Section XX.D.6. Best Available Retrofit Technology (BART) Assessment for NO_X and PM''.

The revision and addition read as follows:

§52.2320 Identification of plan.

* * * * *

(c) * * *

Rule No.	Rule title	State effective date	Final rule citation, date	Comments
*	*	*	*	*
R307–110. General Requirements: State Implementation Plan				
*	*	*	*	*
R307–110–17.	Section IX. Control Measures for Area and Point Sources, Part H, Emissions Limits.	6/4/2015	[Insert **Federal Register** citation] 7/5/2016.	Except for Section IX.H.21.e. which is conditionally approved through one year from [Insert date of publication in the **Federal Register**], IX.H.21.g., Sections of IX.H.21 that reference and apply to the source specific emission limitations disapproved in Section IX.H.22, and Sections IX.H.22.a.ii-iii, IX.H.22.b.ii, and IX.H.22.c.
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(e) * * *

Rule title	State effective date	Final rule citation, date	Comments
*	*	*	*
XVII. Visibility Protection			

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Rule title	State effective date	Final rule citation, date	Comments
* *	*	* *	* *
Section XX.D.6. Best Available Retrofit Technology (BART) Assessment for NO_X and PM.	6/4/2015	[Insert **Federal Register** citation] 7/5/2016.	Except for XX.D.6.a the phrase "and BART for NO_X through alternative measures under 40 CFR 51.308(e)(2)"; XX.D.6.c; XX.D.6.d the phrase "NO_X and" in the first sentence, the entire last sentence in the introductory paragraph, all SO_2 and NO_X provisions and the word "Permitted" in the "Utah Permitted Limits" column in Table 5, "Hunter 3" and the Hunter limits, and all provisions in the "Presumptive BART Rates" column in Table 5; XX.D.6.e the phrase ", and pursuant to 51.308(e)(2)(E)(3) all alternative measures must take place within the first planning period", the rows beginning with "Hunter 3", "Carbon 1" and "Carbon 2" in Table 6, and the entire paragraph immediately following Table 6.
* *	*	* *	* *

* 3. Section 52.2336 is added to read as follows:

§52.2336 Federal implementation plan for regional haze.

(a) *Applicability.* (1) This section applies to each owner and operator of the following emissions units in the State of Utah:

(i) PacifiCorp Hunter Plant Units 1 and 2; and

(ii) PacifiCorp Huntington Plant Units 1 and 2.

(2) [Reserved]

(b) *Definitions.* Terms not defined in this paragraph (b) shall have the meaning given them in the Clean Air Act or EPA's regulations implementing the Clean Air Act. For purposes of this section:

(1) *BART* means Best Available Retrofit Technology.

(2) *BART unit* means any unit subject to a Regional Haze emission limit in Table 1 of this section.

(3) *Continuous emission monitoring system* or *CEMS* means the equipment required by this section to sample, analyze, measure, and provide, by means of readings recorded at least once every 15 minutes (using an automated data acquisition and handling system (DAHS)), a permanent record of NO_X emissions, diluent, or stack gas volumetric flow rate.

(4) *FIP* means Federal Implementation Plan.

(5) The term *lb/MMBtu* means pounds per million British thermal units of heat input to the fuel-burning unit.

(6) NO_X means nitrogen oxides.

(7) *Operating day* means a 24-hour period between 12 midnight and the following midnight during which any fuel is combusted at any time in the BART unit. It is not necessary for fuel to be combusted for the entire 24-hour period.

(8) The *owner/operator* means any person who owns or who operates, controls, or supervises a unit identified in paragraph (a) of this section.

(9) *Unit* means any of the units identified in paragraph (a) of this section.

(c) *Emission limitations.* (1) The owners/operators of emission units subject to this section shall not emit, or cause to be emitted, NO_X in excess of the following limitations:

TABLE 1 TO §52.2336—EMISSION LIMITATIONS FOR BART UNITS

Source name/BART unit	NO_X Emission limitation—lb/MMBtu (30-day rolling average)
PacifiCorp Hunter Plant/Unit 1 [1]	0.07
PacifiCorp Hunter Plant/Unit 2 [1]	0.07
PacifiCorp Huntington Plant/Unit 1 [1]	0.07
PacifiCorp Huntington Plant/Unit 2 [1]	0.07

[1] The owners and operators of PacifiCorp Hunter Units 1 and 2 and Huntington Units 1 and 2, shall comply with the NO_X emission limit for BART of 0.07 lb/MMBtu and other requirements of this section by August 4, 2021.

