ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R08–OAR–2024–0389; FRL–12173–01–R8]

Air Plan Partial Approval and Partial Disapproval; Utah; Regional Haze State Implementation Plan for the Second Implementation Period; Air Plan Disapproval; Utah; Interstate Transport of Air Pollution for the 2015 8-Hour Ozone National Ambient Air Quality Standards

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: In this notice of proposed rulemaking, the Environmental Protection Agency (EPA) is proposing to act on two Utah State implementation plan (SIP) submissions related to visibility protection. First, we are proposing to partially approve and partially disapprove a regional haze SIP submission for the second implementation period that Utah submitted on August 2, 2022. The regional haze SIP submission addresses the requirement that states revise their long-term strategies every implementation period to make reasonable progress towards the national goal of preventing any future, and remedying any existing, anthropogenic impairment of visibility, including regional haze, in mandatory Class I Federal areas. Utah's regional haze SIP submission also addresses other applicable requirements for the second implementation period of the regional haze program. The EPA is taking this action on Utah's regional haze SIP submission pursuant to the Clean Air Act (CAA or the Act). Second, the EPA is proposing to disapprove a portion of Utah's infrastructure SIP submission submitted on January 9, 2020, to address the applicable requirements of CAA section 110(a)(2) for the 2015 Ozone National Ambient Air Quality Standards (NAAQS). Our proposed disapproval is based on CAA section 110(a)(2)(D)(i)(II)'s requirement that a state's SIP contain adequate provisions prohibiting emissions that will interfere with measures to protect visibility required to be included in any other state's SIP (known as interstate transport ''prong 4''). The EPA is taking this action on Utah's infrastructure SIP submission pursuant to section 110 of the CAA.

DATES: Written comments must be received on or before September 18, 2024.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–R08–OAR–2024–0389 at *https://www.regulations.gov.* Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from *https://www.regulations.gov.* The EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.,* on the web, cloud, or other file sharing system). For additional submission methods, the full public comment policy of the EPA, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit *https://www.epa.gov/dockets/commenting-epa-dockets.*

Docket: All documents in the docket are listed in the *https://www.regulations.gov* index. Although listed in the index, some information is not publicly available, *e.g.,* CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available electronically in *https://www.regulations.gov.* Please email or call the person listed in the **FOR FURTHER INFORMATION CONTACT** section if you need to make alternative arrangements for access to the docket.

FOR FURTHER INFORMATION CONTACT: Clayton Bean, U.S. Environmental Protection Agency, Region 8, Air and Radiation Division; 1595 Wynkoop Street, Denver, Colorado 80202–1129; telephone: (303) 312–6143; email address: *bean.clayton@epa.gov.*

SUPPLEMENTARY INFORMATION:

Table of Contents

I. What action is the EPA proposing?

In this notice of proposed rulemaking, the EPA is proposing to take action on two Utah SIP submissions related to visibility protection. First, as detailed in section IV., the EPA's Evaluation of Utah's Regional Haze Submission for the Second Implementation Period, we are proposing to partially approve and partially disapprove Utah's regional haze second implementation period SIP submission. Second, as a consequence of our proposed partial disapproval of the regional haze SIP submission and as detailed in section V. of this document, we are proposing to disapprove a portion of Utah's infrastructure SIP for the 2015 ozone NAAQS.

On August 2, 2022, the Utah Department of Environmental Quality's Division of Air Quality (DAQ) submitted a SIP submission to the EPA to address regional haze for the second implementation period. Utah made this SIP submission to satisfy the requirements of the CAA's regional haze program pursuant to CAA sections 169A and 169B and 40 CFR 51.308(f). The EPA is proposing to approve the portions of Utah's Regional Haze SIP

submission relating to 40 CFR 51.308(f)(1): calculations of baseline, current, and natural visibility conditions, progress to date, and the uniform rate of progress; (f)(4): reasonably attributable visibility impairment; (f)(5) and (g): progress report requirements; and (f)(6): monitoring strategy and other implementation plan requirements. The EPA is proposing disapproval for the portions of Utah's regional haze SIP submission relating to 40 CFR 51.308(f)(2): long-term strategy; (f)(3): reasonable progress goals; and (i): FLM consultation. Consistent with section 110(k)(3) of the CAA, the EPA may partially approve portions of a SIP submittal if those elements meet all applicable requirements and may disapprove the remainder so long as the elements are fully separable.

Additionally, the EPA proposes to disapprove a portion of Utah's January 9, 2020 infrastructure SIP submission for the 2015 ozone NAAQS that addresses interstate transport of visibility impairing pollutants. Utah submitted this SIP submission to address the applicable requirements of CAA section 110(a)(2) for the 2015 ozone NAAQS. We propose to disapprove the portion of the infrastructure SIP submission addressing interstate transport of visibility impairing pollutants for not meeting the requirements of CAA section 110(a)(2)(D)(i)(II).

II. Background and Requirements for Regional Haze Plans

A. Regional Haze Background

In the 1977 CAA amendments, Congress created a program for protecting visibility in the nation's mandatory Class I Federal areas, which include certain national parks and wilderness areas.[1] CAA section 169A. The CAA establishes as a national goal the ''prevention of any future, and the remedying of any existing, impairment of visibility in mandatory Class I Federal areas which impairment results from manmade air pollution.'' CAA section 169A(a)(1). The CAA further directs the EPA to promulgate regulations to assure reasonable progress toward meeting this national goal. CAA section 169A(a)(4). On December 2, 1980, the EPA promulgated regulations to address visibility impairment in mandatory Class I Federal areas (hereinafter referred to as ''Class I areas'') that is ''reasonably attributable'' to a single source or small group of sources. (45 FR 80084, December 2, 1980). These regulations, codified at 40 CFR 51.300 through 51.307, represented the first phase of the EPA's efforts to address visibility impairment. In 1990, Congress added section 169B to the CAA to further address visibility impairment, specifically, impairment from regional haze. CAA section 169B. The EPA promulgated the Regional Haze Rule (RHR), codified at 40 CFR 51.308 and 51.309,[2] on July 1, 1999 (64 FR 35714, July 1, 1999). On January 10, 2017, the EPA promulgated additional regulations that address visibility impairment for the second and subsequent implementation periods (82 FR 3078, January 10, 2017). These regional haze regulations are a central component of the EPA's comprehensive visibility protection program for Class I areas.

Regional haze is visibility impairment that is produced by a multitude of anthropogenic sources and activities that are located across a broad geographic area and that emit pollutants that impair visibility. Visibility impairing pollutants include fine and coarse particulate matter (PM) (*e.g.,* sulfates, nitrates, organic carbon, elemental carbon, and soil dust) and their precursors (*e.g.,* sulfur dioxide (SO_2), nitrogen oxides (NO_X), and, in some cases, volatile organic compounds (VOC) and ammonia (NH_3)). Fine particle precursors react in the atmosphere to form fine particulate matter ($PM_{2.5}$), which impairs visibility by scattering and absorbing light. Visibility impairment reduces the perception of clarity and color, as well as visible distance.[3]

To address regional haze visibility impairment, the 1999 RHR established an iterative planning process that requires both states in which Class I areas are located and states ''the emissions from which may reasonably be anticipated to cause or contribute to any impairment of visibility'' in a Class I area to periodically submit SIP revisions to address such impairment. CAA section 169A(b)(2);[4] see also 40 CFR 51.308(b), (f) (establishing submission dates for iterative regional haze SIP revisions) (64 FR 35768, July 1, 1999). Under the CAA, each SIP submission must contain ''a long-term (ten to fifteen years) strategy for making reasonable progress toward meeting the national goal,'' CAA section 169A(b)(2)(B); the initial round of SIP submissions also had to address the statutory requirement that certain older, larger sources of visibility impairing pollutants install and operate the best available retrofit technology (BART). CAA section 169A(b)(2)(A); 40 CFR 51.308(d), (e). States' first regional haze SIPs were due by December 17, 2007, 40 CFR 51.308(b), with subsequent SIP submissions containing updated long-term strategies originally due July 31, 2018, and every ten years thereafter. (64 FR 35768, July 1, 1999) The EPA established in the 1999 RHR that all states either have Class I areas within their borders or ''contain sources whose emissions are reasonably anticipated to contribute to regional haze in a Class I area''; therefore, all states must submit regional haze SIPs.[5] *Id.* at 35721.

Much of the focus in the first implementation period of the regional haze program, which ran from 2007 through 2018, was on satisfying states' BART obligations. First implementation period SIPs were additionally required to contain long-term strategies for

[1] Areas statutorily designated as mandatory Class I Federal areas consist of national parks exceeding 6,000 acres, wilderness areas and national memorial parks exceeding 5,000 acres, and all international parks that were in existence on August 7, 1977. CAA section 162(a). There are 156 mandatory Class I areas. The list of areas to which the requirements of the visibility protection program apply is in 40 CFR part 81, subpart D.

[2] In addition to the generally applicable regional haze provisions at 40 CFR 51.308, the EPA also promulgated regulations specific to addressing regional haze visibility impairment in Class I areas on the Colorado Plateau at 40 CFR 51.309. The requirements under 40 CFR 51.309(d)(4) contain general requirements pertaining to stationary sources and market trading and allow states to adopt alternatives to the point source application of BART.

[3] There are several ways to measure the amount of visibility impairment, *i.e.,* haze. One such measurement is the deciview, which is the principal metric used by the RHR. Under many circumstances, a change in one deciview will be perceived by the human eye to be the same on both clear and hazy days. The deciview is unitless. It is proportional to the logarithm of the atmospheric extinction of light, which is the perceived dimming of light due to its being scattered and absorbed as it passes through the atmosphere. Atmospheric light extinction (b^{ext}) is a metric used for expressing visibility and is measured in inverse megameters (Mm^{-1}). The EPA's Guidance on Regional Haze State Implementation Plans for the Second Implementation Period (''2019 Guidance'') offers the flexibility for the use of light extinction in certain cases. Light extinction can be simpler to use in calculations than deciviews, since it is not a logarithmic function. See, *e.g.,* 2019 Guidance at 16, 19, *https://www.epa.gov/visibility/guidance-regional-haze-state-implementation-plans-second-implementation-period,* The EPA Office of Air Quality Planning and Standards, Research Triangle Park (August 20, 2019). The formula for the deciview is $10 \ln (b^{ext}/10\ Mm^{-1})$. 40 CFR 51.301.

[4] The RHR expresses the statutory requirement for states to submit plans addressing out-of-state Class I areas by providing that states must address visibility impairment ''in each mandatory Class I Federal area located outside the State that may be affected by emissions from within the State.'' 40 CFR 51.308(d), (f).

[5] In addition to each of the fifty states, the EPA also concluded that the Virgin Islands and District of Columbia must also submit regional haze SIPs because they either contain a Class I area or contain sources whose emissions are reasonably anticipated to contribute regional haze in a Class I area. See 40 CFR 51.300(b), (d)(3).

making reasonable progress toward the national visibility goal, of which BART is one component. The core required elements for the first implementation period SIPs (other than BART) are laid out in 40 CFR 51.308(d). Those provisions required that states containing Class I areas establish reasonable progress goals (RPGs) that are measured in deciviews and reflect the anticipated visibility conditions at the end of the implementation period including from implementation of states' long-term strategies. The first implementation period [6] RPGs were required to provide for an improvement in visibility for the most impaired days over the period of the implementation plan and ensure no degradation in visibility for the least impaired days over the same period. In establishing the RPGs for any Class I area in a state, the state was required to consider four statutory factors: the costs of compliance, the time necessary for compliance, the energy and non-air quality environmental impacts of compliance, and the remaining useful life of any potentially affected sources. CAA section 169A(g)(1); 40 CFR 51.308(d)(1).

States were also required to calculate baseline (using the five-year period of 2000–2004) and natural visibility conditions (*i.e.,* visibility conditions without anthropogenic visibility impairment) for each Class I area, and to calculate the linear rate of progress needed to attain natural visibility conditions, assuming a starting point of baseline visibility conditions in 2004 and ending with natural conditions in 2064. This linear interpolation is known as the uniform rate of progress (URP) and is used as a tracking metric to help states assess the amount of progress they are making towards the national visibility goal over time in each Class I area.[7] 40 CFR 51.308(d)(1)(i)(B), (d)(2). The 1999 RHR also provided that states' long-term strategies must include the ''enforceable emissions limitations, compliance schedules, and other measures as necessary to achieve the reasonable progress goals.'' 40 CFR 51.308(d)(3). In establishing their long-term strategies, states are required to consult with other states that also contribute to visibility impairment in a given Class I area and include all measures necessary to obtain their shares of the emission reductions needed to meet the RPGs. 40 CFR 51.308(d)(3)(i), (ii). Section 51.308(d) also contains seven additional factors states must consider in formulating their long-term strategies (see 40 CFR 51.308(d)(3)(v)), as well as provisions governing monitoring and other implementation plan requirements. 40 CFR 51.308(d)(4). Finally, the 1999 RHR required states to submit periodic progress reports—SIP revisions due every five years that contain information on states' implementation of their regional haze plans and an assessment of whether anything additional is needed to make reasonable progress, see 40 CFR 51.308(g), (h)—and to consult with the Federal Land Manager(s) [8] (FLMs) responsible for each Class I area according to the requirements in CAA section 169A(d) and 40 CFR 51.308(i).

On January 10, 2017, the EPA promulgated revisions to the RHR (82 FR 3078, January 10, 2017) that apply for the second and subsequent implementation periods. The 2017 rulemaking made several changes to the requirements for regional haze SIPs to clarify states' obligations and streamline certain regional haze requirements. The revisions to the regional haze program for the second and subsequent implementation periods focused on the requirement that states' SIPs contain long-term strategies for making reasonable progress towards the national visibility goal. The reasonable progress requirements as revised in the 2017 rulemaking (referred to here as the 2017 RHR Revisions) are codified at 40 CFR 51.308(f). Among other changes, the 2017 RHR Revisions adjusted the deadline for states to submit their second implementation period SIPs from July 31, 2018, to July 31, 2021, clarified the order of analysis and the relationship between RPGs and the long-term strategy, and focused on making visibility improvements on the days with the most *anthropogenic* visibility impairment, as opposed to the days with the most visibility impairment overall. The EPA also revised requirements of the visibility protection program related to periodic progress reports and FLM consultation. The specific requirements applicable to second implementation period regional haze SIP submissions are addressed in detail below.

The EPA provided guidance to the states for their second implementation period SIP submissions in the preamble to the 2017 RHR Revisions as well as in subsequent, stand-alone guidance documents. In August 2019, the EPA issued ''Guidance on Regional Haze State Implementation Plans for the Second Implementation Period'' (''2019 Guidance'').[9] On July 8, 2021, the EPA issued a memorandum containing ''Clarifications Regarding Regional Haze State Implementation Plans for the Second Implementation Period'' (''2021 Clarifications Memo'').[10] Additionally, the EPA further clarified the recommended procedures for processing ambient visibility data and optionally adjusting the URP to account for international anthropogenic and prescribed fire impacts in two technical guidance documents: the December 2018 ''Technical Guidance on Tracking Visibility Progress for the Second Implementation Period of the Regional Haze Program'' (''2018 Visibility Tracking Guidance''),[11] and the June 2020 ''Recommendation for the Use of Patched and Substituted Data and Clarification of Data Completeness for Tracking Visibility Progress for the Second Implementation Period of the Regional Haze Program'' and associated

[6] The EPA uses the terms ''implementation period'' and ''planning period'' interchangeably.

[7] The EPA established the URP framework in the 1999 RHR to provide ''an equitable analytical approach'' to assessing the rate of visibility improvement at Class I areas across the country. The starting point for the URP analysis is 2004 and the endpoint was calculated based on the amount of visibility improvement that was anticipated to result from implementation of existing CAA programs over the period from the mid-1990s to approximately 2005. Assuming this rate of progress would continue into the future, the EPA determined that natural visibility conditions would be reached in 60 years, or 2064 (60 years from the baseline starting point of 2004). However, the EPA did not establish 2064 as the year by which the national goal *must* be reached. 64 FR 35731–32. That is, the URP and the 2064 date are not enforceable targets but are rather tools that ''allow for analytical comparisons between the rate of progress that would be achieved by the state's chosen set of control measures and the URP. (82 FR 3078, 3084, January 10, 2017).

[8] The EPA's regulations define ''Federal Land Manager'' as ''the Secretary of the department with authority over the Federal Class I area (or the Secretary's designee) or, with respect to Roosevelt-Campobello International Park, the Chairman of the Roosevelt-Campobello International Park Commission.'' 40 CFR 51.301.

[9] Guidance on Regional Haze State Implementation Plans for the Second Implementation Period. *https://www.epa.gov/visibility/guidance-regional-haze-state-implementation-plans-second-implementation-period.* The EPA Office of Air Quality Planning and Standards, Research Triangle Park (August 20, 2019).

[10] Clarifications Regarding Regional Haze State Implementation Plans for the Second Implementation Period. *https://www.epa.gov/system/files/documents/2021-07/clarifications-regarding-regional-haze-state-implementation-plans-for-the-second-implementation-period.pdf.* The EPA Office of Air Quality Planning and Standards, Research Triangle Park (July 8, 2021).

[11] Technical Guidance on Tracking Visibility Progress for the Second Implementation Period of the Regional Haze Program. *https://www.epa.gov/visibility/technical-guidance-tracking-visibility-progress-second-implementation-period-regional.* The EPA Office of Air Quality Planning and Standards, Research Triangle Park (December 20, 2018).

Technical Addendum (''2020 Data Completeness Memo'').[12]

As explained in the 2021 Clarifications Memo, the EPA intends the second implementation period of the regional haze program to secure meaningful reductions in visibility impairing pollutants that build on the significant progress states have achieved to date. The Agency also recognizes that analyses regarding reasonable progress are state-specific and that, based on states' and sources' individual circumstances, what constitutes reasonable reductions in visibility impairing pollutants will vary from state-to-state. While there exist many opportunities for states to leverage both ongoing and upcoming emission reductions under other CAA programs, the Agency expects states to undertake rigorous reasonable progress analyses that identify further opportunities to advance the national visibility goal consistent with the statutory and regulatory requirements. See generally 2021 Clarifications Memo. This is consistent with Congress's determination that a visibility protection program is needed in addition to the CAA's National Ambient Air Quality Standards and Prevention of Significant Deterioration programs, as further emission reductions may be necessary to adequately protect visibility in Class I areas throughout the country.[13]

B. Roles of Agencies in Addressing Regional Haze

Because the air pollutants and pollution affecting visibility in Class I areas can be transported over long distances, successful implementation of the regional haze program requires long-term, regional coordination among multiple jurisdictions and agencies that have responsibility for Class I areas and the emissions that impact visibility in those areas. To address regional haze, states need to develop strategies in coordination with one another, considering the effect of emissions from one jurisdiction on the air quality in another. Five regional planning organizations (RPOs),[14] which include representation from state and Tribal governments, the EPA, and FLMs, were developed in the lead-up to the first implementation period to address regional haze. RPOs evaluate technical information to better understand how emissions from state and tribal land impact Class I areas across the country, pursue the development of regional strategies to reduce emissions of particulate matter and other pollutants leading to regional haze, and help states meet the consultation requirements of the RHR.

The Western Regional Air Partnership (WRAP), one of the five RPOs described in the previous paragraph, is a collaborative effort of State governments, local air agencies, Tribal governments, and various Federal agencies established to initiate and coordinate activities associated with the management of regional haze, visibility, and other air quality issues in the western United States. Members include the States of Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, Wyoming, and 28 Tribal governments.[15] The Federal partner members of WRAP are the EPA, U.S. National Parks Service (NPS), U.S. Fish and Wildlife Service (USFWS), U.S. Forest Service (USFS), and the U.S. Bureau of Land Management (BLM).

The WRAP membership formed a workgroup to develop a planning framework for state regional haze second implementation period SIPs. Based on emissions inventories and monitoring data supplied by its membership, WRAP produced a technical system to support regional modeling of visibility impacts at Class I areas across the West. The WRAP Technical Support System (TSS) consolidated air quality monitoring data, meteorological and receptor modeling data analyses, emissions inventories and projections, and gridded air quality/visibility regional modeling results. The WRAP TSS is accessible by member States and allows for the creation of maps, figures, and tables to export and use in SIP development. WRAP TSS also maintains the original source data for verification and further analysis. Utah relied on the WRAP TSS products and Interagency Monitoring of Protected Visual Environments (IMPROVE) data to determine visibility conditions and impacts at in-state and out-of-state Class I areas.

C. Background on Utah's First Implementation Period SIP

The CAA required that regional haze plans for the first implementation period include both a long-term strategy for making reasonable progress and BART requirements for certain older stationary sources, where applicable.[16] Utah submitted SIP revisions addressing regional haze for the first implementation period in September 2008 and May 2011. In 2012, the EPA partially approved and partially disapproved Utah's 2008 and 2011 SIP submissions, which included disapproval of NO_X and PM BART for subject-to-BART sources.[17]

In June 2015, Utah submitted a SIP revision to address the NO_X and PM BART determinations we had previously disapproved. In 2016, the EPA partially approved and partially disapproved the June 2015 SIP submission and promulgated a Federal implementation plan (FIP) for NO_X BART at Hunter Units 1, 2, and 3, and Huntington Units 1 and 2.[18]

In 2019, Utah submitted a new SIP revision for NO_X BART.[19] In November 2020, the EPA approved Utah's 2019 SIP submission and concurrently withdrew the 2016 FIP.[20]

Utah submitted its first implementation period progress report in 2016 to meet the requirements of 40 CFR 51.308(g) and (h). The progress report described progress toward the reasonable progress goals and contained a determination of adequacy of Utah's regional haze SIP to achieve established goals for visibility improvement and

[12] Recommendation for the Use of Patched and Substituted Data and Clarification of Data Completeness for Tracking Visibility Progress for the Second Implementation Period of the Regional Haze Program. *https://www.epa.gov/visibility/memo-and-technical-addendum-ambient-data-usage-and-completeness-regional-haze-program.* The EPA Office of Air Quality Planning and Standards, Research Triangle Park (June 3, 2020).

[13] See, *e.g.,* H.R. Rep. No. 95–294 at 205 (''In determining how to best remedy the growing visibility problem in these areas of great scenic importance, the committee realizes that as a matter of equity, the national ambient air quality standards cannot be revised to adequately protect visibility in all areas of the country.'') (''the mandatory Class I increments of [the PSD program] do not adequately protect visibility in Class I areas'').

[14] RPOs are sometimes also referred to as ''multi-jurisdictional organizations,'' or MJOs. For the purposes of this document, the terms RPO and MJO are synonymous.

[15] A full list of WRAP members is available at *https://www.westar.org/wrap-council-members/.*

[16] Requirements for regional haze SIPs for the first implementation period are contained in Clean Air Act section 169A(b)(2). The RHR provided two paths for states to address regional haze in the first implementation period. Most states must follow 40 CFR 51.308(d) and (e), which require states to perform individual point source BART determinations and evaluate the need for other control strategies. The requirements for addressing regional haze visibility impairment in the sixteen Class I areas covered by the Grand Canyon Visibility Transport Commission are found in 40 CFR 51.309(d)(4), which contains general requirements pertaining to stationary sources and market trading and allows states to adopt alternatives to the point source application of BART. See also 40 CFR 51.308(b). States with Class I areas covered by the Grand Canyon Visibility Transport Commission could choose to submit a regional haze SIP under 40 CFR 51.308 or 51.309.

[17] 77 FR 74355, 74357 (Dec. 14, 2012).

[18] 81 FR 43894, 43896, 43907 (July 5, 2016).

[19] On December 3, 2019, Utah submitted a supplement to the July 3, 2019 SIP submission that included an amendment to the monitoring, recordkeeping, and reporting requirements.

[20] 85 FR 75860 (Nov. 27, 2020).

emissions reductions. The EPA approved the progress report in 2020.[21]

D. Utah's Second Implementation Period SIP Submission

In accordance with CAA section 169A and the RHR at 40 CFR 51.308(f), on August 2, 2022, Utah made a SIP submission to the EPA to address the State's regional haze obligations for the second implementation period.[22] Prior to submission, Utah made its draft regional haze SIP available for public comment from May 1, 2022, to May 31, 2022, and held a public hearing on May 26, 2022. The public comments and Utah's responses are contained in the State's regional haze SIP submission and are available in the docket for this action.

Section IV of this document describes Utah's regional haze SIP submission, including the four-factor analyses conducted by certain sources that Utah identified as potential contributors to visibility impairment, and Utah's determinations of the emissions reduction measures necessary to make reasonable progress based on those analyses. The regional haze SIP submission also includes Utah's assessment of progress made since the first implementation period in reducing emissions of visibility impairing pollutants, as well as visibility progress at in-state and out-of-state Class I areas. Section IV also contains the EPA's evaluation of Utah's SIP submission against the requirements of the CAA and RHR (as described in section III. of this document). The entirety of Utah's regional haze SIP submission is included in the docket for this action.

We have also included a Technical Support Document (TSD) in the docket to provide technical information and analysis supporting our proposed action on the Utah regional haze SIP submission. The TSD includes our review of the WRAP analyses that Utah relied on during the State's regional haze second implementation period SIP development process.

III. Requirements for Regional Haze Plans for the Second Implementation Period

Under the CAA and the EPA's regulations, all 50 states, the District of Columbia, and the U.S. Virgin Islands are required to submit regional haze SIPs satisfying the applicable requirements for the second implementation period of the regional haze program by July 31, 2021. Each state's SIP must contain a long-term strategy for making reasonable progress toward meeting the national goal of remedying any existing and preventing any future anthropogenic visibility impairment in Class I areas. CAA section 169A(b)(2)(B). To this end, 40 CFR 51.308(f) lays out the process by which states determine what constitutes their long-term strategies, with the order of the requirements in § 51.308(f)(1) through (3) generally mirroring the order of the steps in the reasonable progress analysis[23] and (f)(4) through (6) containing additional, related requirements. Broadly speaking, a state first must identify the Class I areas within the state and determine the Class I areas outside the state in which visibility may be affected by emissions from the state. These are the Class I areas that must be addressed in the state's long-term strategy. See 40 CFR 51.308(f) introductory text, (f)(2). For each Class I area within its borders, a state must then calculate the baseline, current, and natural visibility conditions for that area, as well as the visibility improvement made to date and the URP. See 40 CFR 51.308(f)(1). Each state having a Class I area and/or emissions that may affect visibility in a Class I area must then develop a long-term strategy that includes the enforceable emission limitations, compliance schedules, and other measures that are necessary to make reasonable progress in such areas. A reasonable progress determination is based on applying the four factors in CAA section 169A(g)(1) to sources of visibility impairing pollutants that the state has selected to assess for controls for the second implementation period. Additionally, as further explained below, the RHR at 40 CFR 51.3108(f)(2)(iv) separately provides five ''additional factors''[24] that states must consider in developing their long-term strategies. See 40 CFR 51.308(f)(2). A state evaluates potential emission reduction measures for those selected sources and determines which are necessary to make reasonable progress. Those measures are then incorporated into the state's long-term strategy. After a state has developed its long-term strategy, it then establishes RPGs for each Class I area within its borders by modeling the visibility impacts of all reasonable progress controls at the end of the second implementation period, *i.e.,* in 2028, as well as the impacts of other requirements of the CAA. The RPGs include reasonable progress controls not only for sources in the state in which the Class I area is located, but also for sources in other states that contribute to visibility impairment in that area. The RPGs are then compared to the baseline visibility conditions and the URP to ensure that progress is being made towards the statutory goal of preventing any future and remedying any existing anthropogenic visibility impairment in Class I areas. 40 CFR 51.308(f)(2) and (3).

In addition to satisfying the requirements at 40 CFR 51.308(f) related to reasonable progress, the regional haze SIP revisions for the second implementation period must address the requirements in § 51.308(g)(1) through (5) pertaining to periodic reports describing progress towards the RPGs, 40 CFR 51.308(f)(5), as well as requirements for FLM consultation that apply to all visibility protection SIPs and SIP revisions. 40 CFR 51.308(i).

A state must submit its regional haze SIP and subsequent SIP revisions to the EPA according to the requirements applicable to all SIP revisions under the CAA and the EPA's regulations. See

[21] 85 FR 64050 (Oct. 9, 2020).

[22] Utah's regional haze SIP submission comprises several documents that are available in the docket for this action. The document titled ''Utah Regional Haze SIP Submittal 2022 v2'' is a PDF totaling 491 pages that Utah submitted to the EPA on August 2, 2022. This document includes both Utah's final regional haze SIP narrative (titled ''Utah State Implementation Plan, Regional Haze Second Implementation Period, Section XX.A'' and dated August 1, 2022) and the draft regional haze SIP that Utah proposed for public comment in May 2022 during its State public comment process. The EPA is not evaluating Utah's draft public comment version of the regional haze SIP. Therefore, for the reader's convenience, we have included a standalone document in the docket for this action titled ''Final SIP Only—Utah Regional Haze SIP Submittal 2022 v2.'' This document contains only the submittal letter, Legal Authority, Public Comments, Final Effective Rule, Final Effective Plans, and Certification portions of Utah's August 2, 2022 SIP submission. We created this document to help the public avoid confusion between the State's public comment draft SIP and final SIP. In this notice of proposed rulemaking, our references to page numbers in Utah's regional haze SIP submission are based on the internal pagination of the ''Utah State Implementation Plan, Regional Haze Second Implementation Period, Section XX.A'' dated August 1, 2022.