(2) These emission limitations shall apply at all times, including startups, shutdowns, emergencies, and malfunctions.

(d) *Compliance date.* (1) The owners and operators of PacifiCorp Hunter Units 1 and 2 shall comply with the NO_X emission limitation of 0.07 lb/MMBtu and other requirements of this section by August 4, 2021. The owners and operators of PacifiCorp Huntington Units 1 and 2 shall comply with the NO_X emission limitation of 0.07 lb/MMBtu and other requirements of this section by August 4, 2021.

(2) [Reserved]

(e) *Compliance determinations for* NO_X. (1) For all BART units:

(i) *CEMS.* At all times after the earliest compliance date specified in paragraph (d) of this section, the owner/operator of each unit shall maintain, calibrate, and operate a CEMS, in full compliance with the requirements found at 40 CFR part 75, to accurately measure NO_X, diluent, and stack gas volumetric flow rate from each unit. The CEMS shall be used to determine compliance with the emission limitations in paragraph (c) of this section for each unit.

(ii) *Method.* (A) For any hour in which fuel is combusted in a unit, the owner/operator of each unit shall calculate the hourly average NO_X emission rate in lb/MMBtu at the CEMS in accordance with the requirements of 40 CFR part 75. At the end of each operating day, the owner/operator shall calculate and record a new 30-day rolling average emission rate in lb/MMBtu from the arithmetic average of all valid hourly emission rates from the CEMS for the current operating day and the previous 29 successive operating days.

(B) An hourly average NO_X emission rate in lb/MMBtu is valid only if the minimum number of data points, as specified in 40 CFR part 75, is acquired by both the pollutant concentration

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monitor (NO_X) and the diluent monitor (O_2 or CO_2).

(C) Data reported to meet the requirements of this section shall not include data substituted using the missing data substitution procedures of subpart D of 40 CFR part 75, nor shall the data have been bias adjusted according to the procedures of 40 CFR part 75.

(2) [Reserved]

(f) *Recordkeeping.* The owner/operator shall maintain the following records for at least five years:

(1) All CEMS data, including the date, place, and time of sampling or measurement; parameters sampled or measured; and results.

(2) Records of quality assurance and quality control activities for emissions measuring systems including, but not limited to, any records required by 40 CFR part 75.

(3) Records of all major maintenance activities conducted on emission units, air pollution control equipment, and CEMS.

(4) Any other CEMS records required by 40 CFR part 75.

(g) *Reporting.* All reports under this section shall be submitted to the Director, Office of Enforcement, Compliance and Environmental Justice, U.S. Environmental Protection Agency, Region 8, Mail Code 8ENF–AT, 1595 Wynkoop Street, Denver, Colorado 80202–1129.

(1) The owner/operator of each unit shall submit quarterly excess emissions reports for NO_X BART units no later than the 30th day following the end of each calendar quarter. Excess emissions means emissions that exceed the emissions limits specified in paragraph (c) of this section. The reports shall include the magnitude, date(s), and duration of each period of excess emissions, specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the unit, the nature and cause of any malfunction (if known), and the corrective action taken or preventative measures adopted.

(2) The owner/operator of each unit shall submit quarterly CEMS performance reports, to include dates and duration of each period during which the CEMS was inoperative (except for zero and span adjustments and calibration checks), reason(s) why the CEMS was inoperative and steps taken to prevent recurrence, and any CEMS repairs or adjustments. The owner/operator of each unit shall also submit results of any CEMS performance tests required by 40 CFR part 75.

(3) When no excess emissions have occurred or the CEMS has not been inoperative, repaired, or adjusted during the reporting period, such information shall be stated in the quarterly reports required by paragraphs (g)(1) and (2) of this section.

(h) *Notifications.* (1) The owner/operator shall promptly submit notification of commencement of construction of any equipment which is being constructed to comply with the NO_X emission limits in paragraph (c) of this section.

(2) The owner/operator shall promptly submit semi-annual progress reports on construction of any such equipment.

(3) The owner/operator shall promptly submit notification of initial startup of any such equipment.

(i) *Equipment operation.* At all times, the owner/operator shall maintain each unit, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions.

(j) *Credible evidence.* Nothing in this section shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with requirements of this section if the appropriate performance or compliance test procedures or method had been performed.