As part of its SIP submission, Utah also submitted a 704-page PDF titled ''Utah State Implementation Plan Appendices,'' which contains a collection of technical documents and communications. This PDF is also available in the docket for this action. Because many portions of the PDF are illegible due to poor quality, we have included a legible version of each individual document contained within the larger ''Utah State Implementation Plan Appendices'' PDF in the docket for this action. In this notice of proposed rulemaking, our references to page numbers in appendices to Utah's regional haze SIP submission are based on the internal pagination of the legible individual documents.

[23] The EPA explained in the 2017 RHR Revisions that we were adopting new regulatory language in 40 CFR 51.308(f) that, unlike the structure in § 51.308(d), ''tracked the actual planning sequence.'' 82 FR 3091.

[24] The five ''additional factors'' for consideration in § 51.308(f)(2)(iv) are distinct from the four factors listed in CAA section 169A(g)(1) and 40 CFR 51.308(f)(2)(i) that states must consider and apply to sources in determining reasonable progress.

CAA section 169A(b)(2); CAA section 110(a). Upon approval by the EPA, a SIP is enforceable by the Agency and the public under the CAA. If the EPA finds that a state fails to make a required SIP revision, or if the EPA finds that a state's SIP is incomplete or if it disapproves the SIP, the Agency must promulgate a FIP that satisfies the applicable requirements. CAA section 110(c)(1).

A. Identification of Class I Areas

The first step in developing a regional haze SIP is for a state to determine which Class I areas, in addition to those within its borders, ''may be affected'' by emissions from within the state. In the 1999 RHR, the EPA determined that all states contribute to visibility impairment in at least one Class I area (see 64 FR 35720–22), and explained that the statute and regulations lay out an ''extremely low triggering threshold'' for determining ''whether States should be required to engage in air quality planning and analysis as a prerequisite to determining the need for control of emissions from sources within their State.'' *Id.* at 35721.

A state must determine which Class I areas must be addressed by its SIP by evaluating the total emissions of visibility impairing pollutants from all sources within the state. While the RHR does not require this evaluation to be conducted in any particular manner, the EPA's 2019 Guidance provides recommendations for how such an assessment might be accomplished, including by, where appropriate, using the determinations previously made for the first implementation period. 2019 Guidance at 8–9. In addition, the determination of which Class I areas may be affected by a state's emissions is subject to the requirement in 40 CFR 51.308(f)(2)(iii) to ''document the technical basis, including modeling, monitoring, cost, engineering, and emissions information, on which the State is relying to determine the emission reduction measures that are necessary to make reasonable progress in each mandatory Class I Federal area it affects.''

B. Calculations of Baseline, Current, and Natural Visibility Conditions; Progress to Date; and the Uniform Rate of Progress

As part of assessing whether a SIP submission for the second implementation period is providing for reasonable progress towards the national visibility goal, the RHR contains requirements in § 51.308(f)(1) related to tracking visibility improvement over time. The requirements of this section apply only to states having Class I areas within their borders; the required calculations must be made for each such Class I area. The EPA's 2018 Visibility Tracking Guidance [25] provides recommendations to assist states in satisfying their obligations under § 51.308(f)(1); specifically, in developing information on baseline, current, and natural visibility conditions, and in making optional adjustments to the URP to account for the impacts of international anthropogenic emissions and prescribed fires. See 82 FR 3103–05.

The RHR requires tracking of visibility conditions on two sets of days: the clearest and the most impaired days. Visibility conditions for both sets of days are expressed as the average deciview index for the relevant five-year period (the period representing baseline or current visibility conditions). The RHR provides that the relevant sets of days for visibility tracking purposes are the 20% clearest (the 20% of monitored days in a calendar year with the lowest values of the deciview index) and 20% most impaired days (the 20% of monitored days in a calendar year with the highest amounts of anthropogenic visibility impairment).[26] 40 CFR 51.301. A state must calculate visibility conditions for both the 20% clearest and 20% most impaired days for the baseline period of 2000–2004 and the most recent five-year period for which visibility monitoring data are available (representing current visibility conditions). 40 CFR 51.308(f)(1)(i), (iii). States must also calculate natural visibility conditions for the clearest and most impaired days,[27] by estimating the conditions that would exist on those two sets of days absent anthropogenic visibility impairment. 40 CFR 51.308(f)(1)(ii). Using all these data, states must then calculate, for each Class I area, the amount of progress made since the baseline period (2000–2004) and how much improvement is left to achieve to reach natural visibility conditions.

Using the data for the set of most impaired days only, states must plot a line between visibility conditions in the baseline period and natural visibility conditions for each Class I area to determine the URP—the amount of visibility improvement, measured in deciviews, that would need to be achieved during each implementation period to achieve natural visibility conditions by the end of 2064. The URP is used in later steps of the reasonable progress analysis for informational purposes and to provide a non-enforceable benchmark against which to assess a Class I area's rate of visibility improvement.[28] Additionally, in the 2017 RHR Revisions, the EPA provided states the option of proposing to adjust the endpoint of the URP to account for impacts of anthropogenic sources outside the United States and/or impacts of certain types of wildland prescribed fires. These adjustments, which must be approved by the EPA, are intended to avoid any perception that states should compensate for impacts from international anthropogenic sources and to give states the flexibility to determine that limiting the use of wildland-prescribed fire is not necessary for reasonable progress. 82 FR 3107, footnote 116.

The EPA's 2018 Visibility Tracking Guidance can be used to help satisfy the 40 CFR 51.308(f)(1) requirements, including in developing information on baseline, current, and natural visibility conditions, and in making optional adjustments to the URP. In addition, the 2020 Data Completeness Memo provides recommendations on the data completeness language referenced in § 51.308(f)(1)(i) and provides updated natural conditions estimates for each Class I area.

C. Long-Term Strategy for Regional Haze

The core component of a regional haze SIP submission is a long-term strategy that addresses regional haze in each Class I area within a state's borders and each Class I area outside the state that may be affected by emissions from the state. The long-term strategy ''must include the enforceable emissions limitations, compliance schedules, and

[25] The 2018 Visibility Tracking Guidance references and relies on parts of the 2003 Tracking Guidance: ''Guidance for Tracking Progress Under the Regional Haze Rule,'' which can be found at *https://www.epa.gov/sites/default/files/2021-03/documents/tracking.pdf.*

[26] This document also refers to the 20% clearest and 20% most anthropogenically impaired days as the ''clearest'' and ''most impaired'' or ''most anthropogenically impaired'' days, respectively.

[27] The RHR at 40 CFR 51.308(f)(1)(ii) contains an error related to the requirement for calculating two sets of natural conditions values. The rule says ''most impaired days or the clearest days'' where it should say ''most impaired days and clearest days.'' This is an error that was intended to be corrected in the 2017 RHR Revisions but did not get corrected in the final rule language. This is supported by the preamble text at 82 FR 3098: ''In the final version of 40 CFR 51.308(f)(1)(ii), an occurrence of ''or'' has been corrected to ''and'' to indicate that natural visibility conditions for both the most impaired days and the clearest days must be based on available monitoring information.''

[28] Being on or below the URP is not a ''safe harbor''; *i.e.,* achieving the URP does not mean that a Class I area is making ''reasonable progress'' and does not relieve a state from using the four statutory factors to determine what level of control is needed to achieve such progress. See, *e.g.,* 82 FR 3093.

other measures that are necessary to make reasonable progress, as determined pursuant to (f)(2)(i) through (iv).'' 40 CFR 51.308(f)(2). The amount of progress that is ''reasonable progress'' is based on applying the four statutory factors in CAA section 169A(g)(1) in an evaluation of potential control options for sources of visibility impairing pollutants, which is referred to as a ''four-factor'' analysis. The outcome of that analysis is the emission reduction measures that a particular source or group of sources needs to implement to make reasonable progress towards the national visibility goal. See 40 CFR 51.308(f)(2)(i). Emission reduction measures that are necessary to make reasonable progress may be either new, additional control measures for a source, or they may be the existing emission reduction measures that a source is already implementing. See 2019 Guidance at 43; 2021 Clarifications Memo at 8–10. Such measures must be represented by ''enforceable emissions limitations, compliance schedules, and other measures'' (*i.e.,* any additional compliance tools) in a state's long-term strategy in its SIP. 40 CFR 51.308(f)(2).

Section 51.308(f)(2)(i) provides the requirements for the four-factor analysis. The first step of this analysis entails selecting the sources to be evaluated for emission reduction measures; to this end, the RHR requires states to consider ''major and minor stationary sources or groups of sources, mobile sources, and area sources'' of visibility impairing pollutants for potential four-factor control analysis. 40 CFR 51.308(f)(2)(i). A threshold question at this step is which visibility impairing pollutants will be analyzed. As the EPA previously explained, consistent with the first implementation period, the EPA generally expects that each state will analyze at least SO_2 and NO_X in selecting sources and determining control measures. See 2019 Guidance at 12; 2021 Clarifications Memo at 4. A state that chooses not to consider at least these two pollutants should demonstrate why such consideration would be unreasonable. 2021 Clarifications Memo at 4.

While states have the option to analyze *all* sources, the 2019 Guidance explains that ''an analysis of control measures is not required for every source in each implementation period,'' and that ''[s]electing a set of sources for analysis of control measures in each implementation period is . . . consistent with the Regional Haze Rule, which sets up an iterative planning process and anticipates that a state may not need to analyze control measures for all its sources in a given SIP revision.'' 2019 Guidance at 9. However, given that source selection is the basis of all subsequent control determinations, a reasonable source selection process ''should be designed and conducted to ensure that source selection results in a set of pollutants and sources the evaluation of which has the potential to meaningfully reduce their contributions to visibility impairment.'' 2021 Clarifications Memo at 3.

The EPA explained in the 2021 Clarifications Memo that each state has an obligation to submit a long-term strategy that addresses the regional haze visibility impairment that results from emissions from within that state. Thus, source selection should focus on the in-state contribution to visibility impairment and be designed to capture a meaningful portion of the state's total contribution to visibility impairment in Class I areas. A state should not decline to select its largest in-state sources on the basis that there are even larger out-of-state contributors. 2021 Clarifications Memo at 4.[29]

Thus, while states have discretion to choose any source selection methodology that is reasonable, whatever choices they make should be reasonably explained. To this end, 40 CFR 51.308(f)(2)(i) requires that a state's SIP submission include ''a description of the criteria it used to determine which sources or groups of sources it evaluated.'' The technical basis for source selection, which may include methods for quantifying potential visibility impacts such as emissions divided by distance metrics, trajectory analyses, residence time analyses, and/or photochemical modeling, must also be appropriately documented, as required by 40 CFR 51.308(f)(2)(iii).

Once a state has selected the set of sources, the next step is to determine the emissions reduction measures for those sources that are necessary to make reasonable progress for the second implementation period.[30] This is accomplished by considering the four factors—''the costs of compliance, the time necessary for compliance, and the energy and nonair quality environmental impacts of compliance, and the remaining useful life of any existing source subject to such requirements.'' CAA section 169A(g)(1). The EPA has explained that the four-factor analysis is an assessment of potential emission reduction measures (*i.e.,* control options) for sources; ''use of the terms 'compliance' and 'subject to such requirements' in section 169A(g)(1) strongly indicates that Congress intended the relevant determination to be the requirements with which sources would have to comply to satisfy the CAA's reasonable progress mandate.'' 82 FR 3091. Thus, for each source it has selected for four-factor analysis,[31] a state must consider a ''meaningful set'' of technically feasible control options for reducing emissions of visibility impairing pollutants. *Id.* at 3088. The 2019 Guidance provides that ''[a] state must reasonably pick and justify the measures that it will consider, recognizing that there is no statutory or regulatory requirement to consider all technically feasible measures or any particular measures. A range of technically feasible measures available to reduce emissions would be one way to justify a reasonable set.'' 2019 Guidance at 29.

The EPA's 2021 Clarifications Memo provides further guidance on what constitutes a reasonable set of control options for consideration: ''A reasonable four-factor analysis will consider the full range of potentially reasonable options for reducing emissions.'' 2021 Clarifications Memo at 7. In addition to add-on controls and other retrofits (*i.e.,* new emissions reduction measures for sources), the EPA explained that states should generally analyze efficiency improvements for sources' existing

[29] Similarly, in responding to comments on the 2017 RHR Revisions, the EPA explained that ''[a] state should not fail to address its many relatively low-impact sources merely because it only has such sources and another state has even more low-impact sources and/or some high impact sources.'' Responses to Comments on Protection of Visibility: Amendments to Requirements for State Plans; Proposed Rule (81 FR 26942, May 4, 2016) at 87–88.

[30] The CAA provides that ''[i]n determining reasonable progress there shall be taken into consideration'' the four statutory factors. CAA section 169A(g)(1). However, in addition to four-factor analyses for selected sources, groups of sources, or source categories, a state may also consider additional emission reduction measures for inclusion in its long-term strategy, *e.g.,* from other newly adopted, on-the-books, or on-the-way rules and measures for sources not selected for four-factor analysis for the second implementation period.

[31] ''Each source'' or ''particular source'' is used here as shorthand. While a source-specific analysis is one way of applying the four factors, neither the statute nor the RHR requires states to evaluate individual sources. Rather, states have ''the flexibility to conduct four-factor analyses for specific sources, groups of sources or even entire source categories, depending on state policy preferences and the specific circumstances of each state.'' 82 FR 3088. However, not all approaches to grouping sources for four-factor analysis are necessarily reasonable; the reasonableness of grouping sources in any particular instance will depend on the circumstances and the manner in which grouping is conducted. If it is feasible to establish and enforce different requirements for sources or subgroups of sources, and if relevant factors can be quantified for those sources or subgroups, then states should make a separate reasonable progress determination for each source or subgroup. 2021 Clarifications Memo at 7–8.

measures as control options in their four-factor analyses, as in many cases such improvements are reasonable given that they typically involve only additional operation and maintenance costs. Additionally, the 2021 Clarifications Memo provides that states that have assumed a higher emissions rate than a source has achieved or could potentially achieve using its existing measures should also consider lower emissions rates as potential control options. That is, a state should consider a source's recent actual and projected emission rates to determine if it could reasonably attain lower emission rates with its existing measures. If so, the state should analyze the lower emission rate as a control option for reducing emissions. 2021 Clarifications Memo at 7. The EPA's recommendations to analyze potential efficiency improvements and achievable lower emission rates apply to both sources that have been selected for four-factor analysis and those that have forgone a four-factor analysis on the basis of existing ''effective controls.'' See 2021 Clarifications Memo at 5, 10.

After identifying a reasonable set of potential control options for the sources it has selected, a state then collects information on the four factors with regard to each option identified. The EPA has also explained that, in addition to the four statutory factors, states have flexibility under the CAA and RHR to reasonably consider visibility benefits as an additional factor alongside the four statutory factors.[32] The 2019 Guidance provides recommendations for the types of information that can be used to characterize the four factors (with or without visibility), as well as ways in which states might reasonably consider and balance that information to determine which of the potential control options is necessary to make reasonable progress. See 2019 Guidance at 30–36. The 2021 Clarifications Memo contains further guidance on how states can reasonably consider modeled visibility impacts or benefits in the context of a four-factor analysis. 2021 Clarifications Memo at 12–13, 14–15. Specifically, the EPA explained that while visibility can reasonably be used when comparing and choosing between multiple reasonable control options, it should not be used to summarily reject controls that are reasonable given the four statutory factors. 2021 Clarifications Memo at 13. Ultimately, while states have discretion to reasonably weigh the factors and to determine what level of control is needed, § 51.308(f)(2)(i) provides that a state ''must include in its implementation plan a description of . . . how the four factors were taken into consideration in selecting the measure for inclusion in its long-term strategy.''

As explained above, § 51.308(f)(2)(i) requires states to determine the emission reduction measures for sources that are necessary to make reasonable progress by considering the four factors. Pursuant to § 51.308(f)(2), measures that are necessary to make reasonable progress towards the national visibility goal must be included in a state's long-term strategy and in its SIP.[33] If the outcome of a four-factor analysis is a new, additional emission reduction measure for a source, that new measure is necessary to make reasonable progress towards remedying existing anthropogenic visibility impairment and must be included in the SIP. If the outcome of a four-factor analysis is that no new measures are reasonable for a source, continued implementation of the source's existing measures is generally necessary to prevent future emission increases and thus to make reasonable progress towards the second part of the national visibility goal: preventing future anthropogenic visibility impairment. See CAA section 169A(a)(1). That is, when the result of a four-factor analysis is that no new measures are necessary to make reasonable progress, the source's existing measures are generally necessary to make reasonable progress and must be included in the SIP. However, there may be circumstances in which a state can demonstrate that a source's existing measures are *not* necessary to make reasonable progress. Specifically, if a state can demonstrate that a source will continue to implement its existing measures and will not increase its emissions rate, it may not be necessary to have those measures in the long-term strategy to prevent future emissions increases and future visibility impairment. The EPA's 2021 Clarifications Memo provides further explanation and guidance on how states may demonstrate that a source's existing measures are not necessary to make reasonable progress. See 2021 Clarifications Memo at 8–10. If the state can make such a demonstration, it need not include a source's existing measures in the long-term strategy or its SIP.

As with source selection, the characterization of information on each of the factors is also subject to the documentation requirement in § 51.308(f)(2)(iii). The reasonable progress analysis, including source selection, information gathering, characterization of the four statutory factors (and potentially visibility), balancing of the four factors, and selection of the emission reduction measures that represent reasonable progress, is a technically complex exercise, but also a flexible one that provides states with bounded discretion to design and implement approaches appropriate to their circumstances. Given this flexibility, § 51.308(f)(2)(iii) plays an important function in requiring a state to document the technical basis for its decision making so that the public and the EPA can comprehend and evaluate the information and analysis the state relied upon to determine what emission reduction measures must be in place to make reasonable progress. The technical documentation must include the modeling, monitoring, cost, engineering, and emissions information on which the state relied to determine the measures necessary to make reasonable progress. This documentation requirement can be met through the provision of and reliance on technical analyses developed through a regional planning process, so long as that process and its output has been approved by all state participants. In addition to the explicit regulatory requirement to document the technical basis of their reasonable progress determinations, states are also subject to the general principle that those determinations must be reasonably moored to the statute.[34] That is, a state's decisions about the emission reduction measures that are necessary to make reasonable progress must be consistent with the statutory goal of remedying existing and preventing future visibility impairment.

[32] *See, e.g.,* Responses to Comments on Protection of Visibility: Amendments to Requirements for State Plans; Proposed Rule (81 FR 26942, May 4, 2016), Docket ID No. EPA–HQ–OAR–2015–0531, U.S. Environmental Protection Agency at 186; 2019 Guidance at 36–37.

[33] States may choose to, but are not required to, include measures in their long-term strategies beyond just the emission reduction measures that are necessary for reasonable progress. See 2021 Clarifications Memo at 16. For example, states with smoke management programs may choose to submit their smoke management plans to the EPA for inclusion in their SIPs but are not required to do so. See, *e.g.,* 82 FR 3108–09 (requirement to consider smoke management practices and smoke management programs under 40 CFR 51.308(f)(2)(iv) does not require states to adopt such practices or programs into their SIPs, although they may elect to do so).

[34] *See Arizona ex rel. Darwin* v. *U.S. EPA,* 815 F.3d 519, 531 (9th Cir. 2016); *Nebraska* v. *EPA,* 812 F.3d 662, 668 (8th Cir. 2016); *North Dakota* v. *EPA,* 730 F.3d 750, 761 (8th Cir. 2013); *Oklahoma* v. *EPA,* 723 F.3d 1201, 1206, 1208–10 (10th Cir. 2013); cf. *Nat'l Parks Conservation Ass'n* v. *EPA,* 803 F.3d 151, 165 (3d Cir. 2015); *Alaska Dep't of Envtl. Conservation* v. *EPA,* 540 U.S. 461, 485, 490 (2004).

The four statutory factors (and potentially visibility) are used to determine what emission reduction measures for selected sources must be included in a state's long-term strategy for making reasonable progress. Additionally, the RHR at 40 CFR 51.3108(f)(2)(iv) separately provides five ''additional factors'' [35] that states must consider in developing their long-term strategies: (1) Emission reductions due to ongoing air pollution control programs, including measures to address reasonably attributable visibility impairment; (2) measures to reduce the impacts of construction activities; (3) source retirement and replacement schedules; (4) basic smoke management practices for prescribed fire used for agricultural and wildland vegetation management purposes and smoke management programs; and (5) the anticipated net effect on visibility due to projected changes in point, area, and mobile source emissions over the period addressed by the long-term strategy. The 2019 Guidance provides that a state may satisfy this requirement by considering these additional factors in the process of selecting sources for four-factor analysis, when performing that analysis, or both, and that not every one of the additional factors needs to be considered at the same stage of the process. See 2019 Guidance at 21. The EPA provided further guidance on the five additional factors in the 2021 Clarifications Memo, explaining that a state should generally not reject cost-effective and otherwise reasonable controls merely because there have been emission reductions since the first implementation period owing to other ongoing air pollution control programs or merely because visibility is otherwise projected to improve at Class I areas. Additionally, states generally should not rely on these additional factors to summarily assert that the state has already made sufficient progress and, therefore, no sources need to be selected or no new controls are needed regardless of the outcome of four-factor analyses. 2021 Clarifications Memo at 13.

Because the air pollution that causes regional haze crosses state boundaries, § 51.308(f)(2)(ii) requires a state to consult with other states that also have emissions that are reasonably anticipated to contribute to visibility impairment in a given Class I area. Consultation allows for each state that impacts visibility in an area to share whatever technical information, analyses, and control determinations may be necessary to develop coordinated emission management strategies. This coordination may be managed through inter- and intra-RPO consultation and the development of regional emissions strategies; additional consultations between states outside of RPO processes may also occur. If a state, pursuant to consultation, agrees that certain measures (*e.g.,* a certain emission limitation) are necessary to make reasonable progress at a Class I area, it must include those measures in its SIP. 40 CFR 51.308(f)(2)(ii)(A). Additionally, the RHR requires that states that contribute to visibility impairment at the same Class I area consider the emission reduction measures the other contributing states have identified as being necessary to make reasonable progress for their own sources. 40 CFR 51.308(f)(2)(ii)(B). If a state has been asked to consider or adopt certain emission reduction measures, but ultimately determines those measures are not necessary to make reasonable progress, that state must document in its SIP the actions taken to resolve the disagreement. 40 CFR 51.308(f)(2)(ii)(C). The EPA will consider the technical information and explanations presented by the submitting state and the state with which it disagrees when considering whether to approve the state's SIP. See *id.;* 2019 Guidance at 53. Under all circumstances, a state must document in its SIP submission all substantive consultations with other contributing states. 40 CFR 51.308(f)(2)(ii)(C).

D. Reasonable Progress Goals

Reasonable progress goals ''measure the progress that is projected to be achieved by the control measures states have determined are necessary to make reasonable progress based on a four-factor analysis.'' 82 FR 3091. Their primary purpose is to assist the public and the EPA in assessing the reasonableness of states' long-term strategies for making reasonable progress towards the national visibility goal for Class I areas within the state. See 40 CFR 51.308(f)(3)(iii) and (iv). States in which Class I areas are located must establish two RPGs, both in deciviews—one representing visibility conditions on the clearest days and one representing visibility on the most anthropogenically impaired days—for each area within their borders. 40 CFR 51.308(f)(3)(i). The two RPGs are intended to reflect the projected impacts, on the two sets of days, of the emission reduction measures the state with the Class I area, as well as all other contributing states, have included in their long-term strategies for the second implementation period.[36] The RPGs also account for the projected impacts of implementing other CAA requirements, including non-SIP based requirements. Because RPGs are the modeled result of the measures in states' long-term strategies (as well as other measures required under the CAA), they cannot be determined before states have conducted their four-factor analyses and determined the control measures that are necessary to make reasonable progress. See 2021 Clarifications Memo at 6.

For the second implementation period, the RPGs are set for 2028. Reasonable progress goals are not enforceable targets, 40 CFR 51.308(f)(3)(iii); rather, they ''provide a way for the states to check the projected outcome of the [long-term strategy] against the goals for visibility improvement.'' 2019 Guidance at 46. While states are not legally obligated to achieve the visibility conditions described in their RPGs, § 51.308(f)(3)(i) requires that ''[t]he long-term strategy and the reasonable progress goals must provide for an improvement in visibility for the most impaired days since the baseline period and ensure no degradation in visibility for the clearest days since the baseline period.'' Thus, states are required to have emission reduction measures in their long-term strategies that are projected to achieve visibility conditions on the most impaired days that are better than the baseline period and that show no degradation on the clearest days compared to the clearest days from the baseline period. The baseline period for the purpose of this comparison is the baseline visibility condition—the annual average visibility condition for the period 2000–2004. See 40 CFR 51.308(f)(1)(i), 82 FR 3097–98.

So that RPGs may also serve as a metric for assessing the amount of progress a state is making towards the national visibility goal, the RHR requires states with Class I areas to compare the 2028 RPG for the most

[35] The five ''additional factors'' for consideration in § 51.308(f)(2)(iv) are distinct from the four factors listed in CAA section 169A(g)(1) and 40 CFR 51.308(f)(2)(i) that states must consider and apply to sources in determining reasonable progress.

[36] RPGs are intended to reflect the projected impacts of the measures all contributing states include in their long-term strategies. However, due to the timing of analyses, control determinations by other states, and other on-going emissions changes, a particular state's RPGs may not reflect all control measures and emissions reductions that are expected to occur by the end of the implementation period. The 2019 Guidance provides recommendations for addressing the timing of RPG calculations when states are developing their long-term strategies on disparate schedules, as well as for adjusting RPGs using a post-modeling approach. 2019 Guidance at 47–48.

impaired days to the corresponding point on the URP line (representing visibility conditions in 2028 if visibility were to improve at a linear rate from conditions in the baseline period of 2000–2004 to natural visibility conditions in 2064). If the most impaired days RPG in 2028 is above the URP (*i.e.,* if visibility conditions are improving more slowly than the rate described by the URP), each state that contributes to visibility impairment in the Class I area must demonstrate, based on the four-factor analysis required under 40 CFR 51.308(f)(2)(i), that no additional emission reduction measures would be reasonable to include in its long-term strategy. 40 CFR 51.308(f)(3)(ii). To this end, 40 CFR 51.308(f)(3)(ii) requires that each state contributing to visibility impairment in a Class I area that is projected to improve more slowly than the URP provide ''a robust demonstration, including documenting the criteria used to determine which sources or groups [of] sources were evaluated and how the four factors required by paragraph (f)(2)(i) were taken into consideration in selecting the measures for inclusion in its long-term strategy.'' The 2019 Guidance provides suggestions about how such a ''robust demonstration'' might be conducted. See 2019 Guidance at 50–51.

The 2017 RHR, 2019 Guidance, and 2021 Clarifications Memo also explain that projecting an RPG that is on or below the URP based on only on-the-books and/or on-the-way control measures (*i.e.,* control measures already required or anticipated before the four-factor analysis is conducted) is not a ''safe harbor'' from the CAA's and RHR's requirement that all states must conduct a four-factor analysis to determine what emission reduction measures constitute reasonable progress. The URP is a planning metric used to gauge the amount of progress made thus far and the amount left before reaching natural visibility conditions. However, the URP is not based on consideration of the four statutory factors and therefore cannot answer the question of whether the amount of progress being made in any particular implementation period is ''reasonable progress.'' See 82 FR 3093, 3099–3100; 2019 Guidance at 22; 2021 Clarifications Memo at 15–16.

E. Monitoring Strategy and Other State Implementation Plan Requirements

Section 51.308(f)(6) requires states to have certain strategies and elements in place for assessing and reporting on visibility. Individual requirements under this section apply either to states with Class I areas within their borders, states with no Class I areas but that are reasonably anticipated to cause or contribute to visibility impairment in any Class I area, or both. A state with Class I areas within its borders must submit with its SIP revision a monitoring strategy for measuring, characterizing, and reporting regional haze visibility impairment that is representative of all Class I areas within the state. SIP revisions for such states must also provide for the establishment of any additional monitoring sites or equipment needed to assess visibility conditions in Class I areas, as well as reporting of all visibility monitoring data to the EPA at least annually. Compliance with the monitoring strategy requirement may be met through a state's participation in the Interagency Monitoring of Protected Visual Environments (IMPROVE) monitoring network, which is used to measure visibility impairment caused by air pollution at the 156 Class I areas covered by the visibility program. 40 CFR 51.308(f)(6) introductory text and (f)(6)(i) and (iv). The IMPROVE monitoring data is used to determine the 20% most anthropogenically impaired and 20% clearest sets of days every year at each Class I area and tracks visibility impairment over time.

All states' SIPs must provide for procedures by which monitoring data and other information are used to determine the contribution of emissions from within the state to regional haze visibility impairment in affected Class I areas. 40 CFR 51.308(f)(6)(ii) and (iii). Section 51.308(f)(6)(v) further requires that all states' SIPs provide for a statewide inventory of emissions of pollutants that are reasonably anticipated to cause or contribute to visibility impairment in any Class I area; the inventory must include emissions for the most recent year for which data are available and estimates of future projected emissions. States must also include commitments to update their inventories periodically. The inventories themselves do not need to be included as elements in the SIP and are not subject to the EPA's review as part of the Agency's evaluation of a SIP revision.[37] All states' SIPs must also provide for any other elements, including reporting, recordkeeping, and other measures, that are necessary for states to assess and report on visibility. 40 CFR 51.308(f)(6)(vi). Per the 2019 Guidance, a state may note in its regional haze SIP that its compliance with the Air Emissions Reporting Rule (AERR) in 40 CFR part 51, subpart A, satisfies the requirement to provide for an emissions inventory for the most recent year for which data are available. To satisfy the requirement to provide estimates of future projected emissions, a state may explain in its SIP how projected emissions were developed for use in establishing RPGs for its own and nearby Class I areas.[38]

Separate from the requirements related to monitoring for regional haze purposes under 40 CFR 51.308(f)(6), the RHR also contains a requirement at § 51.308(f)(4) related to any additional monitoring that may be needed to address visibility impairment in Class I areas from a single source or a small group of sources. This is called ''reasonably attributable visibility impairment.'' [39] Under this provision, if the EPA or the FLM of an affected Class I area has advised a state that additional monitoring is needed to assess reasonably attributable visibility impairment, the state must include in its SIP revision for the second implementation period an appropriate strategy for evaluating such impairment.

F. Requirements for Periodic Reports Describing Progress Towards the Reasonable Progress Goals

Section 51.308(f)(5) requires a state's regional haze SIP revision to address the requirements of 40 CFR 51.308(g)(1) through (5) so that the plan revision due in 2021 will serve also as a progress report addressing the period since submission of the progress report for the first implementation period. The regional haze progress report requirement is designed to inform the public and the EPA about a state's implementation of its existing long-term strategy and whether such implementation is in fact resulting in the expected visibility improvement. See 81 FR 26942, 26950 (May 4, 2016); 82 FR 3119 (January 10, 2017). To this end, every state's SIP revision for the second implementation period is required to describe the status of implementation of all measures included in the state's long-term strategy, including BART and reasonable progress emission reduction measures from the first implementation period, and the resulting emissions reductions. 40 CFR 51.308(g)(1) and (2).

A core component of the progress report requirements is an assessment of changes in visibility conditions on the clearest and most impaired days. For

[37] See ''Step 8: Additional requirements for regional haze SIPs'' in the 2019 Guidance at 55.

[38] *Id.*

[39] The EPA's visibility protection regulations define ''reasonably attributable visibility impairment'' as ''visibility impairment that is caused by the emission of air pollutants from one, or a small number of sources.'' 40 CFR 51.301.

second implementation period progress reports, § 51.308(g)(3) requires states with Class I areas within their borders to first determine current visibility conditions for each area on the most impaired and clearest days, 40 CFR 51.308(g)(3)(i), and then to calculate the difference between those current conditions and baseline (2000–2004) visibility conditions to assess progress made to date. See 40 CFR 51.308(g)(3)(ii). States must also assess the changes in visibility impairment for the most impaired and clearest days since they submitted their first implementation period progress reports. See 40 CFR 51.308(g)(3)(iii), (f)(5). Since different states submitted their first implementation period progress reports at different times, the starting point for this assessment will vary state by state.

Similarly, states must provide analyses tracking the change in emissions of pollutants contributing to visibility impairment from all sources and activities within the state over the period since they submitted their first implementation period progress reports. See 40 CFR 51.308(g)(4), (f)(5). Changes in emissions should be identified by the type of source or activity. Section 51.308(g)(5) also addresses changes in emissions since the period addressed by the previous progress report and requires states' SIP revisions to include an assessment of any significant changes in anthropogenic emissions within or outside the state. This assessment must explain whether these changes in emissions were anticipated and whether they have limited or impeded progress in reducing emissions and improving visibility relative to what the state projected based on its long-term strategy for the first implementation period.

G. Requirements for State and Federal Land Manager Coordination

CAA section 169A(d) requires that before a state holds a public hearing on a proposed regional haze SIP revision, it must consult with the appropriate FLM or FLMs; pursuant to that consultation, the state must include a summary of the FLMs' conclusions and recommendations in the notice to the public. Consistent with this statutory requirement, the RHR also requires that states ''provide the [FLM] with an opportunity for consultation, in person and at a point early enough in the State's policy analyses of its long-term strategy emission reduction obligation so that information and recommendations provided by the [FLM] can meaningfully inform the State's decisions on the long-term strategy.'' 40 CFR 51.308(i)(2). Consultation that occurs 120 days prior to any public hearing or public comment opportunity will be deemed ''early enough,'' but the RHR provides that in any event the opportunity for consultation must be provided at least 60 days before a public hearing or comment opportunity. This consultation must include the opportunity for the FLMs to discuss their assessment of visibility impairment in any Class I area and their recommendations on the development and implementation of strategies to address such impairment. 40 CFR 51.308(i)(2). For the EPA to evaluate whether FLM consultation meeting the requirements of the RHR has occurred, the SIP submission should include documentation of the timing and content of such consultation. The SIP revision submitted to the EPA must also describe how the state addressed any comments provided by the FLMs. 40 CFR 51.308(i)(3). Finally, a SIP revision must provide procedures for continuing consultation between the state and FLMs regarding the state's visibility protection program, including development and review of SIP revisions, five-year progress reports, and the implementation of other programs having the potential to contribute to impairment of visibility in Class I areas. 40 CFR 51.308(i)(4).

IV. The EPA's Evaluation of Utah's Regional Haze SIP Submission for the Second Implementation Period

In section IV of this document, we summarize Utah's regional haze SIP submission and evaluate it against the requirements of the CAA and RHR for the second implementation period of the regional haze program.

A. Identification of Class I Areas

Section 169A(b)(2) of the CAA requires each state in which any Class I area is located or ''the emissions from which may reasonably be anticipated to cause or contribute to any impairment of visibility'' in a Class I area to have a plan for making reasonable progress toward the national visibility goal. The RHR implements this statutory requirement at 40 CFR 51.308(f) introductory text, which provides that each state's plan ''must address regional haze in each mandatory Class I Federal area located within the State and in each mandatory Class I Federal area located outside the State that may be affected by emissions from within the State,'' and paragraph (f)(2), which requires each state's plan to include a long-term strategy that addresses regional haze in such Class I areas.

The EPA explained in the 1999 RHR preamble that the CAA section 169A(b)(2) requirement that states submit SIPs to address visibility impairment establishes ''an 'extremely low triggering threshold' in determining which States should submit SIPs for regional haze.'' 64 FR 35721. In concluding that each of the contiguous 48 states and the District of Columbia meet this threshold,[40] the EPA relied on ''a large body of evidence demonstrat[ing] that long-range transport of fine PM contributes to regional haze,'' *Id.,* including modeling studies that ''preliminarily demonstrated that each State not having a Class I area had emissions contributing to impairment in at least one downwind Class I area.'' *Id.* at 35722. In addition to the technical evidence supporting a conclusion that each state contributes to *existing* visibility impairment, the EPA also explained that the second half of the national visibility goal—preventing *future* visibility impairment—requires having a framework in place to address future growth in visibility impairing emissions and makes it inappropriate to ''establish criteria for excluding States or geographic areas from consideration as potential contributors to regional haze visibility impairment.'' *Id.* at 35721. Thus, the EPA concluded that the agency's ''statutory authority and the scientific evidence are sufficient to require all States to develop regional haze SIPs to ensure the prevention of any future impairment of visibility, and to conduct further analyses to determine whether additional control measures are needed to ensure reasonable progress in remedying existing impairment in downwind Class I areas.'' *Id.* at 35722. The EPA's 2017 revisions to the RHR did not disturb this conclusion. *See* 82 FR 3094.

Utah has five mandatory Federal Class I Federal areas within its borders: Arches National Park, Bryce Canyon National Park, Canyonlands National Park, Capitol Reef National Park, and Zion National Park. These five mandatory Class I areas are located within the physiographic region known as the Colorado Plateau.[41]

[40] The EPA determined that ''there is more than sufficient evidence to support our conclusion that emissions from each of the 48 contiguous states and the District of Columba may reasonably be anticipated to cause or contribute to visibility impairment in a Class I area.'' 64 FR 35721. Hawaii, Alaska, and the U.S. Virgin Islands must also submit regional haze SIPs because they contain Class I areas.

[41] National Park Service, ''Colorado Plateaus Province,'' *https://www.nps.gov/articles/coloradoplateaus.htm* (last accessed July 24, 2024); National Park Service, ''Colorado Plateaus Province: U.S. Physiographic Province Map,'' *https://www.nps.gov/common/uploads/photogallery/nri/park/geology/49177B13-1DD8-B71B-0BF120CC77B24F45/49177B13-1DD8-B71B-*

Additionally, based on its review of WRAP's source apportionment modeling [42] and weighted emission potential (WEP) analysis,[43] Utah identified at least 45 Class I areas outside the State where visibility may be affected by Utah sources.[44] Those Class I areas are listed in tables 26 and 30 of the TSD for this action.

B. Calculations of Baseline, Current, and Natural Visibility Conditions; Progress to Date; and the Uniform Rate of Progress

Section 51.308(f)(1) requires states to determine the following for ''each mandatory Class I Federal area located within the State'': baseline visibility conditions for the most impaired and clearest days, natural visibility conditions for the most impaired and clearest days, progress to date for the most impaired and clearest days, the differences between current visibility conditions and natural visibility conditions, and the URP. This section also provides the option for states to propose adjustments to the URP line for a Class I area to account for visibility impacts from anthropogenic sources outside the United States and/or the impacts from wildland prescribed fires that were conducted for certain, specified objectives. 40 CFR 51.308(f)(1)(vi)(B).

Utah relied on WRAP TSS products and IMPROVE data to determine visibility conditions at its five in-state Class I areas.[45] Utah elected not to adjust the URP for those Class I areas for this implementation period.

Visibility impairing particulate species at Class I areas are measured and analyzed through the IMPROVE network. The IMPROVE network uses identical sampling equipment and analysis protocols to ensure that IMPROVE sites and their respective data are directly comparable. Samples collected from IMPROVE monitors provide estimations of light extinction [46] to monitor visibility conditions and compare long-term visibility trends at Class I areas. IMPROVE monitoring data is also used to determine the 20% most anthropogenically impaired days (most impaired days) and the 20% clearest days every year at each Class I area and to track visibility impairment over time, as required by the RHR.

Due to their remote nature and/or close proximity to each other, several Class I areas throughout the United States share a common IMPROVE monitoring station.[47] Four IMPROVE monitors measure visibility conditions at the five Class I areas in Utah. The IMPROVE monitor at Canyonlands National Park has been determined to also be representative of the visibility conditions at Arches National Park.

Utah determined that Arches National Park and Canyonlands National Park (CANY1) have 2000–2004 baseline visibility conditions of 3.75 deciviews on the 20% clearest days and 8.79 deciviews on the 20% most impaired days. Utah calculated an estimated natural background visibility of 1.05 deciviews on the 20% clearest days and 4.13 deciviews on the 20% most impaired days. The current visibility conditions, which are based on 2014–2018 monitoring data, were 2.20 deciviews on the clearest days and 6.76 deciviews on the most impaired days, which are 1.15 deciviews and 2.63 deciviews greater than natural conditions on the respective sets of days. The five-year rolling average IMPROVE data from 2014–2018 indicate that Arches National Park and Canyonlands National Park are 0.9 deciviews below the 2018 URP of 7.7 deciviews.[48]

Utah determined that Bryce Canyon National Park (BRCA1) has 2000–2004 baseline visibility conditions of 2.77 deciviews on the 20% clearest days and 8.42 deciviews on the 20% most impaired days. Utah calculated an estimated natural background visibility of 0.57 deciviews on the 20% clearest days and 4.08 deciviews on the 20% most impaired days. The current visibility conditions, which are based on 2014–2018 monitoring data, were 1.46 deciviews on the clearest days and 6.60 deciviews on the most impaired days, which are 0.89 deciviews and 2.52 deciviews greater than natural conditions on the respective sets of days. The five-year rolling average IMPROVE data from 2014–2018 indicates that Bryce Canyon National Park is 0.8 deciviews below the 2018 URP of 7.4 deciviews.[49]

Utah determined that Capitol Reef National Park (CAPI1) has 2000–2004 baseline visibility conditions of 4.10 deciviews on the 20% clearest days and 8.78 deciviews on the 20% most impaired days. Utah calculated an estimated natural background visibility of 1.28 deciviews on the 20% clearest days and 4.00 deciviews on the 20% most impaired days. The current visibility conditions, which are based on 2014–2018 monitoring data, were 2.38 deciviews on the clearest days and 7.18 deciviews on the most impaired days, which are 1.10 deciviews and 3.18 deciviews greater than natural conditions on the respective sets of days. The five-year rolling average IMPROVE data from 2014–2018 indicate that Capitol Reef National Park is 0.5 deciviews below the 2018 URP of 7.7 deciviews.[50]

Utah determined that Zion National Park (ZICA1) has 2000–2004 baseline visibility conditions of 4.48 deciviews on the 20% clearest days and 10.40 deciviews on the 20% most impaired days. Utah calculated an estimated natural background visibility of 1.83 deciviews on the 20% clearest days and 5.26 deciviews on the 20% most

0BF120CC77B24F45-large.jpg (last accessed July 24, 2024).

[42] For its source apportionment modeling, WRAP used its emissions inventories, including projections of future emissions, as inputs to a photochemical model that assesses light extinction (*i.e.,* visibility impairment) at each Class I area. More detail on source apportionment modeling is provided in the EPA's TSD for this action.

[43] WEP is a quantitative method of analyzing how pollutants from particular sources may be transported to Class I areas. More detail on WRAP's WEP analysis is provided in the EPA's TSD for this action.

[44] Utah tabulated 30 IMPROVE receptor sites located in adjacent neighboring states in tables 21–22 of the Utah regional haze SIP submission at 77–78. These sites represent 45 Class I areas. We have identified numerous other Class I areas, beyond Utah's neighboring states, that are impacted by light extinction originating from the NO_X and SO_2 emissions of Utah's sources. The forty-five out-of-state Class I areas identified for sulfate light extinction impacts represent 29% of all mandatory Class I areas, and the 45 out-of-state Class I areas identified for nitrate impacts also represent 29% of all mandatory Class I areas. At a minimum, the emissions sources identified by Utah impact visibility in more than a quarter of the 156 mandatory Class I areas nationwide.

[45] Utah regional haze SIP submission, chapter 4 and section 8.C.

[46] The primary cause of regional haze is light extinction by particulate matter (PM). For purposes of regional haze, light extinction is estimated from measurements of PM and its chemical components (sulfate, nitrate, organic mass by carbon (OMC), light absorbing carbon, fine soil, sea salt, and coarse material), assumptions about relative humidity at the monitoring site, and the use of a commonly accepted algorithm. These estimates of light extinction are logarithmically transformed to deciviews (dv). The PM measurements used in the regional haze program are collected by the IMPROVE monitoring network.

[47] Utah identified several Class I areas where visibility is affected by emissions from Utah sources, some of which share a single IMPROVE monitoring station. The IMPROVE Site IDs for these Class I areas are: BRID1 for Bridger Wilderness and Fitzpatrick Wilderness; CANY1 for Arches National Park and Canyonlands National Park; GUMO1 for Carlsbad Caverns National Park and Guadalupe Mountains National Park; NOAB1 for North Absaroka Wilderness and Washakie Wilderness; SULA1 for Anaconda-Pintler Wilderness and Selway-Bitterroot Wilderness; WEMI1 for Black Canyon of the Gunnison National Monument, La Garita Wilderness, and Weminuche Wilderness; WHPE1 for Pecos Wilderness and Wheeler Peak Wilderness; and WHRI1 for Eagles Nest Wilderness, Flat Tops Wilderness, Maroon Bells-Snowmass Wilderness, and West Elk Wilderness.

[48] Utah regional haze SIP submission at 175 (figure 66).

[49] *Id.* at 174 (figure 65).

[50] *Id.* at 176 (figure 67).

impaired days. The current visibility conditions, which are based on 2014–2018 monitoring data, were 3.86 deciviews on the clearest days and 8.75 deciviews on the most impaired days, which are 2.03 deciviews and 3.49 deciviews greater than natural conditions on the respective sets of days. The five-year rolling average IMPROVE data from 2014–2018 indicate that Zion National Park is 0.5 deciviews below the 2018 URP of 9.2 deciviews.[51]

Based on this information, which is provided in chapter 4 and section 8.C. of Utah's regional haze SIP submission, the EPA finds that the visibility condition calculations for all five Utah Class I areas meet the requirements of 40 CFR 51.308(f)(1). For this reason, we propose to approve the portions of Utah's regional haze SIP submission relating to 40 CFR 51.308(f)(1): calculations of baseline, current, and natural visibility conditions; progress to date; and the URP.

C. Long-Term Strategy

Each state having a Class I area within its borders or emissions that may affect visibility in any Class I area outside the state must develop a long-term strategy for making reasonable progress towards the national visibility goal for each impacted Class I area. CAA section 169A(b)(2)(B). As explained in the Background section of this document, reasonable progress is achieved when all states contributing to visibility impairment in a Class I area are implementing the measures determined—through application of the four statutory factors to sources of visibility impairing pollutants—to be necessary to make reasonable progress. 40 CFR 51.308(f)(2)(i). Each state's long-term strategy must include the enforceable emission limitations, compliance schedules, and other measures that are necessary to make reasonable progress. 40 CFR 51.308(f)(2). All new (*i.e.,* additional) measures that are the outcome of four-factor analyses are necessary to make reasonable progress and must be in the long-term strategy. If the outcome of a four-factor analysis and other measures necessary to make reasonable progress is that no new measures are reasonable for a source, that source's existing measures are necessary to make reasonable progress, unless the state can demonstrate that the source will continue to implement those measures and will not increase its emission rate. Existing measures that are necessary to make reasonable progress must also be in the long-term strategy. In developing its long-term strategies, a state must also consider the five additional factors in 40 CFR 51.308(f)(2)(iv). As part of its reasonable progress determinations, the state must describe the criteria used to determine which sources or group of sources were evaluated (*i.e.,* subjected to four-factor analysis) for the second implementation period and how the four factors were taken into consideration in selecting the emission reduction measures for inclusion in the long-term strategy. 40 CFR 51.308(f)(2)(iii).

1. Summary of Utah's Four-Factor Analyses and Long-Term Strategy to Make Reasonable Progress

a. Selection of Sources for Four-Factor Analysis

Utah relied on Q/d analysis to identify sources for consideration of the four statutory factors.[52] Q/d analysis results in a value that represents the ratio of an individual source's annual emissions of light-impairing emission precursors (NO_X, SO_2, and PM_{10}) in combined tons (''Q'') divided by the distance in kilometers (''d'') between the source and the nearest Class I area. The larger the Q/d value, the greater the source's expected effect on visibility impairment in each associated Class I area. Utah chose a Q/d source selection threshold of ≥ 6, meaning that any source with a Q/d value greater than or equal to 6 was ''screened in'' to the pool of sources Utah believed were appropriate for consideration of the four factors.[53] Following Q/d analysis, Utah then conducted a ''secondary screening to review the initial pool of Q/d-qualifying sources to account for factors such as recent emissions controls required by other air quality programs, facility closures, federal preemptions on state controls, etc.'' [54]

Utah's Q/d analysis initially screened in ten sources: Ash Grove Leamington Cement Plant, CCI Paradox Lisbon Natural Gas Plant, Graymont Cricket Mountain Plant, Intermountain Power Authority Intermountain Power Plant,[55] Kennecott Utah Copper Mine & Copperton Concentrator, Kennecott Utah Copper Power Plant Lab Tailings Impoundment, PacifiCorp Hunter Power Plant, PacifiCorp Huntington Power Plant, Sunnyside Cogeneration Facility, and US Magnesium Rowley Plant. Utah determined that four of those sources, Intermountain Power Authority Intermountain Power Plant; CCI Paradox Lisbon Natural Gas Plant; Kennecott Utah Copper Mine & Copperton Concentrator; and Kennecott Utah Copper Power Plant Lab Tailings Impoundment, were not required to perform four-factor analyses based on current emissions, 2028 projected emissions, or plant closures or emission control measures that were put in place after the 2014 base year inventory (which was used to determine sources' Q in the Q/d analysis).[56] Table 1 lists Utah's reasoning for not requiring four-factor analyses for the four sources.

BILLING CODE 6560–50–P

[51] *Id.* at 177 (figure 68).

[52] Utah regional haze SIP submission at 14, 99.

[53] Utah used 2014 NEI emissions data to select sources for four-factor analysis. Utah performed an additional analysis using 2017 NEI emissions data at the EPA's request; no additional sources were captured.

[54] Utah regional haze SIP submission at 77.

[55] Intermountain Power Plant is also referred to as Intermountain Generation Station or Intermountain.

[56] Utah regional haze SIP submission at 100, 102.

Table 1. Sources Utah Excluded from Consideration of the Four Factors and Utah's Justification

Secondary Screening: Sources Excluded from Four-Factor Analysis	
Source	Utah's Justification for Exclusion
Intermountain Power Plant	Enforceable retirement by December 31, 2027, at Part H.23.c.[57]
CCI Paradox Lisbon Natural Gas Plant	SO_2 emissions in 2014 and 2015 were anomalously high, Q/d recalculation shows the source is below the Q/d threshold, and recent actual SO_2 emissions are a fraction of the 2014 levels used in the original Q/d calculation.
Kennecott Mine & Concentrator	Original Q/d value was calculated with non-road and mine truck emissions; recalculation is below the Q/d threshold. The source is controlled under the Salt Lake Serious Nonattainment Area $PM_{2.5}$ SIP.
Kennecott Power Plant	Units 1-3 were decommissioned under the Salt Lake Serious Nonattainment Area $PM_{2.5}$ SIP. Unit 4 was controlled under a selective catalytic reduction (SCR)-derived NO_X rate-based emission limit from the same $PM_{2.5}$ SIP, but is now decommissioned.[58]

Figure 1 below shows the six sources Utah selected for four-factor analysis and their proximity to the State's Class I areas. We have also included CCI Paradox Lisbon Natural Gas Plant in figure 1 because, as detailed in section IV.C.2.b. of this document, we find that Utah unreasonably excluded this source from four-factor analysis.

Figure 1. Sources Required to Perform Four-Factor Analysis and CCI Paradox Lisbon Natural Gas Plant

[57] Utah initially selected Intermountain power plant to perform a four-factor analysis based on the plant's combined Q/d value of 193.6 (based on 2014 NO_X, SO_2, and PM_{10} emissions totaling 28,946 tpy). Utah regional haze SIP submission 100. However, due to the source's planned retirement, Intermountain power plant's emissions were not included in the 2028OTBa2 emissions inventory projection or in WRAP's source apportionment modeling. Intermountain power plant's combined NO_X, SO_2, and PM_{10} emissions, in 2022, were 10,174 tpy. 2022 EPA Emission Inventory System. By magnitude of emissions, in 2022, Intermountain power plant was the sixth highest emitter of NO_X(behind Hunter power plant, the fifth highest emitter) and the 127th highest emitter of SO_2 in the United States. EPA Clean Air Markets Program Data; TSD at 11-12, Table 7. Intermountain power plant is further discussed in sections IV.C.2.c and IV.C.2.f. of this document.

[58] Utah regional haze SIP submission at 104–05 and appendix G.

Figure 1. Sources Required to Perform Four-Factor Analysis and CCI Paradox Lisbon Natural Gas Plant

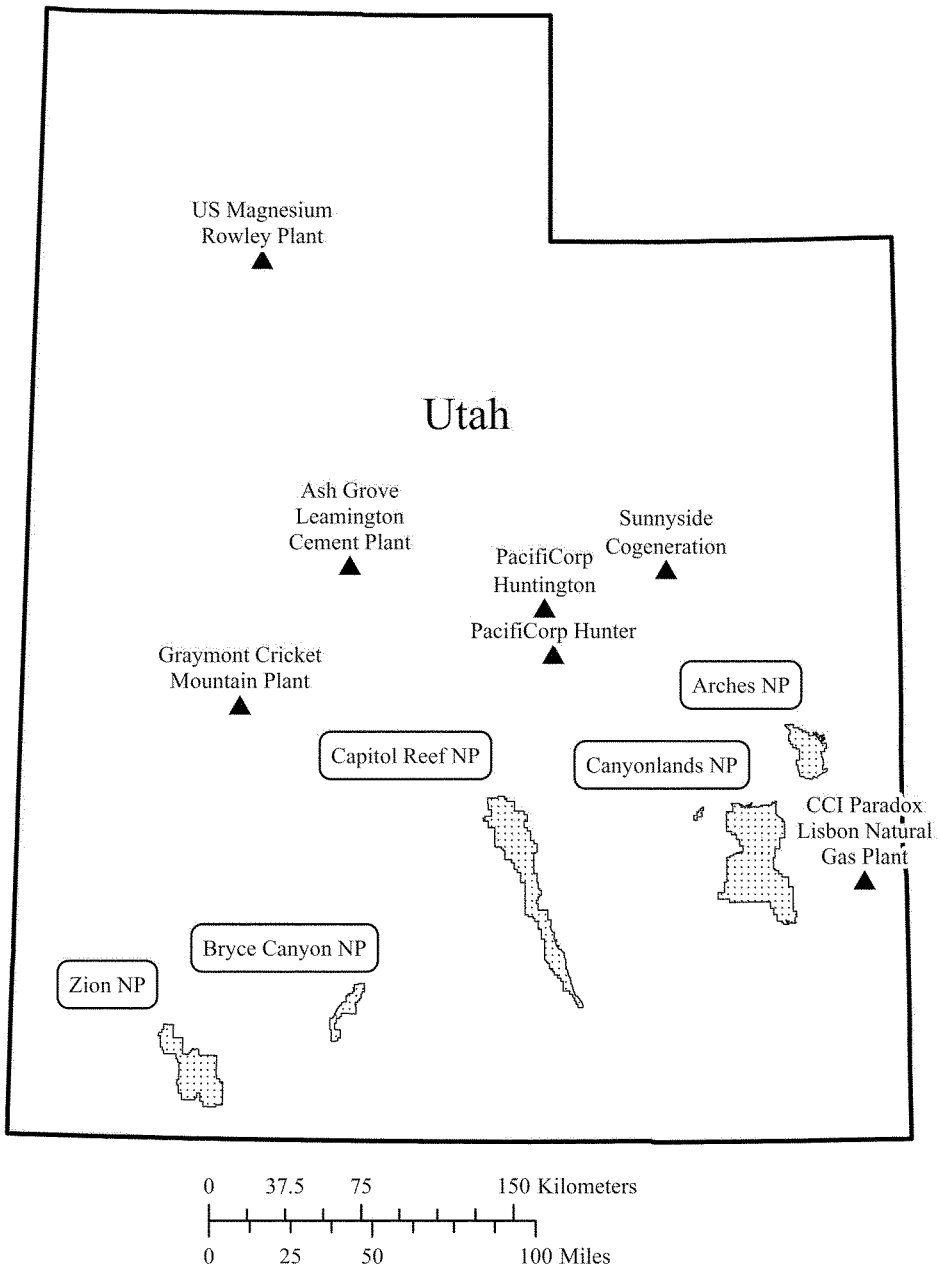


Table 2 tabulates the Q/d values associated with each source that Utah selected for four-factor analysis, as well as CCI Paradox Lisbon Natural Gas Plant. Q/d values were calculated by Utah and WRAP.[59] Q/d values are not listed for out-of-state Class I areas located more than 400 kilometers from a selected source, as those Class I areas fell outside WRAP's and Utah's analysis threshold.[60]

[59] See WRAP_Threshold_Analysis.xlsm in the docket.

[60] The WRAP and Utah Q/d methodology did not calculate Q/d values for any source located at a distance greater than 400 kilometers from a Class I area.