[FR Doc. 2016–14645 Filed 7–1–16; 8:45 am]

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Exhibit B

***State of Utah et al. v. U.S. EPA et al.*, (consolidated)**
Nos. 16-9541, 16-9542, 16-9543, 16-9545

PacifiCorp's Comments Re: Approval, Disapproval and Promulgation of Air Quality Implementations Plans; Partial Approval and Partial Disapproval of Air Quality Implementation Plans and Federal Implementation Plan; State of Utah; Revisions to Regional Haze State Implementation Plan; Federal Implementation Plan for Regional Haze (excerpted pages) (Mar. 14, 2016)

Docket ID No. EPA-R08-OAR-2015-0463

PacifiCorp's Expanded Comments to: **Approval, Disapproval and Promulgation of Air Quality Implementation Plans; Partial Approval and Partial Disapproval of Air Quality Implementation Plans and Federal Implementation Plan; Utah; Revisions to Regional Haze State Implementation Plan; Federal Implementation Plan for Regional Haze**

PacifiCorp provides these comments in response to the above proposed action by the U.S. Environmental Protection Agency ("**EPA**") as published in the Federal Register January 14, 2016 at 81 FR 2004 ("**Proposed Action**").[1]

I. INTRODUCTION

PacifiCorp, which operates in Utah under the business name Rocky Mountain Power, supplies electricity to more than 1.8 million residential and business customers in the state of Utah and five other western states. PacifiCorp is the majority owner and operator of Hunter Units 1 and 2, and is the owner and operator of Huntington Units 1 and 2 (collectively "**Utah BART Units**"). The Utah BART Units are the only sources that Utah and EPA have determined to be subject to the Clean Air Act's ("**CAA**") Best Available Retrofit Technology ("**BART**") requirements. As a result, PacifiCorp and its customers will be directly affected by EPA's final action regarding Utah's regional haze state implementation plan. The Utah regional haze state implementation plan, and all supporting documents, collectively are referred to herein as the "**Utah SIP**".

With regard to NOx emissions, EPA describes its Proposed Action as two "co-proposals" and further describes those as "A proposal to approve the State SIP in its entirety, and a proposal to partially approve and partially disapprove the State SIP and propose a FIP." See 81 FR at 2006. PacifiCorp refers to the "proposal to approve the State SIP in its entirety" as the "**SIP Proposal**," and the "proposal to partially approve and partially disapprove the State SIP and propose a FIP" as the "**FIP Proposal**."

PacifiCorp supports EPA's approval of the SIP Proposal because the Utah SIP satisfies the regional haze requirements as EPA itself has proposed to conclude. This conclusion should be the beginning and the end of EPA's final action. The SIP Proposal produces better visibility improvement under every metric (except one) and does so at cost savings of over $700 million[2] compared to the FIP Proposal. In addition, the single metric EPA

[1] These comments are in addition to those offered during the public hearing sponsored by EPA on January 26, 2016. A copy of the hearing comments are included at EPA-R08-OAR-2015-0463-0112 and identified as "Bill Lawson, Rocky Mountain Power."

[2] As explained below, adding LNB/OFA/SCR to the Utah BART Units will cost approximately $170 million for each unit, with the total for all four Utah BART Units

such as SCRs. S&L generated a report ("S&L Report"), attached hereto as Attachment 5, which is hereby incorporated by reference. S&L identified several material mistakes made by ATP in generating its SCR cost estimates, which estimates EPA then relied on in its BART determinations and FIP Proposal. EPA also made its own independent mistakes in its SCR cost estimates.[45] As a result of ATP's and EPA's cost-estimating mistakes and misapplication of the applicable statutes and regulations, the EPA's BART cost estimates for SCR are vague, confusing, illegal, and wrong, and EPA's FIP Proposal should be rejected, for the following reasons.

1. *EPA's SCR BART cost estimates are missing required information* -- EPA claims that its SCR capital costs were obtained, in part, from PacifiCorp's 2014 BART Analyses. However, PacifiCorp's estimated SCR capital costs are much higher than EPA's estimated SCR capital costs. For example, in PacifiCorp's August 4, 2014 BART analysis, page 2, the estimated SCR capital costs for LNB/OFA/SCR are $180.8 million for Hunter Unit 1. S&L Report at 3, tbl. 1. EPA claims the estimated capital costs for LNB/OFA/SCR are $110.3 million for Hunter Unit 1. See 81 Fed. Reg. 2,004, 2,035 tbl 14. While EPA claims PacifiCorp improperly included certain costs (which claim is wrong), EPA never explains the $70 million difference between its SCR cost estimate and PacifiCorp's SCR cost estimate for Hunter Unit 1.[46] EPA must adequately support and document its BART cost analysis, which includes explaining the differences between PacifiCorp's August 2014 BART analysis costs and EPA's revised costs relied upon in the Proposed Rule. PacifiCorp cannot verify EPA's SCR cost estimates, which are reductions of PacifiCorp's SCR cost estimates, until EPA explains how it reduced PacifiCorp's cost estimates on an item by item basis. EPA's "actions must be reasoned." Nat'l Parks Conservation Ass'n v. E.P.A.,