Table 2. Q/d Values for Total NO_X, SO_2, and PM_{10} Emissions of Sources Selected for Four-Factor Analysis and CCI Paradox Lisbon Natural Gas Plant

State	IMPROVE Site ID	Class I Area	Ash Grove Leamington Cement Plant	CCI Paradox Lisbon Natural Gas Plant	Graymont Cricket Mtn. Plant	PacifiCorp Hunter Power Plant	PacifiCorp Huntington Power Plant	Sunnyside Cogeneration	US Magnesium Rowley Plant
			Q/d Values for Class I Areas Within 400 kms						
UT	CANY1	Arches National Park	4	14	4	135	76	15	6
UT	BRCA1	Bryce Canyon National Park	4	3	8	86	49	6	6
UT	CANY1	Canyonlands National Park	4	21	5	153	80	12	6
UT	CAPI1	Capitol Reef National Park	7	5	9	216	106	11	7
UT	ZICA1	Zion National Park	4	2	7	63	37	5	6
AZ	GRCA2	Grand Canyon NP	3	3	-	62	36	5	-
AZ	PEFO1	Petrified Forest NP	-	2	-	-	-	-	-
CO	GRSA1	Great Sand Dunes NM	-	2	-	-	-	-	-
CO	MEVE1	Mesa Verde NP	-	6	-	54	32	5	-
CO	MOZI1	Mount Zirkel Wilderness	-	2	-	41	26	5	-
CO	ROMO1	Rocky Mountain NP	-	2	-	-	-	4	-
CO	WEMI1	Black Canyon of the Gunnison NM	2	6	-	57	34	6	-
CO	WEMI1	La Garita Wilderness	-	4	-	45	27	5	-
CO	WEMI1	Weminuche Wilderness	-	5	-	49	29	5	-

CO	WHRI1	Eagles Nest Wilderness	-	3	-	41	26	4	-
CO	WHRI1	Flat Tops Wilderness	-	3	-	52	33	6	-
CO	WHRI1	Maroon Bells-Snowmass Wilderness	-	4	-	49	30	5	-
CO	WHRI1	West Elk Wilderness	-	4	-	52	32	6	-
ID	CRMO1	Craters of the Moon NM	-	-	-	-	-	-	8
ID	SAWT1	Sawtooth Wilderness	-	-	-	-	-	-	6
NM	SAPE1	San Pedro Parks Wilderness	-	2	-	-	-	-	-
NM	WHPE1	Pecos Wilderness	-	2	-	-	-	-	-
NM	WHPE1	Wheeler Peak Wilderness	-	2	-	-	-	-	-
NV	JARB1	Jarbridge Wilderness	3	-	3	-	-	-	9
WY	BRID1	Bridger Wilderness	-	-	-	-	26	4	6
WY	BRID1	Fitzpatrick Wilderness	-	-	-	-	-	4	6
WY	NOAB1	Washakie Wilderness	-	-	-	-	-	-	5
WY	YELL2	Grand Teton NP	-	-	-	-	-	-	6
WY	YELL2	Teton Wilderness	-	-	-	-	-	-	6
WY	YELL2	Yellowstone NP	-	-	-	-	-	-	6

BILLING CODE 6560–50–C

Utah also compared the sources it selected through Q/d analysis to WRAP's Weighted Emissions Potential (WEP) analysis, which was released after Utah selected its sources. WEP is a quantitative method of analyzing the contribution of visibility impairing pollutants from individual sources to visibility impairment at individual Class I areas. WEP values are calculated by overlaying extinction weighted residence time with the future projected emissions of light extinction precursors to predict which sources may have the highest contribution potential to affect visibility at Class I areas on the 20% most impaired days. In other words, WEP is an analytical method that can identify significant emission sources that are upwind from a particular Class I area.[61] Based on its review of WEP results, Utah determined that its selection of sources for four-factor analysis sufficiently captured point sources that have the potential to affect visibility at in-state and out-of-state Class I areas.[62]

b. Four-Factor Analyses

Each of the six sources that Utah selected through Q/d analysis prepared and submitted a four-factor analysis to the State. Utah provided each source with the State's evaluation of its four-factor analysis and received responses and other information submittals from each source.[63] Chapter 7.C of Utah's regional haze SIP submission describes

[61] WEP is calculated by overlaying extinction weighted residence time results with 2028OTBa2 emissions of light extinction precursors (*i.e.,* NO_X emissions for ammonium nitrate light extinction and SO_2 emissions for ammonium sulfate light extinction). Extinction weighted residence time is calculated by weighting Hybrid Single-Particle Lagrangian Integrated Trajectory (HYSPLIT) back trajectories by the actual observed light extinction at IMPROVE sites on each Most Impaired Day. The results are then normalized by the sum of the WEP for the total anthropogenic emissions. WEP results include percentages of the total for nitrates and sulfates and the rankings by Class I areas. WRAP, ''WEP/AOI Analysis for western U.S. Class I Areas,'' *https://views.cira.colostate.edu/tssv2/WEP-AOI/* (last accessed July 24, 2024).

[62] Utah regional haze SIP submission at 108.

[63] *Id.* at 14.

the sources' four-factor analyses, Utah's evaluations, the sources' responses and corrections, and Utah's conclusions.

i. Ash Grove Leamington Cement Plant [64]

Ash Grove Leamington Cement Plant is a cement manufacturing plant in Leamington, Utah. The facility has a combined Q/d value of 6.9; the nearest Class I area is Capitol Reef National Park at 134 kilometers away. Existing controls at the Leamington Cement Plant are low-NO_X burners (LNB), selective non-catalytic reduction (SNCR), and a federally enforceable NO_X emission rate of 2.8 lbs/ton clinker (30-day rolling average). Ash Grove identified six potential emission control technologies. It determined four of them to be technically infeasible; the remaining two are already installed at the plant. The results of Ash Grove's analysis are shown in table 3.

Table 3. Ash Grove Leamington Cement Plant: Summary of Four-Factor Analysis Controls

Ash Grove Leamington Cement Plant: Four-Factor Analysis Control Options					
Unit	Control Option	Pollutant	Technically Feasible	Emissions Reduction (tpy)	Cost Effectiveness ($/ton)
Kiln 1	Fuel Substitution	SO_2	No	N/A	N/A
Kiln 1	Wet Scrubbing	SO_2	No	N/A	N/A
Kiln 1	Semi-Wet/Dry Scrubbing	SO_2	No	N/A	N/A
Kiln 1	Low-NO_X Burners	NO_X	Yes (already installed)	N/A	N/A
Kiln 1	SCR	NO_X	No	N/A	N/A
Kiln 1	SNCR	NO_X	Yes (already installed)	N/A	N/A

In its review of Ash Grove's submission, Utah noted that Ash Grove could have evaluated more efficient or upgraded versions of LNB or SNCR.[65] Ash Grove responded that it was ''not aware of any changes that could be made to achieve a higher level of control with the system.'' [66]

Utah concluded that the Leamington Cement Plant is adequately controlled and that no additional emission reduction measures are required in the regional haze second implementation period. The State determined that the source's existing SNCR controls and emissions limits are necessary for reasonable progress.[67]

ii. Graymont Cricket Mountain Plant [68]

The Graymont Cricket Mountain Plant is a lime processing plant with five rotary lime kilns located in rural Millard County, Utah. The facility has a combined Q/d value of 9; the nearest Class I area is Capitol Reef National Park at 130.8 kilometers away. Existing controls at the Cricket Mountain Plant are low-NO_X burners and baghouses at each kiln.

Given Cricket Mountain's low SO_2 emissions, Utah did not require Graymont to conduct a four-factor analysis for SO_2 controls. The facility's SO_2 Q/d values at Capitol Reef National Park and SO_2 emissions data are shown in table 4.

[64] The four-factor analyses for this facility are contained in the Utah regional haze SIP submission at 132–34 and appendix C.1.A.

[65] Utah regional haze SIP submission, appendix C.1.B. at 7.

[66] Utah regional haze SIP submission, appendix C.1.C at 2.

[67] Utah regional haze SIP submission at 178.

[68] The four-factor analyses for this facility are contained in the Utah regional haze SIP submission at 134–138, 179, and appendices C.2.A and C.2.C.

Table 4. Graymont Cricket Mountain SO_2 Emissions Data and SO_2-specific Q/d Values for Capitol Reef National Park

Year	SO_2 Emissions (tpy)	SO_2 Q/d
2008	36.72	0.28
2009	15.36	0.12
2010	15.36	0.12
2011	23.60	0.18
2012	45.81	0.35
2013	61.01	0.47
2014	40.80	0.31
2015	20.46	0.16
2016	22.32	0.17
2017	17.51	0.13
2018	26.02	0.20
2019	30.45	0.23
2020	10.40	0.08
2021	7.44	0.06
2022	17.12	0.13

Graymont identified several potential NO_X control technologies for the Cricket Mountain Plant. It conducted a four-factor analysis for SNCR, although it considered that technology to be infeasible at the facility. Utah requested that Graymont also consider two additional control options: fuel switching (use of alternative fuels instead of coal) and alternative production techniques (use of vertical lime kilns instead of long horizontal kilns). The results of Graymont's analysis are shown in table 5.

Table 5. Graymont Cricket Mountain Plant: Summary of Four-Factor Analysis Controls

Graymont Cricket Mountain Plant: Four-Factor Analysis Control Options Considered					
Unit	Control Option	Pollutant	Technically Feasible	Emissions Reduction (tpy)[1]	Cost Effectiveness ($/ton)[1]
Kilns 1-5	Reduce Peak Flame Zone Temperature	NO_X	No	N/A	N/A
Kilns 1-5	Low NO_X Burners	NO_X	Yes (already installed)	N/A	N/A
Kilns 1-5	Proper Kiln Operation	NO_X	Yes (already operating)	N/A	N/A
Kilns 1-5	Preheater Kiln Design	NO_X	Yes (already operating)	N/A	N/A
Kilns 1-5	SCR	NO_X	No	N/A	N/A
Kiln 1	SNCR	NO_X	No	13.7	$19,519
Kiln 2	SNCR	NO_X	No	22.8	$14,130
Kiln 3	SNCR	NO_X	No	10.2	$24,191
Kiln 4	SNCR	NO_X	No	14.6	$18,695
Kiln 5	SNCR	NO_X	No	70.6	$11,270
Kilns 1-5	Alternative Fuels	NO_X	No	N/A	N/A
Kilns 1-5	Vertical Kiln Technology	NO_X	No	N/A	N/A

[1] Emissions reductions and cost-effectiveness values for SNCR are based on table 2 in appendix C.2.C of the Utah regional haze SIP submission.

Utah identified several errors with Graymont's analysis and requested that it further evaluate SNCR. Graymont submitted additional analyses to support its contention that SNCR is not cost-effective or technically feasible due to potential proprietary costs and associated cost per ton.[69] Graymont also found that fuel switching to natural gas would not be feasible, as natural gas with the Btu values required for lime production is not currently available to the facility and would require construction of extensive infrastructure and process modifications to connect to the nearest natural gas pipeline. Finally, Graymont found replacement of its existing kilns with vertical lime kilns to be infeasible because it would require demolition of the existing kilns and plant infrastructure and construction of a new plant.

Utah ultimately concluded that additional controls are not required for reasonable progress at the Cricket Mountain Plant based on their cost/ton and the potential proprietary costs of SNCR technology for the kilns. The State determined that the facility's existing control measures and emissions limits are necessary for reasonable progress during the second implementation period.[70]

iii. PacifiCorp Hunter and PacifiCorp Huntington [71]

Utah selected two electric generating units (EGUs) operated by PacifiCorp for four-factor analysis: PacifiCorp Hunter and PacifiCorp Huntington. Hunter is a 1,455 megawatt (MW) coal-fired steam EGU consisting of three units. It is located near Castle Dale in Emery County, Utah. Hunter has a combined Q/d value of 216.1, and the nearest Class I area is Capitol Reef National Park at 74.9 kilometers away. Huntington is a 960 MW coal-fired steam EGU consisting of two units. It is located in

[69] Utah regional haze SIP submission at 137–48 and appendix C.2.C.

[70] Utah regional haze SIP submission at 179.

[71] The four-factor analyses for these facilities are contained in the Utah regional haze SIP submission at 138–164, 179, and appendices C.3.A, C.3.C, and C.3.D.

Huntington, Utah. Huntington has a combined Q/d value of 105.5, and the nearest Class I area is Capitol Reef National Park at 95.8 kilometers away. Although Hunter and Huntington are entirely separate facilities, Utah's regional haze SIP submission and PacifiCorp's supporting documentation analyzed Hunter and Huntington alongside each other. Therefore, we address these two facilities together in this document.

Both Hunter and Huntington operate existing emissions controls, although neither have post-combustion NO_X controls. Hunter Units 1 and 2 are equipped with LNB/separated overfire air (SOFA) for NO_X control, baghouses for PM control, and wet flue-gas desulfurization (FGD) scrubbers for SO_2 control. Hunter Unit 3 has LNB/SOFA for NO_X control, baghouse for PM control, and FGD scrubber for SO_2 control. Huntington Units 1 and 2 have LNB/SOFA for NO_X control, fabric filter baghouses for PM control, and FGD scrubbers for SO_2 control.

In its four-factor analyses for NO_X controls[72] at the two facilities, PacifiCorp evaluated three options: SCR, SNCR, and ''Reasonable Progress Emission Limits'' (RPELs). PacifiCorp's proposed RPELs were plantwide (*i.e.,* not unit-specific) combined (NO_X+SO_2) annual emission limits that PacifiCorp proposed to replace the facilities' permitted existing plantwide applicability limits (PALs), which feature separate PALs for NO_X and SO_2. PacifiCorp proposed an RPEL of 17,773 tpy for Hunter and an RPEL of 10,491 tpy for Huntington. It asserted that these RPELs would reduce emissions compared to the plants' most restrictive existing permits.

Based on its calculated cost/ton values for all three control options, PacifiCorp argued that SCR and SNCR at Hunter and Huntington were not cost-effective. It urged Utah to select the RPELs for inclusion in the State's long-term strategy based on a balance of the four statutory factors.

Utah identified several deficiencies in PacifiCorp's cost calculations and requested that PacifiCorp ''expand its analysis of mitigating factors, excessive capital costs, alternative solutions, and other costs in order to justify the removal of either SNCR and/or SCR as viable control options.''[73] Utah also determined that PacifiCorp's proposed RPELs were ''lacking'' because they would not achieve any actual reductions in emissions given that the facilities have consistently operated well below their permitted PALs.[74] Following PacifiCorp's submission of additional information, Utah rejected the proposed RPELs, concluding they could not be effectively compared against the cost/ton values for physical controls (SNCR and SCR).

PacifiCorp provided updated cost/ton values for SCR and SNCR at Hunter and Huntington, which Utah accepted. Depending on the unit, those values ranged from $5,417/ton to $6,579/ton for SNCR and $4,401/ton to $6,533/ton for SCR,[75] as shown in tables 6 and 7. PacifiCorp's cost/ton calculations were based on the plants' average utilization levels (in the form of the units' heat input, expressed as million British thermal units (MMBtu)/year) during the 2015–2019 period.[76] To determine cost/ton values for SNCR and SCR, PacifiCorp first multiplied heat inputs for each unit by an emission rate (which varied based on the SCR, SNCR, and ''no additional controls'' scenarios) to calculate each unit's emission levels under the three control scenarios. Each control scenario yielded a different level of NO_X emissions. The total annual cost of each control was then divided by its associated emission reductions (in tons/year) to arrive at a cost-effectiveness metric of dollars per ton of NO_X emissions reduced for each unit at the plants. Tables 6 and 7 also show the NO_X emissions reductions that SNCR and SCR post-combustion controls would achieve relative to the plants' average actual emissions during the 2015–2019 period.[77]

Table 6. NO_X Post-Combustion Control Cost-Effectiveness at Hunter

Hunter: Control Cost-Effectiveness and NO_X Removal (tpy) for SNCR and SCR					
Unit	SNCR and SCR Baseline Emissions Assumption[1]	Tons NO_X Removed (SNCR)[2]	SNCR $/ton	Tons NO_X Removed (SCR)[2]	SCR $/ton
Unit 1	2,842	568	$6,536	2,130	$6,533
Unit 2	2,902	580	$6,469	2,149	$6,488
Unit 3	4,359	872	$5,417	3,579	$4,401
Total	10,103	2,020	-	7,858	-

[1] 2015-2019 average actual emissions. See 2021-08-31 PAC Response Att B.xlsx in the docket for this action.

[2] Relative to 2015-2019 average actual emissions.

[72] Aside from the RPELs, PacifiCorp did not evaluate any additional SO_2 controls on the basis that the units are already effectively controlled. Utah ultimately agreed with that conclusion.

[73] Utah regional haze SIP submission, appendix C.3.B. at 8.

[74] *Id.* at 9.

[75] Utah regional haze SIP submission at 147; appendix C.3.C., attachment B.

[76] Utah regional haze SIP submission at 147.

[77] To calculate the NO_X emissions reductions, we consulted appendix C.3.C. of Utah's regional haze SIP submission. We determined the tons of NO_X removed shown in tables 6 and 7 by subtracting each unit's NO_X emissions (in tons per year) listed in the ''SNCR Emissions'' and ''SCR Emissions'' tables in Attachment B in appendix C.3.C. from the corresponding units' NO_X emissions (in tons per year) listed in the ''SNCR and SCR Baseline Emissions'' table in Attachment B.

Table 7. NO_X Post-Combustion Control Cost-Effectiveness at Huntington

Huntington: Control Cost-Effectiveness and NO_X Removal (tpy) for SNCR and SCR					
Unit	SNCR and SCR Baseline Emissions Assumption[1]	Tons NO_X Removed (SNCR)[2]	SNCR $/ton	Tons NO_X Removed (SCR)[2]	SCR $/ton
Unit 1	2,968	594	$6,431	2,266	$5,979
Unit 2	2,825	565	$6,579	2,146	$6,294
Total	5,793	1,159	-	4,412	-

[1] 2015-2019 average actual emissions. See 2021-08-31 PAC Response Att B.xlsx in the docket for this action.
[2] Relative to 2015-2019 average actual emissions.

Although it accepted PacifiCorp's updated cost/ton calculations, Utah did not proceed to evaluate SCR and SNCR with reference to those costs of compliance and the other three statutory factors. Rather, Utah elected to further analyze the cost/ton values by predicting how changes in future plant utilization at Hunter and Huntington might affect the cost-effectiveness of SCR.[78] Utah developed a sensitivity analysis to assess cost/ton values under three alternative plant utilization scenarios relative to utilization during the baseline period of 2015–2019: 50%, 75%, and 125% of baseline utilization. The cost/ton values were calculated by scaling 2015–2019 average heat input by those percentages. Utah's analysis showed that, all else equal, higher plant utilization produced lower cost/ton values (meaning that SCR was relatively more cost-effective), while lower utilization produced higher cost/ton values (meaning that SCR was relatively less cost-effective).

Utah observed that its sensitivity analysis ''raises the question of how the units at both plants are likely to be utilized throughout the second regional haze planning period.'' [79] To try to address that question, Utah consulted WRAP's projections of 2028 emissions for Hunter and Huntington that were developed through the WRAP planning process.[80] WRAP's projections of the plants' 2028 emissions were very similar to the 2015–2019 average actual emissions that PacifiCorp used in its cost/ton calculations.[81] WRAP's projections were based on 2016–2018 plant utilization levels.

After considering WRAP's 2028 emissions projections, Utah asserted that the electrical generating sector ''is experiencing significant change'' due to increases in natural gas and renewable energy generation, enhanced grid coordination, greater transmission capacity and planning efforts, improvements in equipment efficiency, uncertainty regarding climate regulation, and customer preferences for renewable energy.[82] The State turned to PacifiCorp's 2021 Integrated Resource Plan (IRP) [83] to assess potential future operations at Hunter and Huntington. The IRP contains PacifiCorp's assessment of the ''least-cost, least-risk portfolio'' of resources while accounting for compliance with regulatory requirements and customer demand for clean energy. PacifiCorp completes the full IRP planning process every two years and reviews and updates it in the in-between years. While the IRP does not project future utilization at Hunter and Huntington (which PacifiCorp considers confidential information), Utah cited PacifiCorp's long-term (2021–2040) plans to increase renewable energy generation and energy storage capacity, retire certain coal-fired units or convert them to natural gas, and utilize remaining coal-fired units to support growth in renewable energy generation by providing power when renewable generation is not available. Utah concluded there would be a ''likely reduction in utilization of Hunter and Huntington in future years,'' which would reduce the cost-effectiveness of SCR.[84]

Utah also highlighted several ''affordability'' considerations regarding the installation of SCR at Hunter and Huntington.[85] It cited PacifiCorp's concerns about supply chain constraints, inflation, competition from renewable and storage resources, and the potential for public utility commissions to reject a future request by PacifiCorp to recover the costs of SCR. Utah maintained that a requirement to install SCR could create the potential for involuntary closure of Hunter and Huntington units, pointing to other coal-fired plants that PacifiCorp asserted had either retired or switched to a different fuel rather than installing SCR to control NO_X pollution. Finally, Utah noted that Deseret Power, a part-owner of Hunter Unit 2, had raised concerns about its ability to finance its portion of SCR costs under the terms of a debt forbearance agreement that restricts Deseret's ability to take on new debt. Utah concluded that ''[t]hese affordability concerns and the potential for forced unit closures weigh in favor of considering reasonable alternatives to requiring the installation of physical controls.'' [86]

As a result of these potential affordability issues and its concerns that reduced future utilization of Hunter and Huntington would erode the cost-

[78] Utah focused its analysis on SCR and did not analyze SNCR in detail. SCR would achieve greater emissions reductions at a lower cost/ton value compared to SNCR.

[79] Utah regional haze SIP submission at 149.

[80] *Id.* at 149–50. WRAP relied on the Center for the New Energy Economy (CNEE) at Colorado State University to project 2028 emissions for coal- and gas-fired EGUs in Western states. Projections for coal-fired EGUs such as Hunter and Huntington were based on 2016–2018 plant utilization (in the form of gross load), heat rates, and emission rates; they also incorporated ''on-the-books'' controls such as the installation of emissions controls or plant closures. CNEE's analysis is contained in the docket for this action. CNEE, ''Project Report for WESTAR–WRAP: Analysis of EGU Emissions for Regional Haze Planning and Ozone Transport Contribution'' (June 14, 2019).

[81] Using the methodology developed by CNEE, WRAP projected 2028 NO_X emissions for Hunter (10,001 tpy) and Huntington (6,091 tpy). Utah explained that these emission projections are ''similar though not identical to PacifiCorp's recent actual emissions used in its four-factor analyses, with the differences stemming from the use of different averaging periods and methodologies.'' Utah regional haze SIP submission at 150.

[82] Utah regional haze SIP submission at 150.

[83] PacifiCorp, ''2021 Integrated Resource Plan'' Vol. I (Sept. 1, 2021), available in the docket for this action (hereinafter ''PacifiCorp 2021 IRP'').

[84] Utah regional haze SIP submission at 156.

[85] *Id.* at 154–56.

[86] *Id.* at 156.

effectiveness of SCR, Utah rejected SCR in favor of establishing mass-based annual emission limits for Hunter and Huntington. To provide compliance flexibility to PacifiCorp, Utah decided to apply these emission limits at a plantwide level, rather than a unit-by-unit level. Utah's mass-based emission limits are shown in table 8 below and are similar in concept to the RPELs that were originally proposed by PacifiCorp. To set the limits, Utah calculated the plant utilization and resulting emissions levels that would be associated with the installation of SCR at $5,750/ton NO_X removed at all units of the plants; it then summed the unit-level allowable emissions for the three units at Hunter and the two units at Huntington to establish plantwide emissions limits for each plant. Although Utah stated that it was not establishing a bright-line cost-effectiveness threshold, it chose the $5,750/ton level based on its determination that $5,750/ton for physical controls is not cost-effective when balancing all four statutory factors.[87] Utah stated that the plantwide mass-based emission limits will prevent Hunter and Huntington from operating at levels above which SCR would have been cost-effective. Finally, to provide additional compliance flexibility, Utah established initial, interim, and final limits that become more stringent over time, as shown in table 8.

Table 8. Hunter and Huntington Mass-Based Emission Limits

Mass-Based Emission Limit	Hunter Allowable NO_X Emissions (tpy)	Huntington Allowable NO_X Emissions (tpy)
2022 Initial Limit	11,041	6,604
2025 Interim Limit	10,442	6,422
2028 Final Limit	9,843	6,240

Although the mass-based emission limits do not require any reductions in NO_X emissions from Hunter and Huntington compared to their recent actual (2014–2019) emissions, Utah noted that they would prevent the plants from ''backsliding.'' [88] Utah also stated that the limits would result in emissions levels that are ''generally consistent'' with those that WRAP used in its 2028 modeling.[89]

The mass-based emission limits apply on an annual basis (12-month rolling total),[90] meaning that Hunter and Huntington may vary their plantwide emissions over the course of a 12-month period so long as they do not emit more than the total allowable amount of NO_X. Utah acknowledged that the variations allowed under annual limits could potentially exacerbate visibility impairment on the most impaired days at Class I areas. Utah observed that the worst nitrate impairment at Class I areas in Utah occurs during the winter. Hunter and Huntington have two operating peaks (with associated peaks in NO_X emissions) each year: a summer peak and a winter peak. Utah concluded that the plants were unlikely to consume the majority of their annual NO_X emissions limit in the winter because they must preserve their ability to operate at peak loads in the summer. Thus, Utah concluded that annual limits were ''sufficient to reduce the likelihood of excess emissions impact [at Class I areas] during periods of high electricity demand.'' [91]

Utah also explained that the other three statutory factors supported its decision to adopt the mass-based emission limits instead of an SCR-based requirement. As to the time necessary for compliance, Utah stated that SCR likely could not be installed during the time remaining in the second implementation period, while the mass-based emission limits could be implemented immediately after approval of the SIP submission. For energy and non-air quality environmental impacts of SCR, Utah pointed to potential increases in water and coal consumption, increased generation of coal combustion residuals and other waste products, and increased greenhouse gas emissions from the additional energy needed to operate SCR. Utah also noted that because Hunter and Huntington are ''projected to assist in the transition towards intermittent renewable resources,'' early plant closures would require the provision of alternative resources.[92] As to remaining useful life, Utah pointed to the then-planned (but not federally enforceable) closure of Hunter by 2042 and Huntington by 2036, which would occur before the expiration of the 30-year useful life of SCR. Utah noted that reduced amortization periods for SCR would reduce its cost-effectiveness.

In sum, Utah determined that physical controls to reduce NO_X (*i.e.,* SCR) at Hunter and Huntington are not necessary to make reasonable progress in the second implementation period.[93] It concluded that the enforceable mass-based annual emission limits, as well as Hunter and Huntington's existing control measures and emission limits (namely, SO_2 emission limits in the plants' title V permits), are necessary to make reasonable progress.[94]

iv. Sunnyside Cogeneration [95]

The Sunnyside Cogeneration Facility is a single unit 58 MW waste-coal combustion boiler located in Sunnyside, Utah. The facility has a combined Q/d value of 15.2; the nearest Class I area is Arches National Park at 97 kilometers away. Sunnyside utilizes a circulating fluidized bed (CFB) boiler that injects limestone in situ with the fuel stock, so that combustion of the fluidized fuel achieves some reduction in SO_2 emissions. A baghouse controls for flue gas particulates.

Sunnyside identified several potential add-on NO_X and SO_2 control technologies for the boiler unit and performed a four-factor analysis for the technologies it determined to be technically feasible.[96] Utah identified multiple errors related to Sunnyside's

[87] *Id.* at 157, 160–61.

[88] *Id.* at 163, appendix H at 656.

[89] Utah regional haze SIP submission at 162–63.

[90] Utah regional haze SIP submission, appendix A, part H.23.d.-e.

[91] Utah regional haze SIP submission at 162.

[92] *Id.* at 157.

[93] *Id.*

[94] *Id.* at 179.

[95] The four-factor analysis for this facility is contained in the Utah regional haze SIP submission at 164–69, 179, and appendices C.4.A. and C.4.C. Additional submissions from Sunnyside that relate to Utah's determination of the measures necessary to make reasonable progress are also contained in the docket for this action.

[96] Utah regional haze SIP submission, appendix C.4.A.

evaluation of technical feasibility and costs of compliance and requested that Sunnyside resubmit a corrected four-factor analysis.[97] Sunnyside submitted an updated four-factor analysis in October 2021, followed by several submissions in 2022 to respond to issues raised by the FLMs and public commenters. The results of Sunnyside's analyses are shown in table 9.

Table 9. Sunnyside Cogeneration Facility: Summary of Four-Factor Analysis Controls

Sunnyside Cogeneration: Four-Factor Analysis Control Options Considered					
Unit	Control Option	Pollutant	Technically Feasible	Emissions Reduction (tpy)	Cost Effectiveness ($/ton)
Boiler	Spray Dry Absorbers	SO_2	No	N/A	N/A
Boiler	Dry Scrubbing	SO_2	Yes (initial analysis); No (subsequent analysis)	319	$10,202[1]
Boiler	Wet Scrubbing	SO_2	No	N/A	N/A
Boiler	(Hydrated Ash Reinjection)	SO_2	No	N/A	N/A
Boiler	Circulating Dry Scrubber/ Circulating Fluidized Bed Scrubber	SO_2	Yes	319	$27,890 (minimum) $68,027 (average) $118,553 (maximum)[2]
Boiler	SCR	NO_X	Yes	432	$13,445
Boiler	SNCR	NO_X	Yes	64	$9,268

[1] Page 5-6 of appendix C.4.A of the regional haze SIP submission lists a cost/ton value of $10,202, while page 5-5 lists $10,372.