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cost estimates. S&L has considerable experience with the federal and state environmental regulations affecting power plant operations, as well as the specification, evaluation, selection, and implementation of emission control technologies for both gas- and coal-fueled utility power facilities, including extensive experience with the NO_X control technologies evaluated. For example, since 2000, S&L has provided, or is currently providing, engineering services for the implementation of SCR systems on 68 units, totaling more than 36,000 MW of operating capacity. S&L's first-hand experience with NO_X control technologies, especially SCR systems, provides it with a thorough understanding of both the capital and operating and maintenance (O&M) costs associated with these technologies. In addition, S&L has completed multiple projects for PacifiCorp at both the Hunter and Huntington stations and is familiar with the site constraints and the potential challenges to construct SCR systems at each station.

[45] EPA made several obvious mistakes in its SCR cost estimates. For example, EPA's FIP Proposal rejects PacifiCorp's SCR cost estimates allegedly because they included improper items, such as AFUDC. See 81 FR at 2004, 2034-35. However, EPA's own expert stated "AFUDC is not included in the overnight cost methodology of the CCM and therefore was not allowed. PacifiCorp correctly excluded this from their estimate." ATP Report, page 10.

[46] Again, although PacifiCorp uses Hunter 1 as an example, EPA and ATP made the same SCR cost estimating mistakes at all of the Utah BART units. Therefore, all of the arguments made herein apply with equal force to all Utah BART Units.

788 F.3d 1134, 1141 (9th Cir. 2015). The law requires EPA to "cogently explain why it has exercised its discretion in a given manner." Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983); Gen. Chem. Corp. v. United States, 817 F.2d 844, 857 (D.C. Cir. 1987) (per curiam). Here, EPA has not cogently explained the difference between its SCR BART cost estimates and PacifiCorp's SCR cost estimates.

2. *EPA's cost estimates are contrary to the CCM* -- In the FIP Proposal, EPA states that "cost estimates for control technologies should be based on the CCM, where possible." See 81 FR at 2033. But EPA, and its expert, ATP, ignored certain costs allowed by the EPA Control Cost Manual ("CCM") when calculating SCR costs for the NOx BART determinations. For example, in the ATP Report, pages 7-8, EPA's expert discounted costs from PacifiCorp's SCR cost estimates that the same experts admit are allowed by the CCM. The ATP Report admits "PacifiCorp provided cost estimates that follow the general format of the 2002 CCM. Although the 2002 CCM shows a process contingency of 5% in Table 2.5 in Section 4.2 (page 2-44), this is not necessary today for SCR on coal-fired boilers firing the coals used in Utah." *Id.* In other words, ATP and EPA inappropriately disallowed SCR costs for process contingency that are explicitly authorized by the CCM. S&L estimates that improperly excluding the "process contingency" reduced EPA's SCR cost estimates by approximately $6 million per Utah BART Unit. S&L Report at 23, tbl 2. This cost is material and impacts the BART cost-effectiveness analyses.

But this is not all. ATP and EPA further skewed the SCR cost estimates relied on by EPA by disallowing general facilities costs, catalyst costs, and indirect installation costs -- all of which are specifically allowed by the CCM. It is improper for EPA to ignore SCR costs allowed by the CCM. See 79 FR at 5032, 5135 ("There are only very limited situations in which a state or EPA can depart from the CCM cost methodology. . . . The guidelines for BART determinations make it clear that the CCM is the intended methodology for conducting a BART cost determination. It also states why: To maintain and improve consistency.").