[2] Sunnyside prepared three alternative cost analyses for circulating dry scrubber/circulating fluidized bed scrubber based on minimum, average, and maximum total installed equipment costs. Utah regional haze SIP submission, appendix D.2.I.

Utah ultimately concurred with Sunnyside's conclusion, based on the costs of compliance and effectiveness of existing controls, that additional NO_X or SO_2 controls are not necessary to make reasonable progress. Utah determined that the existing control measures and emissions limits for Sunnyside are necessary for reasonable progress during the second implementation period.[98]

v. US Magnesium [99]

US Magnesium LLC's Rowley Plant is a magnesium production facility located in Rowley, Utah, west of Salt Lake City. The facility has a combined Q/d value of 7.4; the nearest Class I area is Capitol Reef National Park at 288.7 kilometers away. US Magnesium has multiple units that emit NO_X as a result of fuel combustion. Existing controls at US Magnesium are primarily related to the chlorine reduction burner and associated acid gas scrubbing.

Given the facility's low SO_2 emissions, US Magnesium did not conduct a four-factor analysis for SO_2 controls. The facility's SO_2 specific Q/d values for Capitol Reef National Park and emissions data are shown in table 10.

BILLING CODE 6560–50–P

[97] Utah regional haze SIP submission, appendix C.4.B at 15–19.

[98] Utah regional haze SIP submission at 179.

[99] The four-factor analyses for this facility are contained in the Utah regional haze SIP submission at 169–72, 179–80, and appendices C.5.A. and C.5.C.

Table 10. US Magnesium SO_2 Emissions Data and SO_2-specific Q/d Values for Capitol Reef National Park

Year	SO_2 Emissions (tpy)	SO_2 Q/d
2008	25.47	0.09
2009	32.16	0.11
2010	32.16	0.11
2011	19.12	0.07
2012	22.94	0.08
2013	23.80	0.08
2014	17.93	0.06
2015	25.82	0.09
2016	18.60	0.06
2017	6.71	0.02
2018	9.23	0.03
2019	11.18	0.04
2020	8.83	0.03
2021	8.94	0.03
2022	8.13	0.03

US Magnesium identified several potential NO_X control technologies for the facility and conducted a four-factor analysis for each control that it found to be technically feasible. The results of these analyses are shown in table 11.

Table 11. US Magnesium: Summary of Four-Factor Analysis Controls

US Magnesium: Four-Factor Analysis Control Options Considered					
Unit	Control Option	Pollutant	Technically Feasible	Emissions Reduction (tpy)	Cost Effectiveness ($/ton)
Turbines and Duct Burners	Water or Steam Injection	NO_X	No	N/A	N/A
Turbines and Duct Burners	Dry Low-NO_X	NO_X	No	N/A	N/A
Turbines and Duct Burners	SCR	NO_X	No	N/A	N/A
Chlorine Reduction Burner	N/A	NO_X	N/A	N/A	N/A
Riley Boiler	FGR[1]	NO_X	Yes	22.5	$1,880
Riley Boiler	Low-NO_X Burners	NO_X	No	N/A	N/A
Riley Boiler	Ultra Low-NO_X Burners	NO_X	No	N/A	N/A
Riley Boiler	SCR[1]	NO_X	Yes	40.7	$18,800
Riley Boiler	SNCR	NO_X	No	N/A	N/A
Diesel Engines	Exhaust Gas Recirculation	NO_X	Yes	28.8	$20,833
Diesel Engines	SCR	NO_X	Yes	68.1	$14,146
Diesel Engines	Lean NO_X Catalysts	NO_X	No	N/A	N/A
HCl Plant	Water or Steam Injection	NO_X	No	N/A	N/A
HCl Plant	Dry Low-NO_X	NO_X	No	N/A	N/A
HCl Plant	SCR	NO_X	No	N/A	N/A
Casting House	N/A	NO_X	N/A	N/A	N/A

Lithium Plant[2]	Low-NO_X Burners	NO_X	Yes (already installed)	13.64 (50 MMBtu/hr burner) 24.91 (100 MMBtu/hr burner)	$8,373 (50 MMBtu/hr burner) $6,536 (100 MMBtu/hr burner)
Lithium Plant	Ultra Low-NO_X Burners	NO_X	No	N/A	N/A

[1] The emissions reduction and cost-effectiveness values for flue gas recirculation (FGR) and SCR on the Riley Boiler that are shown in the table were calculated by Utah following its identification of errors in US Magnesium's cost analyses.

[2] The Lithium Plant was constructed recently and concluded the permitting process in 2020. It consists of two boilers and two evaporative burners. In lieu of submitting a standalone four-factor analysis for these units, US Magnesium submitted the NO_X BACT analysis that was performed for the boilers and burners. Utah agreed that the Lithium Plant is well-controlled and did not require further evaluation.

BILLING CODE 6560–50–C

Utah identified multiple errors related to US Magnesium's cost calculations, particularly for the Riley boiler, and requested a corrected analysis. US Magnesium responded that it had conducted a reevaluation of the Riley boiler and believed that the cost/ton numbers for FGR and SNCR were higher than the values Utah had calculated, pointing to (1) overestimated NO_X emissions and (2) the presence of an existing low-NO_X burner on the boiler. However, US Magnesium did not submit supporting information on the low-NO_X burner or its NO_X removal efficacy, and Utah had no record of its existence. Thus, Utah concluded that FGR was a cost-effective and viable control for the Riley boiler. Utah also determined that the existing control measures and emissions limits for US Magnesium are necessary for reasonable progress during the second implementation period.

2. The EPA's Evaluation of Utah's Long-Term Strategy

The EPA must exercise its independent technical judgment in evaluating the adequacy of Utah's long-term strategy, including the sufficiency of the underlying methodology and documentation; we may not approve a SIP that is based on unreasoned analysis or that lacks foundation in the CAA's requirements.[100] As detailed in sections IV.C.2.a-d. of this document, we find that Utah's long-term strategy does not satisfy the requirements of CAA section 169A and 40 CFR 51.308(f)(2) on four separate grounds: (1) Utah unreasonably rejected NO_X emission reduction measures at Hunter and Huntington power plants; (2) Utah did not evaluate whether emission reduction measures at CCI Paradox Lisbon Natural Gas Plant are necessary for reasonable progress; (3) Utah improperly included automatic exemptions for startup, shutdown, and malfunction (SSM) in the emission limitations for Intermountain power plant; and (4) Utah unreasonably rejected SO_2 emission reduction measures and incorporated an unsupported emission limitation into its SIP for Sunnyside Cogeneration. For these reasons, we find that Utah did not adequately ''evaluate and determine the emission reduction measures that are necessary to make reasonable progress'' by considering the four statutory factors, as required by CAA section 169A(g)(1) and 40 CFR 51.308(f)(2)(i), and did not adequately ''document the technical basis, including modeling, monitoring, cost, engineering, and emissions information, on which the State is relying to determine the emission reduction measures that are necessary to make reasonable progress,'' as required by 40 CFR 51.308(f)(2)(iii). Therefore, we are proposing to disapprove Utah's long-term strategy for the second implementation period under CAA section 169A and 40 CFR 51.308(f)(2) because it does not include the enforceable emissions limitations, compliance schedules, and other measures that are necessary to make reasonable progress.[101]

a. Unreasonable Rejection of NO_X Emission Reduction Measures at Hunter and Huntington

Based on its evaluation of the four statutory factors, Utah concluded that SCR or other physical NO_X pollution controls at Hunter and Huntington are not necessary to achieve reasonable progress toward Congress's national visibility goal.[102] Instead, Utah chose to establish plantwide annual mass-based NO_X emission limits for inclusion in its long-term strategy.[103] To provide a ''compliance glidepath,'' Utah established initial limits of 11,041 tpy of NO_X at Hunter and 6,604 tpy of NO_X at Huntington for 2022, interim limits of 10,442 tpy of NO_X at Hunter and 6,422 tpy of NO_X at Huntington for 2025, and final limits of 9,843 tpy of NO_X at Hunter and 6,240 tpy of NO_X at Huntington for 2028.[104]

Utah's determination to impose plantwide annual mass-based emission limits will not secure any reduction in NO_X emissions from Hunter and Huntington.[105] Tables 12–13 and figures 2–3 of this document compare annual emissions levels allowed under the plantwide annual mass-based emission limits to Hunter and Huntington's recent actual (2014–2021) emissions and to WRAP's projections of the plants'

[100] *See Wyoming* v. *EPA,* 78 F.4th 1171, 1180–81 (10th Cir. 2023); *Oklahoma* v. *EPA,* 723 F.3d 1201 (10th Cir. 2013); *Arizona* v. *EPA,* 815 F.3d 519, 530–32 (9th Cir. 2016); *North Dakota* v. *EPA,* 730 F.3d 750, 760–61 (8th Cir. 2013).

[101] See also CAA section 169A(b)(2), section 169(b)(2)(B) (the CAA requires that each implementation plan for a State in which the emissions from may reasonably be anticipated to cause or contribute to visibility impairment in a Class I area ''contain such emision limits, schedules of compliance and other measures as may be necessary to make reasonable progress toward meeting the national goal, . . . including . . . a long-term . . . strategy for making reasonable progress[.]'').

[102] Utah regional haze SIP submission at 157.

[103] Utah proposed to include these limits in its SIP at section IX, part H.23.d.–e.

[104] Utah regional haze SIP submission at 158.

[105] Utah regional haze SIP submission at 163 (noting that the limits are generally consistent with WRAP's projections of 2028 emissions for the ''on-the-books'' scenario and will prevent the plants from ''backsliding'').

2028 emissions under the 2028OTBa2 ''on-the-books'' (no additional controls) scenario. Table 12 shows that Utah's most stringent mass-based emission limits (the 2028 final limits) will result in a net *increase* in NO_X emissions of 8 tpy from Hunter and Huntington combined, compared to WRAP's projected 2028 emissions.[106] Table 13 and figures 2–3 show that both power plants' recent actual (2014–2021) NO_X emissions were, in many years, lower than the initial, interim, and/or final mass-based emission limits. In stark contrast to the mass-based emission limits, installation of SCR would reduce annual NO_X emissions by 7,858 tpy across all three units at Hunter and 4,412 tpy across the two units at Huntington (compared to 2015–2019 average actual emissions),[107] as shown in tables 6–7 of this document.

BILLING CODE 6560–50–P

[106] WRAP's 2028OTBa2 emissions inventory includes emissions from the ''EGU'' and ''non-EGU'' components at Hunter and Huntington. Utah did not specify whether the mass-based emission limits contained in appendix A, part H.23.d.-e. include non-EGU emissions from the power plants; based on our interpretation of part H.23.d.-e., we understand them not to incorporate non-EGU emissions. Therefore, our calculation of the net increase in emissions of 8 tpy accounts for only the ''EGU'' component emissions in WRAP's 2028OTBa2 inventory.

WRAP projected 2028 non-EGU emissions of 9 tpy for Hunter and 8 tpy for Huntington. See *WRAP_2028OTBa2_and_RepBase2_Point_Emissions_after_states_review_17Aug2021.xlsx* in the docket for this action. If we accounted for the non-EGU emissions in our comparison of the mass-based emission limits to WRAP's 2028OTBa2 projected inventory, the mass-based emission limits would result in a net 9 tpy decrease in emissions from Hunter and Huntington combined. Given the similarity between +8 tpy and –9 tpy, and the fact that a decrease of just 9 tpy (0.06% of the power plants' projected 2028 emissions) would not represent any real reduction in emissions, the inclusion of non-EGU emissions in our calculations would not affect the analysis or conclusions contained in this notice of proposed rulemaking.

[107] The record does not contain information on the exact amount of NO_X emissions reductions that installation of SCR at Hunter and Huntington would achieve relative to WRAP's projected 2028 emissions for those plants. However, Hunter and Huntington's 2015–2019 average actual emissions and WRAP's projected 2028 emissions are very similar, as shown in table 13. Therefore, we can reasonably conclude that the relative emissions reductions would be comparable in magnitude.

Table 12. 2028 Final NO_X Plantwide Mass-Based Emission Limit Net Change Relative to 2028OTBa2 Projected Emissions

Source	2028 Final NO_X Mass-Based Emission Limit	2028OTBa2 Projected NO_X Emissions[1]	Net Change NO_X Emissions (tpy)
Hunter	9,843	9,992	-149
Huntington	6,240	6,083	+157
Total	16,083	16,075	+8

[1] 2028OTBa2 projected NO_X emissions reported in this table include only the "EGU" component emissions.

Table 13. Recent Annual Actual NO_X Emissions at Hunter and Huntington, Utah's Plantwide Annual Mass-Based Emission Limits, and WRAP's 2028OTBa2 Emissions Inventory Projections

Year, Limit, or Projection	Plantwide Total NO_X Emissions (tpy)	
	Hunter	Huntington
2014 Actual Emissions	11,595	6,864
2015 Actual Emissions	11,591	6,462
2016 Actual Emissions	8,869	6,210
2017 Actual Emissions	9,773	5,931
2018 Actual Emissions	9,770	5,153
2019 Actual Emissions	10,514	5,206
2015-2019 Average Actual Emissions (used in PacifiCorp cost analysis)[1]	10,103	5,793
2020 Actual Emissions	9,287	4,814
2021 Actual Emissions	11,041	6,604
2022 Initial Limit	11,041	6,604
2025 Interim Limit	10,442	6,422
2028 Final Limit	9,843	6,240
WRAP 2028OTBa2 Emissions Projection[2]	9,992	6,083

[1] We determined 2015-2019 average actual emissions by consulting appendix C.3.C. of Utah's regional haze SIP submission. 2015-2019 average actual NO_X emissions (in tons per year) for each unit are listed in the "SNCR and SCR Baseline Emissions" table in Attachment B of appendix C.3.C. These same annual unit-level NO_X emissions relied upon by PacifiCorp are also available at the EPA's Clean Air Market Program Data (CAMPD) by querying unit-level annual emissions for Hunter and Huntington. Summing the unit level to the facility and averaging over the same period provides the same NO_X emissions values. The CAMPD data is available in the docket for this action.
[2] 2028OTBa2 projected NO_X emissions reported in this table include only the "EGU" component emissions.

Figure 2. Annual Actual NO_X Emissions at Hunter Compared to Utah's Plantwide Mass-Based Emission Limits and 2028OTBa2 Projected Emissions [108]

[108] Data source: EPA CAMPD as reported by Utah and PacifiCorp, available in the docket for this action.

Figure 2. Annual Actual NO_X Emissions at Hunter Compared to Utah's Plantwide Mass-Based Emission Limits and 2028OTBa2 Projected Emissions[108]

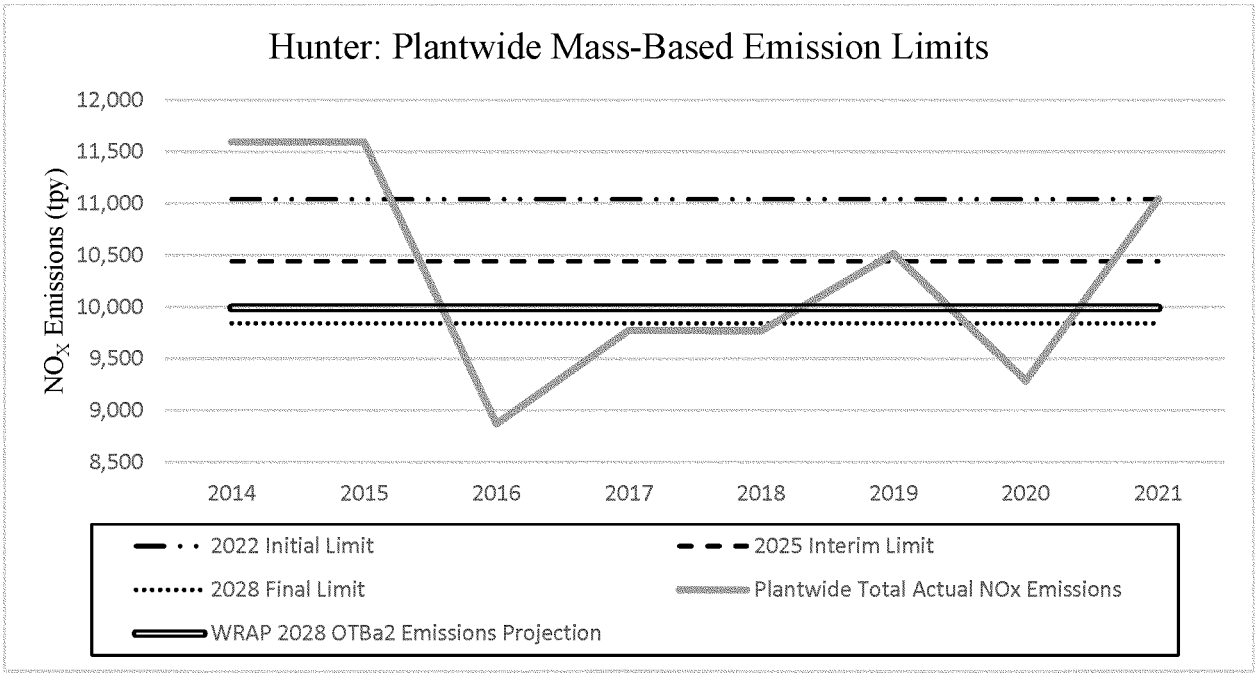
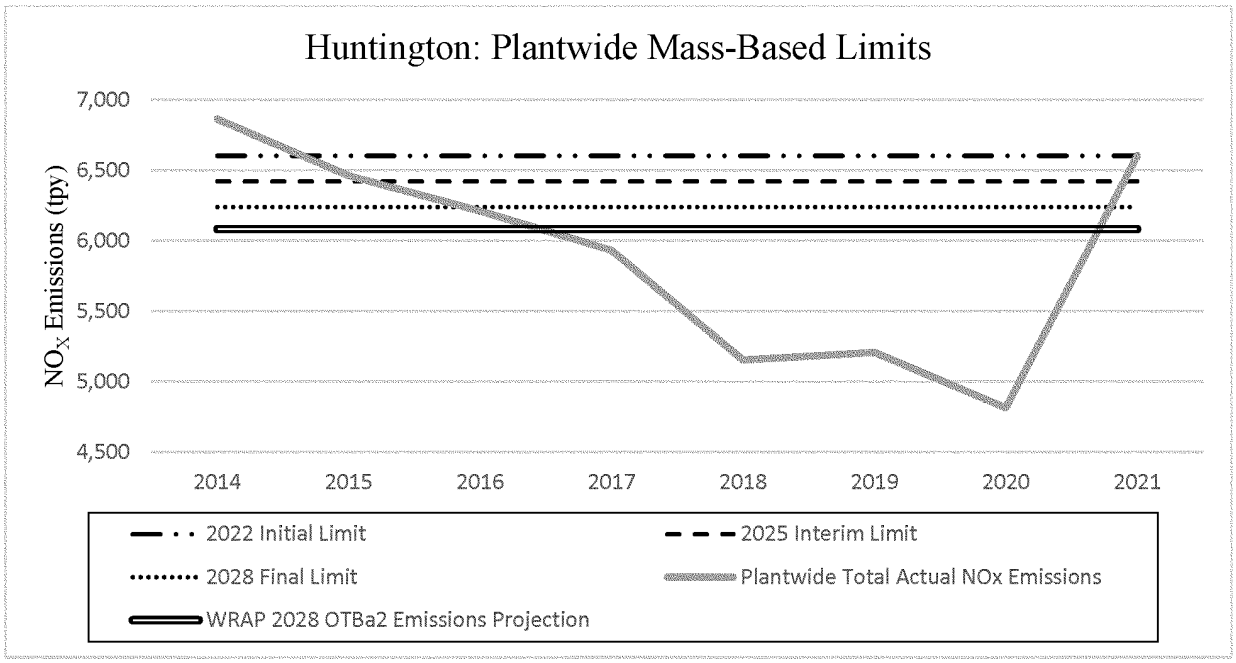


Figure 3. Annual Actual NO_X emissions at Huntington Compared to Utah's Plantwide Mass-Based Emission Limits and 2028OTBa2 Projected Emissions [109]

Figure 3. Annual Actual NO_X emissions at Huntington Compared to Utah's Plantwide Mass-Based Emission Limits and 2028OTBa2 Projected Emissions[109]



BILLING CODE 6560–50–C

The Technical Support Document (TSD) for this action contains detailed information on the effect of emissions from EGUs in Utah, and Hunter and

[109] *Id.*

Huntington in particular, on visibility impairment at all five of Utah's Class I areas and at numerous out-of-state Class I areas. In the following paragraphs of this document, we summarize key points that are further detailed in the TSD.

Utah relied on and referenced data from WRAP's TSS, which includes analytical tools and products that WRAP developed to assist WRAP member states in developing their regional haze SIPs.[110] Among other analyses, WRAP performed photochemical source apportionment modeling for 2028 using the Comprehensive Air Quality Model with extensions (CAMx) model to estimate the statewide visibility impacts for each WRAP state to Class I areas on the 20% most impaired days. This modeling also included a more detailed breakout of state-by-state sulfate and nitrate contributions for five separate emissions source categories (EGUs, mobile sources, non-EGU point sources, oil and gas, and all other remaining anthropogenic sources combined). As part of our evaluation of Utah's regional haze SIP submission, the EPA examined the results of the WRAP products, including the emissions inventories, Q/d analyses, weighted emissions potential (WEP) analyses, and source apportionment modeling. This data provides quantitative results of the sulfate and nitrate Class I area visibility impacts from EGUs in Utah. We also used this data to estimate the visibility impairment impacts at Class I areas from Hunter power plant, Huntington power plant, and both plants combined.

The WRAP 2028 projected emissions inventories show that Utah NO_X and SO_2 emissions are highly influenced by Hunter and Huntington power plants.[111] Of all 2028 projected statewide anthropogenic NO_X and SO_2 emissions, from every anthropogenic source in Utah, Hunter is projected to account for 11.41% of NO_X and 25.56% of SO_2 emissions; Huntington is projected to account for 6.94% of NO_X and 17.89% of SO_2 emissions; and Hunter and Huntington combined are projected to account for 18.35% of NO_X and 43.45% of SO_2 emissions.

Comparing the NO_X and SO_2 emission contributions of Hunter and Huntington to just the Utah EGU source category shows even higher projected contributions. Of all statewide EGU NO_X and SO_2 emissions from every EGU source located in Utah for 2028,[112] Hunter is projected to account for 41.9% of NO_X and 35.45% of SO_2 emissions; Huntington is projected to account for 25.51% of NO_X and 24.81% of SO_2 emissions; and Hunter and Huntington combined are projected to account for 67.41% of NO_X and 60.26% of SO_2 emissions.

WRAP's 2028 projected emissions inventories include emissions from Bonanza power plant, which is on Tribal land and is not subject to Utah's regulatory jurisdiction, and Kennecott power plant, which has been retired. Removing Bonanza and Kennecott's NO_X and SO_2 emissions contributions from the 2028 projected statewide totals of anthropogenic NO_X and SO_2 emissions indicates even higher contributions from Hunter and Huntington. Hunter is projected to account for 58.87% of all EGU source category NO_X and 54.37% of all EGU source category SO_2 emissions; Huntington is projected to account for 35.84% of all EGU source category NO_X and 38.06% of all EGU source category SO_2 emissions; and Hunter and Huntington combined are projected to account for 94.7% of all EGU source category NO_X emissions and 92.43% of all EGU source category SO_2 emissions. In other words, Hunter and Huntington account for more than 90% of the EGU source category emissions that are subject to Utah's regulatory jurisdiction under the regional haze program.

Hunter and Huntington's NO_X emissions are significant on a national scale. Hunter ranked as the third highest emitter of NO_X for all EGUs within the United States in 2021 and as the fifth highest emitter of NO_X for all EGUs within the United States in 2022. Huntington ranked 20th in 2021 and 29th in 2022 for NO_X emissions among all EGUs in the United States.

WRAP's Q/d analyses [113] show that Hunter and Huntington have, by far, the highest Q/d values for Utah's five Class I areas of all the sources that Utah selected for four-factor analysis.[114] Specifically, Hunter has the highest Q/d values and Huntington has the second-highest Q/d values for all Utah Class I areas. For out-of-state Class I areas, Hunter and Huntington also have the highest Q/d values among the sources Utah selected for four-factor analysis.

In addition, due to source decommissionings, enforceable retirements, and requirements to install NO_X post-combustion controls, many of the in-state and out-of-state sources that had the highest Q/d values for Utah's five Class I areas (based on 2014 emissions data, which WRAP used to calculate Q/d values in its analysis) will no longer be major contributors to visibility impairment in the second implementation period. If the Q/d values were updated to reflect these sources' resulting lower emissions, Hunter and Huntington would rank even higher among all sources nationwide with the highest potential impact (in terms of Q/d value) on Utah's Class I areas.

In addition, WRAP's nitrate and sulfate WEP analyses identified Hunter and Huntington as significant emissions sources located upwind of several in-state and out-of-state Class I areas.[115] [116] Among all in-state and out-of-state point sources, WRAP's nitrate WEP results classify Hunter as the top-ranked source for Arches National Park, Bryce Canyon National Park, Canyonlands National Park, and Capitol Reef National Park; and the second-ranked source for Zion National Park. Similarly, WRAP's nitrate WEP results classify Huntington as the second-ranked source for Arches National Park, Bryce Canyon National Park, Canyonlands National Park, and Capitol Reef National Park; and the eighth-ranked source for Zion National Park. Considering only the sources that Utah selected for four-factor analysis, Hunter and Huntington have the highest nitrate WEP values for each of Utah's five Class I areas. Furthermore, WRAP's sulfate WEP results for Utah's five Class I areas show that Hunter and Huntington are the top two ranked sources for many of Utah's Class I areas; they also have the highest sulfate WEP values among all sources that Utah selected for four-factor analysis.

WRAP's 2028 source apportionment modeling also shows that Utah NO_X and SO_2 emission sources are by far the largest sources of anthropogenic nitrate and sulfate visibility impairment at

[110] Utah regional haze SIP submission at 34–35 (stating that the WRAP TSS ''is the source of the key summary analytical results and methods for the required technical elements of the [Regional Haze Rule] contained within this SIP''). See also *id.* at 61–71, 73–81, 97–102, and 108–120.

[111] See the TSD at section II, Emissions Inventories, for detailed information.

[112] Section II of the TSD contains detailed information on emissions from EGU sources in Utah. WRAP's 2028OTBa2 projected emissions inventory indicates that of the 16 currently operating EGU sources that are subject to Utah's regulatory jurisdiction, Hunter and Huntington power plants' combined NO_X emissions of 16,075 tpy far exceed the total combined NO_X emissions of 894 tpy from the 14 other EGU sources.

[113] Utah employed Q/d analysis to ''[determine] which sources have the highest potential impact on Utah's [Class I areas].'' Utah regional haze SIP submission at 81.

[114] See the TSD at section IV, Q/d Analysis of Utah Sources, for detailed information.

[115] Utah regional haze SIP submission at 37 (''[WEP] analyses can identify what significant emission sources are upwind from a Class I area'').

[116] See the TSD at section V, Weighted Emission Potential (WEP) Analysis, for detailed information.

Arches National Park, Canyonlands National Park, and Capitol Reef National Park. For example, at Arches and Canyonlands National Parks (CANY1 [117] site), 60.37% of the total modeled anthropogenic nitrate (from all anthropogenic emissions sources in the country) and 40.34% of the total modeled anthropogenic sulfate are attributed to Utah anthropogenic emissions. The modeling shows that a large percentage of these total anthropogenic emissions originate specifically from Utah EGUs. At Arches and Canyonlands National Parks, 82.26% of the total modeled anthropogenic nitrate and 48.49% of the total modeled anthropogenic sulfate visibility impairment from all EGU sources nationwide is attributed to Utah EGU emissions. The modeled visibility impacts at Arches and Canyonlands National Parks from Utah EGUs to nitrate light extinction are higher than any other anthropogenic source category contribution in the entire continental United States.[118] And the modeled visibility impacts at Arches and Canyonlands National Parks from Utah EGUs to sulfate light extinction are also by far the largest among any other state or source category.[119] Furthermore, the WRAP modeling results indicate that Utah's EGU source category has the highest contributions to nitrate and sulfate visibility impairment of all EGU sources nationwide at all Utah Class I areas (except Zion National Park for sulfate, where Utah has the third-highest contribution).