If ever this rationale applied to a regional haze plan, it applies to the FIP Proposal. In an attempt to validate its SCR-focused BART determinations in the FIP Proposal for the Utah BART Units, EPA compared the Utah BART Units' cost and visibility data with that from SCR-focused BART determinations for the Cholla power plant in Arizona, Laramie River power plant in Wyoming, and Hayden power plant in Colorado. See e.g., 81 FR at 2037. However, as EPA has admitted, such comparisons are meaningless unless the cost estimates are done in a consistent manner. Therefore, before EPA can make the alleged BART cost comparisons, it will need to show it made the same CCM adjustments to the cost estimates for the Cholla, Laramie River, and Hayden cost estimates. This it cannot do, and EPA should withdraw its FIP Proposal.

a. "Draft" changes to the CCM Don't Count -- Additionally, ATP and EPA incorrectly made changes to PacifiCorp's SCR cost estimates based on *draft*

Exhibit C

***State of Utah et al. v. U.S. EPA et al.*, (consolidated)**
Nos. 16-9541, 16-9542, 16-9543, 16-9545

EPA's Response to Comments for the Federal Register Notice for Air Quality State Implementation Plans; Approvals and Promulgations: Utah; Revisions to Regional Haze State Implementation Plan; Federal Implementation Plan for Regional Haze; Partial Approval and Partial Disapproval (excerpted pages) (June 1, 2016)

Response to Comments for the Federal Register Notice for Air Quality State Implementation Plans; Approvals and Promulgations: Utah; Revisions to Regional Haze State Implementation Plan; Federal Implementation Plan for Regional Haze; Partial Approval and Partial Disapproval

Docket No. EPA-R08-OAR-2015-0463

June 1, 2016

*This Response to Comment Document was finalized on June 1, 2016. As shown in the "redline/strikeout" version of this document in the docket for this action, the Agency made non-substantive and formatting edits on June 9, 2016.

Comment: [Docket ID-0165] The Utah Mining Association (UMA) is a 101-year old, 120-member, non-profit, non-partisan trade association representing the interests of the mining industry in Utah. UMA members are actively involved in exploration and mining operations on public and private lands throughout the state. Our diverse membership includes every facet of the mining industry, including geology, exploration, mining, engineering, power generation, equipment manufacturing, legal and technical services, and sales of equipment and supplies. As significant energy ratepayers, our members are directly affected by the EPA's proposal.

Response: Comment noted.

Comment: [Transcript pp. 119-120] One commenter noted that the proposed FIP will require Rocky Mountain Power to spend nearly 700 million dollars. Rocky Mountain Power has a customer base of approximately 83,000 households. The FIP, if implemented, will cost each of these households $8,434. This hurts every citizen of that system, especially the low and fixed income families. The FIP would provide less than one deciview improvement on average which is not noticeable to the human eye. The federal government would be forcing the rate payers of Utah to pay a great cost for something that they cannot even see.

Response: First, we disagree that our FIP will require Rocky Mountain Power to spend $700 million dollars. EPA's revised estimate of the total capital costs for the FIP is $517 million dollars. Second, EPA's evaluation of capital and annual expenses associated with implementation of the FIP shows such expenses to be justified by the degree of improvement in visibility in relationship to the cost of implementation. We note that for electric utilities, while EPA has not customarily analyzed or considered ratepayer impacts in BART determinations,[576] it is readily apparent that the household cost impacts suggested by the commenter are significantly overstated. Based on other economic analyses we have reviewed,[577] residential customers are more likely to experience rate increases in the range of 5-10% due to installation of SCR controls required by the FIP. While these projected rate increases are not trivial, they are comparable to average historical rate increases for Rocky Mountain Power (aka PacifiCorp), Utah, and U.S. ratepayers.[578]

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[576] Exceptions include EPA's Regional Haze FIP for Hawaii, where we analyzed potential rate impacts due to the unique energy situation in Hawaii, (77 FR 61478, 61488 (Oct. 9, 2012));, EPA's BART FIP for Four Corners Power Plant, where we examined potential rate impacts as part of tribal consultation, (77 FR 51620, 51625-51626 (Aug. 24, 2012));, and EPA's BART FIP for Apache Generating Station to understand the rate impacts on Arizona Electric Power Cooperative as a small entity, (77FR 72512 (Dec. 5, 2012)).

[577] Apache Plant: Report on SCR Incremental Cost Assessment, November 9, 2012 [original EPA docket ID EPA-R09-OAR-2012-0021-0211 and also included in the docket for this action] and The Cost of Clean Air, Effects of Air Pollution Controls on Electric Rates in North Dakota and Minnesota, Paul Chernick, November 7, 2011 [original EPA docket ID EPA-R08-OAR-2010-0406-0213, Attachment 5 and also included in the docket for this action.]

[578] Energy Information Administration (EIA) State Historical Tables for 2014, Released: February 19, 2015. Average Price by State by Provider, 1990-2014. http://www.eia.gov/electricity/data.cfm#sales, last accessed June 1, 2016.