The EPA further evaluated WRAP's source apportionment modeling for the EGU source category to estimate contributions attributable to Hunter and Huntington.[120] WRAP's 2028 emissions inventory projects that Hunter and Huntington will account for 67.41% of NO_X emissions and 60.26% of SO_2 emissions from the Utah EGU source category.[121] Therefore, we assumed that these power plants would contribute an equivalent percentage of the total modeled contribution from the Utah EGU source category for nitrate and sulfate light extinction at Class I areas.[122] Using this approach, we estimated Hunter and Huntington's contribution to total (nationwide) anthropogenic visibility impairment at Arches and Canyonlands National Park to be 14.39% of the total (nationwide) modeled 2028 anthropogenic nitrate light extinction and 14.92% of the total (nationwide) modeled 2028 anthropogenic sulfate light extinction. This represents a substantial contribution to both nitrate and sulfate visibility impairment at these Class I areas, and is by far the largest modeled contribution among all anthropogenic sources within and outside Utah. For Capitol Reef National Park, Hunter and Huntington's estimated contributions to total (nationwide) modeled 2028 anthropogenic nitrate light extinction is 7.51% and 7.42% for sulfate light extinction among all source categories.

Using the same assumptions as detailed in the paragraph above, the EPA estimated that of the modeled Utah EGU source category contributions to light extinction at Arches and Canyonlands National Parks, 55.45% of nitrate light extinction and 29.22% of sulfate light extinction is attributable to Hunter and Huntington. Of the modeled Utah EGU source category contributions to light extinction at Capitol Reef National Park, 42.19% of nitrate light extinction and 17.81% of sulfate light extinction is attributable to Hunter and Huntington.

Aside from Arches, Canyonlands, and Capitol Reef National Parks, Utah EGUs also heavily influence visibility impairment at other Class I areas within and outside of Utah. For example, Utah EGUs have the highest modeled contribution to nitrate and sulfate light extinction at Maroon Bells-Snowmass Wilderness, CO, Eagles Nest Wilderness, CO, Flat Tops Wilderness, CO, and West Elk Wilderness, CO (WHRI1 [123]), among all EGU sources nationwide. As shown in table 14, the estimated contribution from Hunter and Huntington to these four Class I areas is 3.46% (nitrate) and 13.77% (sulfate) of all total modeled anthropogenic light extinction.

[117] The CANY1 IMPROVE monitoring site represents both Canyonlands and Arches National Parks.

[118] Utah regional haze SIP submission at 74, figure 36.

[119] Utah regional haze SIP submission at 74, figure 35.

[120] See the TSD at section III, Source Apportionment Modeling, for detailed information.

[121] In the WRAP 2028OTBa2 emissions inventory, Intermountain was assumed to be retired and therefore had no modeled emissions. In addition to Hunter and Huntington, the vast majority of the rest of the modeled Utah NO_X and SO_2 EGU emissions were from the Bonanza power plant, a Tribal source in northeast Utah.

[122] Because the source apportionment modeling was performed at the state level, apportioning the Class I area EGU visibility impacts to the facility level is an approximation. However, since the majority of the statewide modeled 2028 NO_X and SO_2 EGU source category emissions are from Hunter and Huntington, and those power plants are in closer proximity to Canyonlands National Park and Arches National Park than the only other modeled major source of EGU NO_X and SO_2 emissions (Bonanza power plant), our estimates are reasonable assumptions. In fact, since Hunter and Huntington are closer to Canyonlands National Park and Arches National Park than the Bonanza power plant, the calculations likely underestimate Hunter and Huntington's combined anthropogenic nitrate and sulfate visibility impacts. Furthermore, WRAP's modeling does not account for the closure of Kennecott power plant or for retirements and pollution control installations at certain other sources, further underscoring the likelihood that our calculation underestimates the relative importance of Hunter and Huntington's modeled visibility impacts to Class I areas compared to other sources.

[123] The WHRI1 IMPROVE site represents Maroon Bells-Snowmass Wilderness, Eagles Nest Wilderness, Flat Tops Wilderness, and West Elk Wilderness.

Table 14. Hunter and Huntington's Estimated Contribution to Nitrate and Sulfate Light Extinction at Class I areas as a Percentage of Total Modeled Nationwide Anthropogenic Light Extinction

Estimated Percent Contribution of Visibility Impairment Impact from Hunter and Huntington at In-State and Out-of-State Class I areas						
Class I area	Hunter		Huntington		Hunter and Huntington	
	Nitrate	Sulfate	Nitrate	Sulfate	Nitrate	Sulfate
Arches NP and Canyonlands NP	8.95%	8.78%	5.45%	6.14%	14.39%	14.92%
Bryce Canyon NP	1.79%	2.56%	1.09%	1.79%	2.88%	4.35%
Capitol Reef NP	4.67%	4.36%	2.84%	3.05%	7.51%	7.42%
Zion NP	0.92%	1.31%	0.56%	0.92%	1.48%	2.22%
Eagles Nest Wilderness, Flat Tops Wilderness, Maroon Bells-Snowmass Wilderness, and West Elk Wilderness	2.15%	8.10%	1.31%	5.67%	3.46%	13.77%

In sum, WRAP and other available data show that Utah EGUs, and Hunter and Huntington in particular, make substantial contributions to anthropogenic visibility impairment at numerous Class I areas. Because Utah's plantwide mass-based emission limits for Hunter and Huntington do not require emissions reductions compared to the plants' recent actual emissions and 2028 projected emissions, the mass-based emission limits will not mitigate the plants' major effects on anthropogenic visibility impairment at Class I areas.

For the reasons explained in section IV.C.2.a.i.–iv. of this document, we find that Utah's determination that the plantwide mass-based NO_X emission limits for Hunter and Huntington are all that is necessary to make reasonable progress is not grounded in a reasoned evaluation of the four statutory factors or a defensible technical analysis. Therefore, we propose to disapprove Utah's long-term strategy because it does not satisfy the requirements of CAA section 169A(b)(2)(b) and (g)(1) and 40 CFR 51.308(f)(2).

i. Evaluation of Costs of Compliance

Utah's evaluation of the costs of compliance was influenced by its finding that physical controls that cost more than $5,750/ton are not cost-effective; its determination that likely reductions in the future utilization of Hunter and Huntington would reduce the cost-effectiveness of SCR and other physical controls; and its concern about various ''affordability'' considerations associated with physical controls, including the potential for involuntary plant closures. Based on our evaluation of the SIP submission and supporting materials in the record, we find that Utah's analysis of and conclusions regarding the costs of compliance lack support. Therefore, we find that Utah did not reasonably consider the costs of compliance in evaluating emission reduction measures for Hunter and Huntington, as required by CAA section 169A(g)(1) and 40 CFR 51.308(f)(2).

A. Determination That Physical Controls Above $5,750/ton Are Not Cost-Effective

Utah determined that physical controls that cost more than $5,750/ton are not cost-effective for Hunter and Huntington. It then set the plantwide mass-based emission limits at the amount of annual NO_X emissions corresponding to the plant utilization and associated emissions levels at which SCR would have cost $5,750/ton. As explained below, we find that Utah did not adequately justify its determination of the measures necessary to make reasonable progress at Hunter and Huntington based on its chosen cost-effectiveness level.

First, regardless of the appropriateness of the $5,750/ton level, Utah did not specifically address whether SCR at Hunter Unit 3 (at the lower cost of $4,401/ton NO_X removed) is necessary for reasonable progress. Hunter Unit 3 has the highest emissions among the five units at Hunter and Huntington; installing SCR at that unit alone would reduce NO_X by 3,579 tons per year, a >80% reduction in emissions compared to recent levels. See tables 6–7. In its draft regional haze SIP, Utah acknowledged that ''the relatively lower estimated $/ton for SCR for Hunter 3 merits further evaluation of whether this control could be cost-effective.'' [124] However, Utah did not include that evaluation in its final SIP submission, which is silent on whether SCR at Hunter Unit 3 specifically is cost-effective. Since installing SCR at Hunter Unit 3 would achieve significant emissions reductions at a cost of $4,401/ton (below Utah's $5,750/ton cost-effectiveness level) and the State did not address this issue in its SIP submission, we find that Utah unreasonably rejected SCR for this unit.

Second, Utah did not adequately justify its conclusion that physical controls above $5,750/ton are not cost-effective. Utah noted that this level is ''in line with the range considered by other states,'' which it identified as $1,000/ton at the low end to $18,000/ton at the high end.[125] However, Utah

[124] Draft Utah Regional Haze SIP at 127 (contained within ''Utah Regional Haze SIP Submittal 2022 v2,'' available in the docket for this action).

[125] Utah regional haze SIP submission at 160–61.

did not adequately explain why it selected $5,750/ton as the appropriate amount, the factors it considered in doing so, or how this cost/ton level relates to the State's obligation to make reasonable progress toward the national visibility goal. While Utah asserted that $5,750/ton is not cost-effective ''when balanced against the remaining three statutory factors,'' [126] the State's evaluation of those factors evinces no connection to its chosen cost/ton level. Since Utah did not sufficiently explain the basis for its determination and did not provide adequate underlying technical documentation, we cannot conclude that Utah's selection of a $5,750/ton cost-effectiveness level was based on reasoned analysis.

The information in the record indicates that installation of SCR, at an estimated cost of $5,979–$6,533/ton NO_X reduced, may well be cost-effective for Hunter Units 1 and 2 and Huntington Units 1 and 2 (or some subset of these units). These values are on the higher end of emission reduction measures found to be cost-effective in previous regional haze actions,[127] but they may be cost-effective here in light of the magnitude of Hunter and Huntington's contributions to anthropogenic visibility impairment at several Class I areas. Based on the information provided by Utah, installation of SCR at all five units at Hunter and Huntington would reduce NO_X emissions by over 12,000 tons per year compared to both the baseline emissions assumed in the four-factor analysis and the 2028 mass-based emission limits that Utah determined to be necessary for reasonable progress (see tables 6, 7, and 8 above). Utah explained that in making its source-specific reasonable progress determinations, it evaluated the four statutory factors ''as well as the [visibility] modeling results provided by the WRAP.'' [128] The State also concluded that its determinations of the measures necessary to make reasonable progress ''will help protect . . . visibility in Utah.'' [129] At the same time, Utah did not evaluate the appropriateness of the $5,750/ton cost-effectiveness level in light of these visibility considerations. As explained above in this document and in the TSD for this action, the WRAP modeling shows that Utah EGUs, and Hunter and Huntington in particular, have large impacts on both anthropogenic nitrate and sulfate impairment at several Class I areas in Utah and outside the State. SCR would achieve substantial reductions in NO_X emissions from these plants, mitigating their contributions to anthropogenic nitrate visibility impairment in numerous Class I areas.[130] See tables 6–7. As we noted in the 2017 RHR Revisions, if a state arbitrarily excludes ''cost-effective controls at sources with significant visibility impacts, then the EPA has the authority to disapprove the state's unreasoned analysis.'' [131]

For these reasons, we find that Utah unreasonably relied on a $5,750 cost-effectiveness level in determining that the mass-based emission limits at Hunter and Huntington are all that is necessary for reasonable progress.

B. Consideration of Future Plant Utilization

In its evaluation of the costs of compliance, Utah also determined that likely reductions in the future utilization of Hunter and Huntington would erode the cost-effectiveness of SCR. Consequently, the State concluded that this factor weighed in favor of the mass-based emission limits over SCR.[132] As detailed in this section IV.C.2.b.i.B., we find that Utah's decision-making based on projected changes in future plant utilization was not based on reasoned analysis.

Utah did not employ the plant utilization assumptions that WRAP used in its 2028 emissions projection (based on 2016–2018 utilization levels) and that PacifiCorp used in its cost/ton analysis (based on 2015–2019 utilization levels). Utah instead utilized PacifiCorp's 2021 IRP to predict future operations at Hunter and Huntington.[133] The IRP, however, does not provide plant- or unit-specific projections of utilization.[134] More importantly, IRPs are neither permanent nor enforceable at the state or Federal levels and are subject to change at any time.[135] Instead, PacifiCorp's IRP outlines the company's ''preferred portfolio'': the ''least-cost, least-risk'' portfolio of company-wide resources at the time the IRP was published.[136] Utah reviewed the IRP preferred portfolio's projections of new renewable resource and storage capacity, coal unit retirements or conversions to natural gas, and coal generation and capacity compared to total energy generation and capacity.[137] Based on its interpretation of the 2021 IRP, Utah concluded that utilization of Hunter and Huntington is likely to decline.[138]

As the 2021 IRP itself cautions, ''these plans, particularly the longer-range elements, can and do change over time.'' [139] While the 2021 IRP projected retirement dates of 2036 for Huntington and 2042 for Hunter under the company's then-preferred portfolio,[140] the 2023 IRP moved those projections up to 2031–2032.[141] Just one year later, as a result of regulatory developments leading to ''fewer restrictions on coal-fired operation than were assumed,'' the

[126] *Id.* at 157–58.

[127] The EPA recently proposed a BART FIP for Texas that references first implementation period BART decisions and notes that the EPA and states required several BART controls with average cost-effectiveness values in the $4,200/ton to $5,100/ton range (escalated to 2020 dollars). 88 FR 28918, 28963 (May 4, 2024). Other states have found higher control costs to be reasonable, as Utah acknowledged in figure 61 of its regional haze SIP submission. For example, Oregon selected a $10,000/ton cost-effectiveness threshold for the second implementation period. 89 FR 13622, 13638 (Feb. 23, 2024). PacifiCorp submitted its updated cost analysis in August 2021 (appendix C.3.C. to Utah's regional haze SIP submission), though it is not clear what cost year was assumed for the cost/ton values. Even if the cost/ton values for SCR at Hunter and Huntington are somewhat higher than those referenced in the Texas BART FIP and other actions, they may still be cost-effective for purposes of reasonable progress in the second implementation period. Most of the least expensive available emission reduction measures were already required and implemented during the first implementation period. As we move forward to subsequent implementation periods, source emissions will become smaller and potential controls will become more expensive on a cost per ton basis. However, the statute and regulations still require states to continue to make reasonable progress towards the national visibility goal. See generally CAA section 169A(b)(2)(B); 40 CFR 51.308(f)(2); 40 CFR 51.308(e)(5); 82 FR 3080.

[128] Utah regional haze SIP submission at 14.

[129] *Id.* at 178.

[130] The mass-based emission limits are very similar to the RPELs that PacifiCorp initially proposed, which Utah found to be ''lacking'' because they would ''not represent a reduction in actual emissions.'' Utah regional haze SIP submission, appendix C.3.B. at 9. But Utah did not acknowledge or address this issue when it adopted the mass-based emission limits.

[131] 82 FR 3088.

[132] Utah regional haze SIP submission at 156–57, appendix H at 672.

[133] Utah regional haze SIP submission at 152.

[134] PacifiCorp's Public Comment on Utah's Regional Haze Second Implementation Period SIP (May 31, 2022) at 18 n.39 (hereinafter ''PacifiCorp Public Comment''); PacifiCorp 2021 IRP at 21 (''PacifiCorp's portfolio development process is based on achieving reliable system operation using the aggregate contributions of each resource in the portfolio, rather than focusing on an individual estimate.'').

[135] PacifiCorp 2021 IRP at 7. The page following the cover page states: ''This 2021 Integrated Resource Plan Report is based upon the best available information at the time of preparation. The IRP . . . is subject to change as new information becomes available or as circumstances change. It is PacifiCorp's intention to revisit and refresh the IRP action plan no less frequently than annually.''

[136] *Id.* at 7.

[137] Utah regional haze SIP submission at 152–54.

[138] *Id.* at 153–54.

[139] PacifiCorp 2021 IRP at 7.

[140] *Id.* at 136–37; Utah regional haze SIP submission at 153, 158.

[141] PacifiCorp, ''2023 Integrated Resource Plan'' Vol. I (Mar. 31, 2023) at 146, available in the docket for this action.

2023 IRP Update (released in April 2024) returned the plants' projected retirement dates to 2036 and 2042.[142] As these changes demonstrate, PacifiCorp's preferred portfolio frequently evolves in response to changing costs, consumer demand for clean energy, and risks, including changes to the company's regional haze and other environmental compliance obligations.[143]

Notably, PacifiCorp did not provide evidence regarding changes in plant utilization during the SIP development process. In its submissions to the State, the company noted overall changes in the electricity generation sector and ''uncertainty regarding medium to long-term operations of Hunter and Huntington,'' but it never once stated that it expected the plants' utilization to decline.[144] For the reasons explained in this section IV.C.2.a.i.B., we disagree with Utah's assertion that its SIP submission includes ''strong evidence that utilization of these facilities is likely to decrease in the future.'' [145] Consequently, the information in the record does not support Utah's conclusion as to the likely ''erosion'' of the cost-effectiveness of SCR at Hunter and Huntington ($4,401/ton to $6,533/ton).[146]

Furthermore, the mass-based emission limits that Utah established bear no relationship to the State's judgment that utilization of Hunter and Huntington is likely to decline. Table 59 in Utah's regional haze SIP submission shows the inputs Utah used to calculate the emission limits, including each unit's 2028 utilization (in the form of heat input). As shown in table 15, Utah's projected 2028 heat input levels are slightly *higher* than 2015–2019 average heat input for all Hunter and Huntington units except Hunter Unit 3. Plantwide, the 2028 utilization levels Utah used in calculating the mass-based emission limits represent a 7.75% increase in utilization across the two units at Huntington and a 0.94% increase across the three units at Hunter, compared to their average actual 2015–2019 utilization. In other words, Utah set its mass-based emission limits at levels premised on an *increased* plant utilization scenario. The State did not acknowledge or reconcile this conflict within its SIP submission.

Table 15. Hunter and Huntington: 2015-2019 Average Heat Input, 2028 Mass-Based Emissions Limit Heat Input, and the Percent Change of 2015-2019 Average Heat Input to 2028 Mass-Based Emissions Limit Heat Input

Individual EGU Unit or EGU Facility	2015-2019 Average Heat Input (MMBtu)	2028 Mass-Based Emissions Limit Heat Input (MMBtu)	Percent Change 2015-2019 Average to 2028 Heat Input
Hunter Unit 1	28,482,643	33,016,004	115.92%
Hunter Unit 2	30,101,030	34,628,669	115.04%
Hunter Unit 3	31,182,279	22,963,607	73.64%
Hunter Units 1-3	**89,765,952**	**90,608,279**	**100.94%**
Huntington Unit 1	28,063,728	29,357,153	104.61%
Huntington Unit 2	27,150,145	30,136,124	111.00%
Huntington Units 1-2	**55,213,873**	**59,493,277**	**107.75%**

Because the mass-based emission limits are predicated on increased plant utilization, Utah's citation to the 2019 Guidance and 2021 Clarifications Memo [147] lends no support to its position. The 2019 Guidance states that ''[g]enerally, the estimate of a source's 2028 emissions is based at least in part on information on the source's operation and emissions during a representative historical period.'' [148] However, both the 2019 Guidance and 2021 Clarifications Memo provide examples of situations where it may be reasonable to conclude that a source's 2028 operations will differ from its historical operations, such as the addition of *enforceable* requirements or expected changes in utilization due to documented and verifiable renewable energy or energy efficiency programs.[149] The 2021 Clarifications Memo notes that when a state relies on an assumption of reduced utilization to reject emission control measures, it may incorporate a utilization or production limit corresponding to that assumption into its SIP.[150] Utah projected that utilization of Hunter and Huntington would decline compared to recent historical utilization levels. In alignment with the 2021 Clarifications Memo, Utah could have proposed enforceable utilization limits and/or mass-based emission limits based upon the decreasing utilization assumptions. However, Utah set the mass-based emission limits at levels premised on increased, rather than decreased, plant utilization, which does not align with the 2019 Guidance or 2021 Clarifications Memo.

[142] PacifiCorp, ''2023 Integrated Resource Plan Update'' (April 1, 2024) at 12, available in the docket for this action.

[143] PacifiCorp 2021 IRP at 7, 24, 53–56.

[144] PacifiCorp Public Comment at 18. PacifiCorp declined to provide its projected capacity factors for Hunter and Huntington, citing their proprietary and commercially sensitive nature. Utah and EPA regulations provide for the confidential treatment of qualifying business information. See generally 40 CFR 2.201 through 2.311; Utah Admin. Code 307–102–2.

[145] Utah regional haze SIP submission, appendix H at 672.

[146] Utah regional haze SIP submission at 156.

[147] Utah regional haze SIP submission at 147–48.

[148] 2019 Guidance at 29.

[149] *Id.;* 2021 Clarifications Memo at 12.

[150] 2021 Clarifications Memo at 12.

In sum, Utah's reliance on an unsubstantiated and unenforceable projected reduction in future plant utilization does not justify its conclusion that installing SCR at Hunter and Huntington, at an estimated cost of $4,401/ton to $6,533/ton depending on the unit, is not cost-effective and is not necessary for reasonable progress.[151] Furthermore, the specific levels at which Utah established the mass-based emission limits are not grounded in reasoned analysis. For the reasons explained in this section, we find that Utah has not justified its reliance on changes in plant utilization to determine that the mass-based emission limits at Hunter and Huntington are all that is necessary for reasonable progress.

C. Evaluation of Affordability Considerations

In its evaluation of the costs of compliance, Utah also considered several ''affordability'' arguments presented by PacifiCorp and Deseret Power, a part owner of Hunter Unit 2. These included the potential for involuntary plant closures or conversions to natural gas, difficulties in recovering the costs of SCR installation, and Deseret's contention that it could not finance its share of SCR costs at Hunter Unit 2.[152] Utah concluded that ''these affordability concerns and the potential for forced unit closures weigh in favor of'' the mass-based emission limits over SCR.[153]

To support its affordability arguments, PacifiCorp relied on the BART Guidelines,[154] which the EPA promulgated to address BART, a separate statutory and regulatory requirement from the requirement to make reasonable progress toward the national visibility goal. While we may consider affordability under the costs of compliance factor for reasonable progress, affordability is not an overriding element of the costs of compliance analysis and cannot be considered in isolation to determine whether emission reduction measures are necessary to make reasonable progress. As explained in the paragraphs that follow, Utah's conclusion regarding affordability was not based on adequate analysis or supporting documentation. Therefore, as with plant utilization, we find Utah's reliance on affordability considerations to be unjustified.

First, the record does not substantiate Utah's concerns that Hunter and Huntington may be effectively forced to cease operations if the State required emission reductions based on SCR. While Utah listed several coal-fired power plants regionally and nationwide that PacifiCorp alleged have either ''retired or powered [to natural gas] rather than installing SCR,'' [155] the record contains no details about those closures or conversions.[156] Without that information, it is impossible to conclude whether they resulted from market forces, regulatory requirements, other factors, or some combination of causes. Utah also cited an ''Affordability Analysis'' that PacifiCorp prepared for its Wyodak power plant in Wyoming.[157] That document presented an economic analysis of SCR installation at Wyodak using system modeling analysis and a plant-specific market-based dispatch analysis.[158] PacifiCorp acknowledged that ''the outcome of the Affordability Analysis does not directly translate'' to Hunter and Huntington,[159] and it did not submit a similar plant-specific analysis for those facilities. Utah did not address the Affordability Analysis' applicability to Hunter and Huntington, conduct its own economic analysis, or make any determination as to the likelihood (versus the potential) of plant closures. Without such a determination grounded in adequate documentation and supporting analysis, Utah's stated concerns about involuntary plant closures cannot be substantiated.[160]

Second, PacifiCorp's broad assertions about affordability do not justify Utah's concern that SCR could be deemed an ''imprudent investment'' by state public service commissions.[161] PacifiCorp (a regulated public utility) highlighted the ''likely inability to recover the costs of SCR,'' citing out-of-state laws and prior difficulties in recovering the costs of pollution control equipment in Oregon, California, and Washington, but not in Utah.[162] Utah lent credence to these concerns without evaluating the likelihood that PacifiCorp would be unable to recover the costs of SCR installation at Hunter and Huntington or addressing which states would have jurisdiction over such a request.[163] Therefore, we find that Utah's concerns about potential scrutiny of investments in SCR are unsubstantiated and lack a sufficient connection to the sources at issue.

Third, Utah gave unreasonable weight to assertions by Deseret Power (which owns a 25% share in Hunter Unit 2) that it may be unable to finance its portion of SCR installation costs for that unit.[164] Deseret stated in a short comment letter that under the terms of a debt forbearance with its principal creditor, it cannot take on new debt without the creditor's consent.[165] Deseret did not attach any supporting documentation (*e.g.,* a debt forbearance agreement) and did not opine on the likelihood that its creditor would withhold consent. We find that Utah did not have a sufficient basis for taking Deseret's unsubstantiated concerns into account in its evaluation of the costs of compliance.[166]

For these reasons, we find that Utah unreasonably relied on affordability considerations to conclude that the costs of compliance factor favors mass-based emission limits over SCR.

[151] Utah also highlighted the ''regulatory flexibility'' that mass-based limits provide, noting that PacifiCorp can meet them by ''modifying operation, installing controls, switching fuels, closing units, or some combination of these options.'' Utah regional haze SIP submission at 164. Given that Utah's mass-based limits are predicated on *increased* plant utilization, we do not see the logic in Utah's assumption that PacifiCorp must make any changes to comply with them. In any event, SCR-based numeric emission limits would provide that same flexibility, as sources can generally choose to comply with those limits in any manner they choose.

[152] Utah regional haze SIP submission at 154–156.

[153] *Id.* at 156.

[154] 40 CFR part 51, appendix Y, section IV.E.3.

[155] Utah regional haze SIP submission at 154.

[156] PacifiCorp Public Comment at 13–14 (listing sources but providing no details on the factors that led to the decision). PacifiCorp also conceded that ''some coal-fueled units have elected to install SCR.'' *Id.* at 14.

[157] Utah regional haze SIP submission at 154–55.

[158] PacifiCorp Public Comment, appendix A—''Wyodak Facility SCR Affordability Analysis, August 25, 2020.'' The EPA is not expressing any opinion on the content of the Affordability Analysis or its accuracy.

[159] PacifiCorp Public Comment at 10.

[160] Only once has the EPA agreed with a facility's position that regional haze emissions controls would be unaffordable, and that evaluation was pursuant to the BART Guidelines. In that case, the company provided the EPA with data substantiating its assertion that it would likely not be able to operate profitably if it installed the required control technology, and that the plant would likely close rather than install and operate the BART-required controls. The EPA relied on its own affordability analysis and detailed financial records submitted by the company demonstrating that the facility and the company were in a strained financial position that would have been exacerbated by the installation of the BART controls. 78 FR 79344, 79353–54 (Dec. 30, 2013) (proposed rule); 79 FR 33438, 33442–42 (June 11, 2014) (final rule).

[161] Utah regional haze SIP submission at 154–55, 158.

[162] PacifiCorp Public Comment at 14–15.

[163] Utah regional haze SIP submission at 154–55.

[164] Utah regional haze SIP submission at 155–56, appendix H at 674–75.

[165] Deseret Generation & Transmission Co-operative Public Comment (May 31, 2022) at 2.

[166] *See generally* 78 FR 79344, 79353 (in proposing to find that BART controls were unaffordable, relying on detailed financial information submitted by the company and the EPA's affordability analysis addressing ''the long-term power supply contract, cost/sales ratio, ability to borrow funds, the price of electricity, updated investment ratings, aluminum market conditions and other factors relevant to the affordability determination'').

ii. Evaluation of Time Necessary for Compliance, Energy and Non-air Quality Impacts of Compliance, and Remaining Useful Life

Utah also concluded that the three other statutory factors supported its determination that the plantwide mass-based emission limits are all that is necessary to demonstrate reasonable progress.[167] As explained in the paragraphs below, we find that Utah did not reasonably evaluate these three statutory factors.

In considering the time necessary for compliance, Utah pointed out the ''short window available'' for installation of physical controls during the time remaining in the second implementation period (''approximately five years, depending [on] the final approval date'').[168] Utah concluded this was likely not enough time for installation of SCR, while mass-based emission limits could be implemented immediately upon SIP approval.[169] Utah's analysis contravenes the plain text of 40 CFR 51.308(f)(2)(i), which states: ''In considering the time necessary for compliance, if the State concludes that a control measure cannot reasonably be installed and become operational until after the end of the implementation period, the State *may not consider this fact* in determining whether the measure is necessary to make reasonable progress.'' [170] But even if that consideration were permissible, PacifiCorp expressly stated in a submission to Utah that SCR could be installed at all units of Hunter and Huntington by the end of the second implementation period in 2028.[171] Utah provided no explanation for its contrary assessment.

In its analysis of the energy and non-air quality impacts of compliance, Utah stated that because Hunter and Huntington are ''projected to assist in the transition towards intermittent renewable resources, alternative resources will be required to provide such support'' if an SCR-based requirement leads to early plant closures.[172] As explained in section IV.C.2.a.i.C. of this document, Utah did not substantiate its concern that Hunter and Huntington would cease operations rather than install SCR. But even it if it had, Utah provided no analysis or documentation of how the plants' closure would affect renewable energy deployment or the sufficiency of ''alternative resources'' to assume their role. Without any supporting documentation or analysis, Utah's reliance on this issue in its consideration of energy and non-air quality impacts cannot be substantiated.

Finally, in its consideration of Hunter and Huntington's remaining useful lives, Utah stated that the expected closure dates of 2042 for Hunter and 2036 for Huntington both involve shorter time periods than the 30-year economic life of SCR. Utah asserted that closure of the plants at or before these planned retirement dates ''would further erode the cost-effectiveness of physical controls by shortening the amortization period for control costs.'' [173] It also stated that ''[o]ngoing scrutiny of expenditures associated with coal-fired power plants by state public service commissions and the establishment of clean energy requirements in California, Oregon, and Washington increase the risk that these facilities may face early closure.'' [174] Utah did not substantiate its concerns about early plant closures; it also conceded that the planned retirement dates of 2036 and 2042, which were sourced from the 2021 IRP, are not enforceable.[175] Therefore, we find that Utah did not accurately or reasonably consider Hunter and Huntington's remaining useful lives.

In sum, Utah unreasonably concluded that the remaining three statutory factors support its determination that plantwide mass-based emission limits for Hunter and Huntington, instead of SCR, are all that is necessary to make reasonable progress toward the national visibility goal.

iii. Establishment of Annual Limits

Apart from its unreasonable evaluation of the four statutory factors, we find that Utah did not adequately support its determination that mass-based emission limits that apply on an annual basis, as opposed to a shorter time period such as monthly or seasonally, are sufficient to make reasonable progress. As the State recognized, nitrate visibility impairment at Utah's Class I areas (*i.e.,* impairment caused by NO_X emissions) is ''largely seasonal'' and peaks in the winter.[176] The EPA commented that short-term limits may better protect visibility on the most impaired days in Class I areas.[177] In response, Utah asserted that Hunter and Huntington, whose operational peaks have historically occurred in both summertime and wintertime (in response to electricity demand), are unlikely to consume the majority of their annual NO_X limit in the winter because they must preserve enough of their emissions budgets for the summertime peak. Utah also noted that short-term limits ''may limit flexibility to provide support for PacifiCorp's energy transition to intermittent non-emitting resources like renewables.'' [178]

We find that Utah did not provide adequate technical documentation to support its conclusion that short-term limits are ''unnecessary.'' [179] Utah did not explain why it is reasonable to assume the plants' historical operational patterns (*e.g.,* summer and winter seasonal peaks) are likely to persist in the future despite the ''significant change[s]'' the State predicted for the electricity generation industry in general and Hunter and Huntington's operations in particular.[180] Nor did Utah provide any data or analysis examining how short-term limits could impair Hunter and Huntington's ability to produce sufficient electricity during times of low renewable energy generation. For example, Utah provided no information on the anticipated times of year or expected frequencies that Hunter and Huntington may be required to provide support to renewable generation. Therefore, Utah has not shown that annual limits are sufficient to ensure reasonable progress toward the national goal of preventing any future and remedying any existing anthropogenic visibility impairment at Class I areas.

In conclusion, for the reasons explained above in sections IV.C.2.a.i.-iv. of this document, we propose to disapprove Utah's long-term strategy for failing to reasonably evaluate the NO_X emission reduction measures for Hunter and Huntington that are necessary to make reasonable progress toward Congress's national visibility goal.

iv. SO_2 Emissions at Hunter and Huntington

Utah did not conduct a four-factor evaluation of SO_2 emission reduction measures for Hunter and Huntington, concluding that the plants are already

[167] Utah regional haze SIP submission at 157.

[168] *Id.*

[169] *Id.*

[170] 40 CFR 51.308(f)(2)(i) (emphasis added).

[171] Utah regional haze SIP submission, appendix C.3.A at 12, 24.

[172] Utah regional haze SIP submission at 157.

[173] *Id.* at 158.

[174] *Id.*

[175] *Id.* 40 CFR 51.308(f)(2) requires SIPs to include enforceable measures. Therefore, as we explained in the 2019 Guidance at 34, a state should rely on a facility's planned closure date in its evaluation of remaining useful life only if the closure is enforceable.

[176] Utah regional haze SIP submission at 161–62.

[177] Utah regional haze SIP submission, appendix H at 693–94.

[178] *Id.* at 693–94.

[179] *Id.* at 694.

[180] Utah regional haze SIP submission at 150–54.

well-controlled based on their current permitted SO_2 limits (0.12 lb/MMBtu 30-day rolling average).[181] As detailed in the TSD for this action, Hunter and Huntington make substantial contributions to sulfate light extinction at several Class I areas. We are seeking comment on whether SO_2 emission reduction measures (such as installation of new controls, efficiency improvements to the plants' existing scrubber systems, operational changes, or other measures) and/or emission limit tightening to align with the plants' recent actual operation [182] are necessary to make reasonable progress under CAA section 169A and 40 CFR 51.308(f)(2).

Utah determined that continued operation of the plants' existing SO_2 controls is necessary for reasonable progress. The State incorporated the SO_2 emission limits in the plants' title V permits into the regulatory language of its SIP at parts H.23.d.vi-vii (Hunter) and H.23.e.vi-vii (Huntington). For Hunter Unit 3, however, the limit specified in part H.23.d.vii (1.2 lb/MMBtu heat input for any 3-hour period) does not match the more stringent title V permitted limit of 0.12 lb/MMBtu heat input based on a 30-day rolling average.[183] Utah did not address this discrepancy in its regional haze SIP submission. We invite comment on this issue.

[181] *Id.* at 145–46.

[182] Since 2011, all five units at Hunter and Huntington have consistently operated at levels below their permitted SO_2 limits, achieving SO_2 emission rates between 0.06 and 0.10 lb/MMBtu. Utah regional haze SIP submission at 145.

[183] Title V Operating Permit for PacifiCorp—Hunter Power Plant (Permit No. 1500101004, last revised Nov. 19, 2021), section II.B.3.b., available in the docket for this action.

b. Failure To Evaluate Whether Emission Reduction Measures at CCI Paradox Lisbon Natural Gas Plant Are Necessary for Reasonable Progress

In developing its long-term strategy, Utah chose not to evaluate the four statutory factors to determine whether emission reduction measures at CCI Paradox Lisbon Natural Gas Plant are necessary to make reasonable progress. For the reasons explained in this section IV.C.2.b., we find Utah's decision to be unjustified. Therefore, we propose to disapprove Utah's long-term strategy because the State did not consider the emission reduction measures at Lisbon Natural Gas Plant that are necessary to make reasonable progress toward the national visibility goal, as required by 40 CFR 51.308(f)(2).

The Lisbon Natural Gas Plant is a natural gas processing plant in an area known as the Lisbon Valley in southeastern Utah. As explained in section IV.C.1.a. of this document, Utah used a Q/d screening process to identify potential sources for four-factor analysis. The facility fell within Utah's Q/d screening due to its combined Q/d value of 20.9 for Canyonlands National Park (based on 2014 actual emissions).[184] It is located 35.8 kilometers (approximately 22 miles) from Canyonlands and 54.6 kilometers (approximately 33 miles) from Arches, closer to Class I areas than any other source Utah analyzed.[185]

During its ''secondary'' review of sources, Utah eliminated the Lisbon Natural Gas Plant from further evaluation. Utah elected not to require four-factor analysis for the facility due to its ''anomalously high SO_2 emissions in 2014 (and 2015),'' a Q/d recalculation for years 2017–2021 indicating that the source was below Utah's Q/d threshold of 6, and the facility's recent actual SO_2 emissions dropping to a small fraction of the 2014 emissions used in the original Q/d calculation.[186] As detailed below, these reasons do not justify Utah's decision not to consider the four factors and determine the emission reduction measures at Lisbon Natural Gas Plant that are necessary to make reasonable progress.

[184] Utah regional haze SIP submission at 100.

[185] *Id.* at 100, 103.

To evaluate the State's discussion of Lisbon Natural Gas Plant's Q/d values, the EPA calculated the facility's combined (SO_2, NO_X, and PM_{10}) Q/d values for Canyonlands National Park using emissions data the source provided to Utah.[187] Our results are listed in table 16 of this document; the State's Q/d calculations are reported in table 29 (Q/d values based on 2014 emissions) and table 31 (Q/d values for 2017–2021) of its regional haze SIP submission. Table 16 shows Lisbon Natural Gas Plant's actual emissions from 2008–2021 and the Q/d values we calculated for Canyonlands National Park based on those actual emissions. Given Utah's reference to ''anomalously high'' SO_2 emissions in 2014 and 2015, we also included a scenario calculating the facility's Q/d value had it emitted zero SO_2 (*i.e.,* the Q/d value reflects only NO_X and PM_{10} emissions) in the years when its actual SO_2 emissions caused the Q/d value to exceed 6.

BILLING CODE 6560–50–P

[186] *Id.* at 102–103.

[187] See CCI Paradox emissions data.xlsx, available in the docket for this action.

Table 16. CCI Paradox Lisbon Natural Gas Plant Emissions and Q/d Values with Yearly Scenarios Assuming Zero SO_2 Emissions

CCI Paradox Midstream Lisbon Natural Gas Plant					
Year	NO_X	PM_{10}	SO_2	Combined Q	Combined Q/d at Canyonlands (35.80 km)
2008	213.06	5.43	85.24	303.73	8.48
2008 - No SO_2 Emissions Scenario	213.06	5.43	-	218.49	6.10
2009	218.02	5.05	147.24	370.31	10.34
2009 - No SO_2 Emissions Scenario	218.02	5.05	-	223.07	6.23
2010	21.70	5.13	82.24	109.07	3.05
2011	156.98	6.61	24.87	188.46	5.26
2012	157.99	6.88	0.10	164.97	4.61
2013	237.83	7.61	5.09	250.53	7.00
2013 - No SO_2 Emissions Scenario	237.83	7.61	-	245.43	6.86
2014	188.56	58.99	499.57	747.11	20.87
2014 - No SO_2 Emissions Scenario	188.56	58.99	-	247.54	6.91
2015	235.27	22.13	664.66	922.06	25.76
2015 - No SO_2 Emissions Scenario	235.27	22.13	-	257.40	7.19
2016	242.38	14.69	78.49	335.56	9.37
2016 - No SO_2 Emissions Scenario	242.38	14.69	-	257.07	7.18
2017	Plant not in operation				
2018	111.56	45.11	0.05	156.73	4.38
2019	Plant not in operation				
2020	186.53	61.91	0.65	249.09	6.96
2020 - No SO_2 Emissions Scenario	186.53	61.91	-	248.44	6.94
2021	181.44	27.83	0.09	209.35	5.85

BILLING CODE 6560–50–C

For 2020, we calculated a combined Q/d value of 6.96, compared to the State's value of 5.3. This discrepancy appears to have resulted from Utah's use of a NO_X emission value of 126.0 tpy for 2020, rather than the 186.53 tpy reported in the EPA's Emissions

Inventory System (EIS).[188] Thus, we disagree with the State's determination that Lisbon Natural Gas Plant's Q/d values based on 2017–2021 emissions ''all . . . fall below'' its Q/d threshold of 6.[189]

The data in table 16 do not support the State's assessment that anomalously high SO_2 emissions in 2014 and 2015 were largely responsible for Lisbon Natural Gas Plant's Q/d values. For every year between 2008 and 2021 where the source exceeded Utah's combined Q/d threshold of 6, table 16 shows that would still hold true even when all SO_2 emissions are eliminated from the ''Q.'' [190] In other words, the source's anomalous SO_2 emissions in 2014 and 2015 (and its SO_2 emissions in any other year) did not cause it to exceed the Q/d threshold. It would have surpassed that threshold based on NO_X and PM_{10} emissions alone. For that same reason, Utah's statement that the source's SO_2 emissions in 2017–2021 dropped to ''0.01 and 0.13 percent of the 2014 levels used in the original screening'' [191] do not justify the State's decision not to evaluate the four statutory factors for Lisbon Natural Gas Plant. Moreover, even if the State had properly excluded SO_2 emissions from consideration, a four-factor analysis may still have been warranted for NO_X and PM emission reduction measures because those emissions caused the source to exceed Utah's Q/d threshold.

The WEP values for Lisbon Natural Gas Plant, which Utah considered when evaluating the appropriateness of its source selections,[192] show that the facility is a top ten contributor to nitrate visibility impairment at Arches National Park and Canyonlands National Park. Considering all in-state and all out-of-state point sources, Lisbon Natural Gas Plant ranks ninth for nitrate WEP value, indicating that its NO_X emissions are expected to affect visibility even without considering SO_2.

Furthermore, other sources that Utah selected for four-factor analysis (namely Ash Grove Leamington Cement Plant, Graymont Cricket Mountain Plant, and US Magnesium Rowley Plant) all have similar Q/d values as the Lisbon Natural Gas Plant. See table 17. Utah's regional haze SIP submission does not adequately justify the State's decision to evaluate the four statutory factors for all of these other sources but not for Lisbon Natural Gas Plant.

Table 17. Q/d Values for Utah's Selected Sources and CCI Paradox Lisbon Natural Gas Plant

State	IMPROVE Site ID	Class I Area	Ash Grove Leamington Cement Plant	CCI Paradox Lisbon Natural Gas Plant	Graymont Cricket Mtn. Plant	PacifiCorp Hunter Power Plant	PacifiCorp Huntington Power Plant	Sunnyside Cogeneration	US Magnesium Rowley Plant
			Q/d Values from Utah's Selected Sources at Utah Class I Areas						
UT	CANY1	Arches National Park	4	14	4	135	76	15	6
UT	BRCA1	Bryce Canyon National Park	4	3	8	86	49	6	6
UT	CANY1	Canyonlands National Park	4	21	5	153	80	12	6
UT	CAPI1	Capitol Reef National Park	7	5	9	216	106	11	7
UT	ZICA1	Zion National Park	4	2	7	63	37	5	6

The regulations at 40 CFR 51.308(f)(2)(i) requires a state's SIP submission to include ''a description of the criteria it used to determine which sources or groups of sources it evaluated.'' In addition, the state must adequately document the technical basis for source selection, as required by 40 CFR 51.308(f)(2)(iii). As explained in this section, Utah did not adequately justify its decision not to evaluate the four statutory factors for Lisbon Natural

[188] Utah regional haze SIP submission at 103. The EIS data for Lisbon Natural Gas Plant is included in the docket for this action.

[189] Utah regional haze SIP submission at 102.

[190] See the ''No SO_2 Emissions Scenario'' for 2008, 2009, 2013, 2014, 2015, 2016, and 2020 in table 16.

[191] Utah regional haze SIP submission at 102.

[192] *Id.* at 108.

Gas Plant to determine the emission reduction measures necessary to make reasonable progress. Consequently, we find that Utah's long-term strategy does not satisfy the requirements of 40 CFR 51.308(f)(2).

c. Improper Inclusion of Automatic Exemption for Startup, Shutdown, and Malfunction Events in Emission Limitations for Intermountain Power Plant

We are also proposing to disapprove Utah's long-term strategy for the improper inclusion of an automatic exemption for SSM events in the emission limitations for Intermountain power plant. As detailed in this section, these automatic exemptions violate CAA requirements.

The CAA, RHR, and 2017 RHR Revisions establish the requirements states must meet in developing SIPs to address visibility impairment.[193] CAA section 110(a)(2)(A) requires that each SIP submitted by a state under the CAA ''shall 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 this chapter.'' Under the CAA's visibility provisions, CAA section 169A(b)(2) requires states' SIPs to ''contain such emission limits, schedules of compliance and other measures as may be necessary to make reasonable progress toward meeting the national goal.'' In addition, CAA section 169B(e)(2) directs the Administrator to promulgate regulations under section 169A requiring states to revise their SIPs under CAA section 110, specifying that those SIPs must contain such emission limits, schedules of compliance, and other measures as may be necessary to carry out the regulations promulgated pursuant to the CAA's visibility provisions.

Pursuant to this statutory directive, the EPA promulgated the RHR and its subsequent 2017 revisions,[194] which require states' long-term strategies to ''include the enforceable emissions limitations, compliance schedules, and other measures that are necessary to make reasonable progress'' towards remedying and preventing anthropogenic visibility impairment in Class I areas.[195] Under CAA section 302(k), ''emission limitation'' is defined as ''a requirement established by the State or the Administrator which limits the quantity, rate, or concentration of emissions of air pollutants on a continuous basis, including any requirement relating to the operation or maintenance of a source to assure continuous emission reduction, and any design, equipment, work practice or operational standard promulgated under this chapter.'' [196]

When states are developing SIPs to address regional haze, they may exercise discretion, consistent with the statutory and regulatory requirements, to determine what emission limitations are necessary to make reasonable progress. If a state determines that emission limitations are necessary, it must incorporate those emission limitations into its SIP pursuant to CAA section 110(a)(2)(A).

In 2015, the EPA issued a SIP call that laid out our policy with respect to SSM provisions in SIPs.[197] Specifically, the EPA determined that SIP provisions that create or authorize exemptions from SIP emission limitations during SSM events are inconsistent with the CAA. This is because excess emissions during SSM events result in higher emissions that are not considered a violation under the CAA, even though the source exceeds the otherwise applicable emission limitation.[198]

In *Environmental Committee of the Florida Electric Power Coordination Group, Inc.* v. *EPA*,[199] petitioners challenged the EPA's 2015 SIP call for four categories of SIP provisions that provide full or limited exemptions for SSM events: (1) automatic exemptions; (2) director's discretion provisions; (3) overbroad enforcement discretion provisions; and (4) affirmative defense provisions. The D.C. Circuit held that the EPA impermissibly issued a SIP call for automatic and director's discretion exemptions, because the EPA was required to determine under CAA section 110(a)(2)(A) whether it was ''necessary or appropriate'' for the emissions restrictions at issue in the 2015 SIP call to qualify as emission limitations as defined by CAA section 302(k).[200]

Based on *Environmental Committee of the Florida Electric Power Coordination Group, Inc.* v. *EPA,* the EPA's evaluation of Utah's regional haze SIP submission hinges on whether the emission restrictions contained in the SSM provision included in the regulatory portion of Utah's regional haze SIP submission are ''emissions limitations . . . that are necessary to make reasonable progress'' [201] toward the national goal of remedying and preventing anthropogenic visibility impairment at Class I areas. As explained below, the State has concluded that these provisions are emission limitations necessary to make reasonable progress under CAA sections 169A(b)(2) and 110(a)(2) and 40 CFR 51.308(f)(2); thus, CAA section 302(k) requires that they be continuous.

In its regional haze SIP submission, Utah, under CAA section 169A(b)(2) and 40 CFR 51.308(f)(2), selected seven sources, including Intermountain power plant, as sources whose emission limitations are measures necessary for reasonable progress.[202] For Intermountain power plant, the State is requiring existing emission limitations until the coal-fired units cease operations by December 31, 2027. In chapter 8.d (Reasonable Progress Determinations), Utah determined, and the EPA agrees, that it is necessary for Intermountain power plant to implement emission controls in the form of existing emission limitations to guarantee that Intermountain power plant will continue to implement existing measures and will not increase its emission rate before the scheduled shutdown of the coal-fired units.[203] This is supported by chapter 6 (Long-Term Strategy for Second Planning Period of Utah's regional haze SIP submission).[204] Chapter 6.A provides the long-term strategy requirements under 40 CFR 51.308(f)(2), including incorporation of emission limitations and schedules for compliance for Intermountain power plant and six other sources to achieve the reasonable progress goals.[205] In addition, chapter 6.A.8 (Emissions Limitations and Schedules for Compliance to Achieve the RPG) states that ''emissions limitations and schedules for compliance for the second planning period may be found in SIP subsection IX.H.23.'' [206] Section IX.H.23 is titled ''Emission Limitations: Regional

[193] 42 U.S.C. 7410(a)(2)(B), 7491(b)(2), 7492(e)(2). 1999 RHR, 64 FR 35714, 35743 (Jul. 1, 1999), and 2017 RHR revisions, 82 FR 3078 (Jan. 10, 2017).

[194] 1999 RHR, 64 FR 35714 (Jul. 1, 1999), and 2017 RHR Revisions, 82 FR 3078 (Jan. 10, 2017).

[195] 40 CFR 51.308(f)(2).

[196] CAA section 302(k).

[197] 80 FR 33840 (June 12, 2015).

[198] *Id.* at 33842, 33874. This type of exemption from a SIP emission limitation is referred to as an automatic exemption under the SSM policy, since the SSM provision in a SIP emission limitation automatically exempts excess emissions from the SIP emission limitation.

[199] 94 F.4th 77 (D.C. Cir. 2024).

[200] *See* 94 F.4th at 100.

[201] 40 CFR 51.308(f)(2). In addition, CAA section 169B(e)(2) authorized the EPA to promulgate the RHR (40 CFR 51.308) requiring states to revise their SIPs under CAA section 110, specifying that those SIPs must contain such emission limits, schedules of compliance, and other measures as may be necessary to carry out these regulations.

[202] Utah regional haze SIP submission at 180.

[203] *Id.* at 180.

[204] *Id.* at 72.

[205] *Id.*

[206] *Id.* at 88.

Haze Requirement, Reasonable Progress Control Measures'' and provides the emission reduction measures, including emission limitations, for Intermountain power plant and other sources that are necessary to make reasonable progress for the second implementation period.[207] While not all control measures qualify as emission limitations, in this instance, the EPA agrees with the State's determination that these provisions are ''emission limitations'' that the State has concluded are necessary to make reasonable progress toward the national goal.[208]

When a state relies on an emission limitation as part of its SIP submission, the emission limitation must limit the quantity, rate, or concentration of emissions of air pollutants on a continuous basis, as required under CAA section 302(k).[209] The goal that Congress established for the visibility protection program is to prevent future and remedy existing anthropogenic visibility impairment in Class I areas.[210] When a state submits a SIP with an emission limitation to meet the CAA's visibility requirements, the emission limitation needs to be continuous to ensure that visibility conditions at Class I areas are improving uninterrupted.[211] Relying on an emission limitation that allows for uncontrolled excess emissions during SSM events could negatively impact a state's ability to make reasonable progress toward meeting the national goal.

The Intermountain power plant emission limitations contained in SIP subsection IX, part H.23., ''Source Specific Emission Limitations: Regional Haze Requirements, Reasonable Progress Controls,'' include an automatic exemption for SSM events that occur when Intermountain power plant is operating prior to its closure.[212] Parts H.23.c.i.B.I–III establish PM_{10}, NO_X, and SO_2 emission limitations for Intermountain power plant, while part H.23.c.i.B.IV provides that these emission limitations ''apply at all times except for periods of startup, shutdown, malfunction (NO_X or PM_{10} only), or emergency conditions (SO_2 only).'' [213] This exemption means that emissions exceeding the normal operational limits under periods of SSM or emergency conditions would not be considered to violate the emission limitations. The emission limitations for all of the other sources that Utah determined are necessary to make reasonable progress are continuous.[214] However, the SSM provision that is part of the Intermountain power plant emission limitations at H.23.c.i.B.IV has no defined parameters for the excess emissions that will occur during periods of SSM or emergency conditions,[215] making these emission limitations less than continuous. Because Utah has determined that the emission limitations for Intermountain power plant are measures necessary for reasonable progress, the emission limitations must be continuous at all times. Therefore, the emission limitations are inconsistent with the CAA and are not approvable for inclusion into the Utah SIP.

d. Unreasonable Rejection of Technically Feasible SO_2 Emissions Reduction Measures and Establishment of Unsupported Emission Limitations for Sunnyside Cogeneration Facility

As detailed in sections IV.C.d.i.-ii. of this document, we also propose to disapprove Utah's long-term strategy based on problems with the State's evaluation of the measures necessary to make reasonable progress for Sunnyside Cogeneration Facility. First, the State unreasonably rejected dry scrubbing (also known as dry sorbent injection, or DSI),[216] a technically feasible SO_2 control, without providing adequate technical documentation. Second, the State did not provide adequate technical documentation to support the emission limitations for Sunnyside that it incorporated into its SIP.

i. Unreasonable Rejection of Technically Feasible SO_2 Emissions Reduction Measures

Sunnyside conducted an initial evaluation of additional SO_2 controls for its facility and eliminated spray dry absorbers, wet scrubbing, and hydrated ash reinjection as technically infeasible. Sunnyside found that dry scrubbing/DSI, an add-on retrofit control, was technically feasible. Dry scrubbing/DSI systems operate through the injection of a powdered sorbent, such as lime, into the flue gas downstream of the boiler.[217] Sunnyside noted the mechanical simplicity, ease of installation, limited water use, and simplicity of waste disposal associated with dry scrubbing/DSI systems.[218] Sunnyside conducted a four-factor analysis for dry scrubbing/DSI and calculated a cost/ton value of just over $10,000/ton.[219]

Utah identified multiple problems with Sunnyside's cost analysis, which it found ''improperly inflated the costs of a dry scrubber.'' [220] Among other issues, the State pointed out that Sunnyside did not adequately justify its application of a retrofit factor of 1.3 (which resulted in a 30% inflation of costs),[221] its use of a 20-year instead of a 30-year amortization period, and its inclusion of the costs of a new baghouse, which Sunnyside maintained would be necessary for a dry scrubbing/DSI system.[222]

In its October 2021 response to the State, Sunnyside abandoned its consideration of dry scrubbing/DSI, asserting that ''[a]fter further evaluation, a dry scrubbing unit cannot be retrofitted between the [circulating fluidized bed] boiler and the existing baghouse due to space limitations requiring significant reconfiguration of existing equipment.'' [223] It concluded that a circulating dry scrubber/circulating fluidized bed scrubber (CDS/CFBS) was the only add-on SO_2 control technology that is potentially technically feasible.[224] Sunnyside provided a new cost analysis for CDS/CFBS to replace its previous dry scrubbing/DSI analysis, calculating cost/ton values that ranged between $27,890-$118,553/ton based on minimum, average, and maximum cost scenarios.[225] Those cost/ton values significantly exceeded that of the dry scrubbing/DSI system (just over $10,000/ton), which Utah had already

[207] Utah regional haze SIP submission, appendix A, part H.23.

[208] Utah regional haze SIP submission at 180.

[209] CAA section 110(a)(2)(A), section 302(k).

[210] CAA section 169A(a)(1).

[211] CAA sections 110(a)(2)(A), 169A, 169B(e)(2), and 302(k); 40 CFR 51.308(f).

[212] Utah regional haze SIP submission, appendix A, part H.23.

[213] *Id.*

[214] *Id.*

[215] *Id.*

[216] The documents in the record use several terms to refer to this control technology, including dry scrubbing, dry scrubbers, dry sorbent injection (DSI), and dry injection.

[217] Sunnyside clarified that dry scrubbing is an add-on technology that is separate from its existing practice of injecting limestone directly into the circulating fluidized bed boiler. Utah regional haze SIP submission, appendix C.4.C at 5–6.

[218] Utah regional haze SIP submission, appendix C.4.A at 5–2—5–4.

[219] *Id.* at 5–5.

[220] Utah regional haze SIP submission, appendix C.4.B at 15.

[221] Retrofit factors are used to quantify the additional costs of installation not directly related to the capital costs of the controls themselves, such as the unexpected magnitude of anticipated cost elements, the costs of unexpected delays, the cost of re-engineering and re-fabrication, and the cost of correcting design errors. EPA, Control Cost Manual, Chapter 2: Cost Estimation: Concepts and Methodology (Nov. 2017), at 27, available in the docket for this action.

[222] Utah regional haze SIP submission, appendix C.4.B at 15–19.

[223] Utah regional haze SIP submission, appendix C.4.C at 7.

[224] *Id.*

[225] Utah regional haze SIP submission, appendix D.2.I at 2–3 (section titled ''Total Installed Cost for Circulating Dry Scrubber (CDS)'').

determined was likely overestimated. Utah ultimately accepted Sunnyside's analyses and concluded that CDS/CFBS was not necessary for reasonable progress.

Sunnyside did not submit any documentation to substantiate the space constraints that led it to exclude dry scrubbing/DSI from further consideration as an emission reduction measure necessary to make reasonable progress. Its appeal to space limitations consisted of a single conclusory sentence with no supporting details or explanation.[226] The National Park Service commented that Sunnyside had not adequately explained why there would be insufficient space for a dry scrubbing/DSI system but not for a CDS/CFBS system.[227] Conservation organizations presented a similar criticism, pointing out that DSI involves injecting sorbent into the flue gas ductwork between the air preheater and the baghouse, which should not present any space limitations.[228] Although Sunnyside submitted two letters to the State responding specifically to comments raised by the National Park Service and the conservation organizations, it did not address their points about its failure to substantiate the purported space constraints on a dry scrubber/DSI system.[229] While Utah responded that Sunnyside had adequately demonstrated infeasibility based on the lack of physical space and air flow mechanics described in the facility's May 27, 2022 submission,[230] the information in that submission pertains to CDS/CFBS and not to the dry scrubber/DSI system that Sunnyside rejected in its October 2021 submission.[231]

Based on our review of the materials in the record, we find that Utah has not provided adequate technical documentation justifying the exclusion of a dry scrubber/DSI system from further consideration based on space constraints. And because Sunnyside abandoned its evaluation of the dry scrubber/DSI system in favor of CDS/CFBS, it never prepared a revised cost analysis remedying the shortcomings Utah had initially identified. As a result, Utah did not satisfy 40 CFR 51.308(f)(2)(iii)'s requirement to document the technical basis, including modeling, monitoring, cost, engineering, and emissions information on which it is relying. For these reasons, we propose to disapprove Utah's long-term strategy because the State did not reasonably evaluate and determine the emission reduction measures for Sunnyside that are necessary to make reasonable progress, as required by CAA section 169A and 40 CFR 51.308(f)(2).

ii. Unsupported Emission Limitations for Making Reasonable Progress

We are also proposing to disapprove Utah's long-term strategy because the State did not provide adequate technical documentation to support the emission limitations it incorporated into its SIP for Sunnyside Cogeneration Facility. In its regional haze SIP submission, Utah determined that the existing control measures and emission limitations at Sunnyside are necessary to achieve reasonable progress in the second implementation period and incorporated those limitations into its SIP.[232] However, the SIP incorporates two separate emission limitations for both NO_X and SO_2: one that applies during normal boiler operation and one that applies during SSM events.[233]

Utah neither included a definition of the term ''normal boiler operations'' nor provided any documentation of the frequency of normal boiler operations versus SSM events, making it difficult to determine what combination of emission limitations under normal boiler operations and SSM events Utah has determined are necessary to make reasonable progress. Based on the analysis that Utah submitted for Sunnyside, we cannot determine whether the State concluded that the ''existing controls and emissions limits for the Sunnyside Cogeneration Facility. . . necessary for reasonable progress'' [234] are based on Sunnyside operating continuously at the higher SSM emission limitation or on some other operational scenario. Because Utah did not provide adequate technical documentation explaining how the alternative SSM emission limitation relates to the State's obligation to make reasonable progress, we propose to disapprove Utah's long-term strategy under CAA section 169A and 40 CFR 51.308(f)(2).

e. Other Long-Term Strategy Requirements Under 40 CFR 51.308(f)(2)(ii) Through (iv)

States must also meet the requirements specified in 40 CFR 51.308(f)(2)(ii) through (iv) when developing their long-term strategies. 40 CFR 51.308(f)(2)(ii) requires states to consult with other states (states that have emissions that are reasonably anticipated to contribute to visibility impairment in Class I areas) to develop coordinated emission management strategies. Utah engaged with other states throughout the development of its regional haze SIP submission by participating in WRAP regional haze workgroup meetings. Additionally, Utah directly communicated with other states about the SIP submittal, including Arizona, Colorado, Idaho, New Mexico, Nevada, and Wyoming.[235]

The regulation at 40 CFR 51.308(f)(2)(iii) requires states to document the technical basis, including modeling, monitoring, costs, engineering, and emissions information, on which the state is relying to determine the emission reduction measures that are necessary to make reasonable progress in each mandatory Class I area it impacts. Utah relied on WRAP technical information, modeling, and analysis to support the development of its long-term strategy.

The regulation at 40 CFR 51.308(f)(2)(iv) specifies five additional factors states must consider in developing their long-term strategies. The five additional factors are: emission reductions due to ongoing air pollution control programs, including measures to address reasonably attributable visibility impairment; measures to mitigate the impacts of construction activities; source retirement and replacement schedules; basic smoke management practices for prescribed fire used for agricultural and wildland vegetation management purposes and smoke management programs; and the anticipated net effect on visibility due to projected changes in point, area, and

[226] Utah regional haze SIP submission, appendix C.4.C at 7.

[227] Utah regional haze SIP submission, appendix D.I at 34. The National Park Service referred to dry scrubbing as a dry sorbent injection (DSI) system.

[228] National Parks Conservation Association et al., ''Comments on Utah's Proposed Regional Haze State Implementation Plan for the 2nd Implementation Period'' (May 31, 2022) at 36; exhibit A at 43.

[229] Utah regional haze SIP submission, appendices D.2.G and D.2.I.

[230] Utah regional haze SIP submission, appendix H at 668.

[231] Utah regional haze SIP submission, appendix D.2.G at 5–7.

[232] Utah regional haze SIP submission at 179.

[233] Part H.23(f) states: ''i. Emissions of NO_X (during normal boiler operation not including startup, shutdown and malfunction) shall not exceed 0.25 lb per MMBtu heat input on a 30-day rolling average. ii. Emissions of NO_X (including startup, shutdown and malfunction) shall not exceed 0.6 lb per $10-6$ BTU heat input on a 30-day rolling average. iii. Emissions of SO_2 (during normal boiler operation not including startup, shutdown and malfunction) shall not exceed 0.42 lb per MMBtu heat input on a 30-day rolling average and 462 lb per hour on a 3-hour block average. Emissions of SO_2 (including startup, shutdown and malfunction) shall not exceed 1.2 lb per $10-6$ BTU heat input on a 30-day rolling average.'' Utah regional haze SIP submission, appendix A, section IX, part H.23(f).

[234] Utah regional haze SIP submission at 179.

[235] *Id.* at 181–83 and appendix B.

mobile source emissions over the period addressed by the long-term strategy. Utah described each of the five additional factors in sections 6.A.5. through 6.A.10. of its regional haze SIP submission.

Regardless, as explained in the preceding sections of this document, due to flaws and omissions in its four-factor analyses and the resulting control determinations, the EPA finds that Utah did not submit a long-term strategy that includes ''the enforceable emissions limitations, compliance schedules, and other measures that are necessary to make reasonable progress'' as required by 40 CFR 51.308(f)(2).[236] Consequently, we find that Utah's regional haze SIP submission does not satisfy the long-term strategy requirements of 40 CFR 51.308(f)(2). Therefore, the EPA proposes to disapprove all elements of Utah's regional haze SIP submission that relate to § 51.308(f)(2)'s long-term strategy requirements.

f. Implications of Senate Bill 161

On March 21, 2024, the Governor of Utah signed legislation titled ''Senate Bill 161'' (SB 161),[237] which includes a provision that requires entities that own coal-fired electric generating facilities that are slated to be decommissioned, such as Intermountain power plant, to continue operations through the establishment of a transitional and alternative permit process. SB 161 also prescribes the authority and process for the State of Utah to purchase these facilities and auction them to continue operations. On June 21, 2024, the Governor of Utah signed House Bill 3004, which revises SB 161.[238] Specifically, House Bill 3004 revises the alternative permitting process for electric generating facilities that are slated for decommissioning. As submitted, Utah's regional haze SIP submission incorporates the retirement of two coal-fired units at Intermountain power plant with a closure date of no later than December 31, 2027. We recognize there is uncertainty related to the legislation, alternative permitting process, and potential changes in ownership, as well as any ensuing litigation that could potentially occur during and after the EPA's rulemaking on Utah's regional haze SIP submission. We are seeking comment on the potential impact of the existing language in SB 161 and HB 3004 on Utah's regional haze SIP provision incorporating the two coal-fired unit retirements at Intermountain power plant, including any implications related to compliance with CAA section 110(a)(2)(E).

D. Reasonable Progress Goals

The EPA proposes to find that Utah did not meet the reasonable progress goal requirements under 40 CFR 51.308(f)(3). Section 51.308(f)(3)(i) requires a state in which a Class I area is located to establish RPGs—one each for the most impaired and clearest days—reflecting the visibility conditions that will be achieved at the end of the implementation period as a result of the emission limitations, compliance schedules and other measures required under paragraph (f)(2) in states' long-term strategies, as well as implementation of other CAA requirements.

After establishing its long-term strategy, Utah developed reasonable progress goals for each Class I area for the 20% most impaired days and 20% clearest days based on the results of 2028 WRAP modeling.[239] The reasonable progress goals are based on Utah's long-term strategy, the long-term strategy of other states that may affect Class I areas in Utah, and other CAA requirements.

Per 40 CFR 51.308(f)(3)(iv), the EPA must evaluate the demonstrations the State developed pursuant to 40 CFR 51.308(f)(2) to determine whether the State's reasonable progress goals for visibility improvement provide for reasonable progress towards natural visibility conditions. As previously explained in section IV.C.2. of this document, we are proposing to disapprove Utah's long-term strategy for not meeting the requirements of 40 CFR 51.308(f)(2). Therefore, we also propose to disapprove Utah's reasonable progress goals under 40 CFR 51.308(f)(3) because compliance with that requirement is dependent on compliance with 40 CFR 51.308(f)(2).

E. Reasonably Attributable Visibility Impairment (RAVI)

The RHR contains a requirement at 40 CFR 51.308(f)(4) related to any additional monitoring that may be needed to address visibility impairment in Class I areas from a single source or a small group of sources. This is called ''reasonably attributable visibility impairment,'' [240] also known as RAVI. Under this provision, if the EPA or the FLM of an affected Class I area has advised a state that additional monitoring is needed to assess RAVI, the state must include in its SIP revision for the second implementation period an appropriate strategy for evaluating such impairment. The EPA has not advised Utah to that effect, and the FLMs for the Class I areas that Utah contributes to have not identified any RAVI from sources located in Utah.[241] Accordingly, the EPA proposes to approve the portions of Utah's regional haze SIP submission relating to 40 CFR 51.308(f)(4).

F. Monitoring Strategy and Other State Implementation Plan Requirements

Section 51.308(f)(6) specifies that each comprehensive revision of a state's regional haze SIP must contain or provide for certain elements, including monitoring strategies, emissions inventories, and any reporting, recordkeeping and other measures needed to assess and report on visibility. A main requirement of this section is for states with Class I areas to submit monitoring strategies for measuring, characterizing, and reporting on visibility impairment. Compliance with this requirement may be met through participation in the IMPROVE network. Utah participates in the IMPROVE monitoring network.

Section 51.308(f)(6)(i) requires SIPs to provide for the establishment of any additional monitoring sites or equipment needed to assess whether reasonable progress goals to address regional haze for all mandatory Class I Federal areas within the state are being achieved. As we stated in the 2017 RHR Revisions, ''neither the EPA nor any state has concluded that the IMPROVE network is not sufficient in this way.'' [242] The EPA is not aware of information suggesting that the IMPROVE monitors within Utah Class I areas are no longer sufficient to assess

[236] See also CAA section 169A(b)(2), section 169A(b)(2)(B) (requiring regional haze SIPs to ''contain such emission limits, schedules of compliance and other measures as may be necessary to make reasonable progress toward meeting the national goal, . . . including . . . a long-term . . . strategy for making reasonable progress[.]'').

[237] The enrolled copy of SB 161 is available in the docket for this action. Additional information on SB 161 can be found on the Utah State Legislature's website: *https://le.utah.gov/~2024/bills/static/SB0161.html* (last accessed July 24, 2024).

[238] The enrolled copy of House Bill 3004 is available in the docket for this action. Additional information on House Bill 3004 can be found on the Utah State Legislature's website: *https://le.utah.gov/~2024S3/bills/static/HB3004.html* (last accessed July 24, 2024).

[239] Utah regional haze SIP submission at 172–180.

[240] The EPA's visibility protection regulations define ''reasonably attributable visibility impairment'' as ''visibility impairment that is caused by the emission of air pollutants from one, or a small number of sources.'' 40 CFR 51.301.

[241] Utah regional haze SIP submission at 81.

[242] 82 FR 3085.

the status of reasonable progress goals. Therefore, the EPA finds that Utah has satisfied 40 CFR 51.308(f)(6)(i).

Section 51.308(f)(6)(ii) requires SIPs to provide for procedures by which monitoring data and other information are used in determining the contribution of emissions from within the state to regional haze visibility impairment at mandatory Class I Federal areas both within and outside the state. Chapters 4, 5, 6, 7, and 8 of the Utah regional haze SIP submission describe various analytical methods and tools the State relied on to assess the quantitative impact of Utah emissions on in-state and out-of-state Class I areas. IMPROVE monitoring data and the State's emissions inventory data were used, in many instances, as inputs to the tools and products available in WRAP's TSS, such as the CAMx Particle Source Apportionment tool (PSAT) photochemical model used to assess Utah's contributions to light extinction at Class I areas. Due to the State's reliance on the WRAP TSS products and other analytical methods and tools, as described in chapters 4, 5, 6, 7, and 8 of the Utah regional haze SIP submission, we determine that Utah has satisfied 40 CFR 51.308(f)(6)(ii).

Section 51.308(f)(6)(iii) does not apply to Utah, as it has Class I areas.

Section 51.308(f)(6)(iv) requires the SIP to provide for the reporting of all visibility monitoring data to the Administrator at least annually for each Class I area in the state. Utah's monitoring strategy relies on the IMPROVE network, whose monitors at Utah's Class I areas are operated and maintained by the National Park Service. The IMPROVE Steering committee and Data Analysis and Reporting subcommittee develop policies to generate and distribute IMPROVE data, metadata, and data products. That data is made available on IMPROVE, FLM, and the EPA Air Quality System databases. We find that Utah has satisfied 40 CFR 51.308(f)(6)(iv).

Section 51.308(f)(6)(v) requires SIPs to provide for a statewide inventory of emissions of pollutants that are reasonably anticipated to cause or contribute to visibility impairment, including emissions for the most recent year for which data are available and estimates of future projected emissions. It also requires a commitment to update the inventory periodically. Utah provides for emissions inventories and estimates of future projected emissions by participating in WRAP and complying with the EPA's AERR. In 40 CFR part 51, subpart A, the AERR requires states to submit updated emissions inventories for criteria pollutants to the EPA's EIS annually or triennially depending on the source type. The EPA uses the inventory data from the EIS to develop the National Emissions Inventory (NEI), which is a comprehensive estimate of air emissions of criteria pollutants, criteria precursors, and hazardous air pollutants from air emissions sources. The EPA releases an NEI every three years. Section 5.E of the Utah regional haze SIP submission includes tables of statewide NEI data.[243] Anthropogenic emissions and natural emissions are tabulated under various source categories. The inventories account for emissions of SO_2, NO_X, VOC, $PM_{2.5}$, PM_{10}, and NH_3. Utah also relied on WRAP's projected future inventories of emissions under different modeling scenarios for 2028.[244] [245] The EPA finds that Utah has met the requirements of 40 CFR 51.308(f)(6)(v) through its ongoing compliance with the AERR, its compilation of a statewide emissions inventory based on NEI data, its use of WRAP modeling to project future emissions, and its commitment to update its inventory periodically.

Finally, 40 CFR 51.308(f)(6)(vi) requires the SIP to provide for any other elements, including reporting, recordkeeping, and other measures, that are necessary for states to assess and report on visibility. Utah assesses and reports on visibility through participation in the IMPROVE network. The EPA finds that Utah has satisfied the requirements of 40 CFR 51.308(f)(6)(vi) and that no further elements are necessary at this time for Utah to assess and report on visibility.

In sum, for all the reasons discussed in this section IV.F., the EPA is proposing to approve Utah's Regional Haze SIP submission as meeting the applicable requirements of 40 CFR 51.308(f)(6).

G. Requirements for Periodic Reports Describing Progress Towards the Reasonable Progress Goals

The regulation at 40 CFR 51.308(f)(5) requires that periodic comprehensive revisions of states' regional haze plans also address the progress report requirements of 40 CFR 51.308(g)(1) through (5). The purpose of these requirements is to evaluate progress towards the applicable RPGs for each Class I area within the state and each Class I area outside the state that may be affected by emissions from within that state. Section 51.308(g)(1) and (2) apply to all states and require a description of the status of implementation of all measures included in a state's first implementation period regional haze plan and a summary of the emission reductions achieved through implementation of those measures. Section 51.308(g)(3) applies only to states with Class I areas within their borders and requires such states to assess current visibility conditions, changes in visibility relative to baseline (2000–2004) visibility conditions, and changes in visibility conditions relative to the period addressed in the first implementation period progress report. Section 51.308(g)(4) applies to all states and requires an analysis tracking changes in emissions of pollutants contributing to visibility impairment from all sources and sectors since the period addressed by the first implementation period progress report. This provision further specifies the year or years through which the analysis must extend depending on the type of source and the platform through which its emission information is reported. Finally, § 51.308(g)(5), which also applies to all states, requires an assessment of any significant changes in anthropogenic emissions within or outside the state that have occurred since the period addressed by the first implementation period progress report, including whether such changes were anticipated and whether they have limited or impeded expected progress towards reducing emissions and improving visibility.

Utah included the progress report required by 40 CFR 51.308(f)(5) in its regional haze SIP submission. Utah addresses each of the elements specified in 40 CFR 51.308(g)(1) through (5) in chapter 3 of the state's SIP.

To address 40 CFR 51.308(g)(1), Utah details the status of all control measures implemented during the first implementation period, including emission reduction measures at Hunter, Huntington, and Carbon. To address 40 CFR 51.308(g)(2), Utah indicates that the retirement of Carbon Units 1 and 2 resulted in total SO_2 reductions of 8,005 tpy; unit level reductions were 3,388 tpy of SO_2 at Unit 1 and 4,617 tpy of SO_2 at Unit 2. Other reductions are detailed in chapter 5.

To address 40 CFR 51.308(g)(3), Utah refers to chapter 4 of the SIP, which contains its Utah Visibility Analysis. Table 9 within chapter 4 tabulates the

[243] Utah regional haze SIP submission at 66–70 (tables 15–20).

[244] WRAP's modeling methodology used to develop the projected emissions inventories is described in ''WRAP Technical Support System for Regional Haze Planning: Modeling Methods, Results, and References'' (Sept. 30, 2021), available in the docket for this action.

[245] Utah regional haze SIP submission at 66–70 (tables 15–20).

progress in visibility conditions for the clearest and most impaired days at Utah's Class I areas over the baseline period (2000–2004), first implementation period (2008–2012), and current period (2014–2018).

To address 40 CFR 51.308(g)(4), Utah provides an emissions trend analysis of visibility-impairing pollutants from all emissions sources within the State. It also refers to section 5.E of its SIP submission, which compares historical and recent emissions to future projected emissions of visibility-impairing pollutants at Utah's Class I areas.

To address 40 CFR 51.308(g)(5), Utah provides a Western states EGU emissions trend analysis for NO_X and SO_2, which indicates an overall downward trend due to EGU retirements and new pollution controls. Table 3 tabulates changes in emissions over years 1996, 2002, and 2018 for the nine member states of the Grand Canyon Visibility Transport Commission. The table shows that emissions of VOC, NO_X, SO_2, and $PM_{2.5}$ declined, while emissions of coarse material increased.

In sum, because Utah addressed the requirements of 40 CFR 51.308(g)(1) through (5), the EPA is proposing to approve chapter 3 of Utah's Regional Haze SIP as meeting the requirements of 40 CFR 51.308(f)(5) and (g) for periodic progress reports.

H. Requirements for State and Federal Land Manager Coordination

Section 169A(d) of the Clean Air Act requires states to consult with FLMs before holding the public hearing on a proposed regional haze SIP, and to include a summary of the FLMs' conclusions and recommendations in the notice to the public. In addition, § 51.308(i)(2)'s FLM consultation provision requires a state to provide FLMs with an opportunity for consultation that is early enough in the state's policy analyses of its emission reduction obligation so that information and recommendations provided by the FLMs' can meaningfully inform the state's decisions on its long-term strategy. If the consultation has taken place at least 120 days before a public hearing or public comment period, the opportunity for consultation will be deemed early enough. Regardless, the opportunity for consultation must be provided at least sixty days before a public hearing or public comment period at the state level. Section 51.308(i)(2) also provides two substantive topics on which FLMs must be provided an opportunity to discuss with states: assessment of visibility impairment in any Class I area and recommendations on the development and implementation of strategies to address visibility impairment. Section 51.308(i)(3) requires states, in developing their implementation plans, to include a description of how they addressed FLMs' comments.

Utah DAQ met with the FLMs (the National Park Service and the U.S. Forest Service) throughout the second implementation period planning process.[246] Utah provided its draft SIP to the FLMs in December 2021. In February 2022, the FLMs provided detailed comment letters to Utah DAQ on the draft SIP[247] and met with Utah DAQ to present their feedback. Utah DAQ responded to the FLM comments and included the responses in its SIP submission.[248]

Compliance with 40 CFR 51.308(i) is dependent on compliance with 40 CFR 51.308(f)(2)'s long-term strategy provisions and paragraph (f)(3)'s reasonable progress goals provisions. Because the EPA is proposing to disapprove Utah's long-term strategy under 40 CFR 51.308(f)(2) and the reasonable progress goals under 40 CFR 51.308(f)(3), the EPA is also proposing to disapprove the State's FLM consultation under 40 CFR 51.308(i). While Utah did take administrative steps to provide the FLMs the opportunity to review and provide feedback on the State's initial draft regional haze SIP, the EPA cannot approve that consultation because it was based on a plan that does not meet the statutory and regulatory requirements of the CAA and the RHR, as described in this notice of proposed rulemaking. In addition, if the EPA finalizes our proposed partial approval and partial disapproval of Utah's regional haze SIP submission, the State (or the EPA in the potential case of a FIP) will be required to again complete the FLM consultation requirements under 40 CFR 51.308(i). Therefore, the EPA proposes to disapprove the FLM consultation component of Utah's regional haze SIP submission for failure to meet the requirements of 40 CFR 51.308(i), as outlined in this section.

V. Interstate Transport Prong 4 (Visibility) for the 2015 Ozone NAAQS Infrastructure SIP

A. Background on Infrastructure SIPs

Under CAA sections 110(a)(1) and 110(a)(2), each state is required to submit a SIP that provides for the implementation, maintenance, and enforcement of each primary or secondary NAAQS. Moreover, CAA sections 110(a)(1) and 110(a)(2) require each state to make this new SIP submission within three years (or less, if the Administrator so prescribes) after promulgation of a new or revised NAAQS. This type of SIP submission is commonly referred to as an ''infrastructure SIP.'' The overall purpose of the infrastructure SIP requirements is to ensure that the necessary structural components of each state's air quality management program are adequate to meet the state's responsibilities for the new or revised NAAQS. Overall, the infrastructure SIP submission process provides an opportunity for the responsible air agency, the public, and the EPA to review the basic structural requirements of the air agency's air quality management program in light of each new or revised NAAQS.

CAA section 110(a)(2)(D) has two components: 110(a)(2)(D)(i) and 110(a)(2)(D)(ii). CAA section 110(a)(2)(D)(i) includes four distinct components, commonly referred to as ''prongs,'' that must be addressed in infrastructure SIP submissions. The first two prongs, which are codified in CAA section 110(a)(2)(D)(i)(I), prohibit any source or other type of emissions activity in one state from contributing significantly to nonattainment of the NAAQS in another state (prong 1) and from interfering with maintenance of the NAAQS in another state (prong 2). The third and fourth prongs, which are codified in CAA section 110(a)(2)(D)(i)(II), prohibit emissions activity in one state from interfering with measures required to prevent significant deterioration of air quality in another state (prong 3) or from interfering with measures to protect visibility in another state (prong 4).

B. Prong 4 Requirements

CAA section 110(a)(2)(D)(i)(II) requires SIPs to contain provisions prohibiting sources in a state from emitting pollutants in amounts that interfere with any other state's efforts to protect visibility under part C of the CAA (which includes sections 169A and 169B). The EPA issued guidance on infrastructure SIPs in a September 13, 2013 memorandum from Stephen D. Page titled ''Guidance on Infrastructure State Implementation Plan (SIP) Elements under Clean Air Act Sections 110(a)(1) and 110(a)(2)'' (''2013 Guidance''). The 2013 Guidance states that these prong 4 requirements can be satisfied by approved SIP provisions that the EPA has found to adequately address any contribution of that state's sources that impact the visibility

[246] Utah regional haze SIP submission at 186.

[247] Utah regional haze SIP submission, appendices D.I and D.3.

[248] Utah regional haze SIP submission at 187–194.

program requirements in other states.[249] The 2013 Guidance also states that ''[t]he EPA interprets this prong to be pollutant-specific, such that the infrastructure SIP submission need only address the potential for interference with protection of visibility caused by the pollutant (including precursors) to which the new or revised NAAQS applies.'' [250]

The 2013 Guidance lays out how a state's infrastructure SIP may satisfy prong 4. In the second implementation period, confirmation that the state has a fully approved regional haze SIP that fully meets the requirements of 40 CFR 51.308 or 51.309 will satisfy the requirements of prong 4.[251] The regulations at 40 CFR 51.308 and 51.309 ''specifically require that a state participating in a regional planning process include all measures needed to achieve its apportionment of emission reduction obligations agreed upon through that process.'' [252] A fully approved regional haze SIP [253] will ensure that emissions from sources under an air agency's jurisdiction are not interfering with measures required to be included in other air agencies' plans to protect visibility.

Through this action, the EPA is proposing to disapprove the prong 4 portion of Utah's 2020 ozone infrastructure SIP submittal. All other applicable infrastructure SIP requirements for that SIP submission have been addressed in separate rulemakings.[254]

On October 26, 2015, the EPA revised the 8-hour ozone NAAQS to 70 parts per billion.[255] States were required to submit infrastructure SIPs within three years of promulgation of the revised NAAQS. On October 24, 2019, the State of Utah submitted a SIP revision to the EPA addressing the CAA sections 110(a)(1) and (2) infrastructure requirements for the 2015 ozone NAAQS, including CAA section 110(a)(2)(D)(i)(II) prong 4. The EPA evaluated this submission for completeness pursuant to the criteria in 40 CFR part 51, appendix V, and concluded that it was incomplete because Utah had not provided the necessary certification under section 2.1(g) of appendix V that a public hearing was held or provided the opportunity for the public to request a public hearing in accordance with 40 CFR 51.102(a). On November 21, 2019, the EPA sent a letter to Utah explaining our incompleteness determination.[256] On January 29, 2020, Utah submitted a new SIP revision addressing the infrastructure requirements for the 2015 ozone NAAQS (''2020 ozone infrastructure SIP submittal''), including CAA section 110(a)(2)(D)(i)(II) prong 4.[257] This proposed rulemaking only addresses the prong 4 element of the 2020 Ozone infrastructure SIP submittal.

C. Utah's Prong 4 Elements

To satisfy the prong 4 requirements for the 2015 ozone NAAQS, Utah's 2020 ozone infrastructure SIP submittal points to the EPA's initial disapproval action, subsequent litigation, and the State's then-forthcoming submission to meet the requirements of the first regional haze implementation period. This history, including the final approval action the EPA ultimately took on November 27, 2020,[258] is discussed in section II.C. of this document.

D. The EPA's Evaluation of Utah's Submittal

The EPA acknowledges that Utah has a fully approved regional haze SIP for the first implementation period, which the State relied on to satisfy prong 4 in the 2020 ozone infrastructure SIP submittal. However, the EPA is proposing to partially disapprove Utah's regional haze SIP submission for the second implementation period, as discussed in section IV. of this document. Therefore, Utah cannot rely on a fully approved regional haze SIP to fulfill the prong 4 requirements for the 2015 ozone NAAQS. Consequently, the EPA is proposing to disapprove the prong 4 portion of Utah's 2020 ozone infrastructure SIP submittal.

VI. Proposed Action

For the reasons discussed in this document, the EPA is proposing to partially approve and partially disapprove Utah's regional haze SIP submission for the second implementation period. We are proposing to approve the portions of the SIP submission relating to 40 CFR 51.308(f)(1): calculations of baseline, current, and natural visibility conditions, progress to date, and the uniform rate of progress; (f)(4): reasonably attributable visibility impairment; (f)(5): progress report requirements; and (f)(6): monitoring strategy and other implementation plan requirements. The EPA is proposing to disapprove the remainder of the SIP submission, which addresses 40 CFR 51.308(f)(2): long-term strategy; (f)(3): reasonable progress goals; and (i): FLM consultation.

Additionally, as consequence of our proposed partial disapproval of Utah's regional haze SIP submission, the EPA is proposing to disapprove the prong 4 portion of Utah's infrastructure SIP for the 2015 ozone NAAQS, pursuant to CAA section 110(a)(2)(D)(i)(II).

VII. Environmental Justice

As explained in EPA Legal Tools to Advance Environmental Justice and the 2021 Clarifications Memo, CAA section 169A and the RHR provide states with discretion to consider environmental justice (EJ) in developing rules and measures related to regional haze.[259] Utah exercised this discretion, as described in this document. In section 7.A.5 of its regional haze SIP submission, Utah explained that it considered EJ during source screening ''to ensure sources within disproportionately affected areas are included in the four-factor analysis process.'' [260] Utah used EJScreen, an EPA-developed EJ mapping and screening tool that provides a nationally consistent dataset and approach for combining various environmental and demographic indicators.[261] Utah prepared EJScreen reports covering buffer areas of 20 miles around the ten facilities initially screened in for four-factor analysis. The results of Utah's EJScreen analysis are set forth in section 7.A.5 of the SIP submission. The analysis showed environmental and socioeconomic indicators at or above

[249] 2013 Guidance at 32–33.

[250] *Id.* at 33.

[251] The EPA acknowledges that in the 2013 Guidance, we indicated that the EPA may find it appropriate to supplement the guidance regarding the relationship between regional haze SIPs and prong 4 after second implementation period SIPs become due, which occurred on July 31, 2021. After a review of the 2013 Guidance and the second implementation period regional haze requirements, the EPA maintains the interpretation that a fully approved regional haze SIP satisfies prong 4 requirements in the second implementation period.

[252] 2013 Guidance at 33.

[253] Since second implementation period SIPs became due, a ''fully approved regional haze SIP'' would necessarily include fully approved first and second implementation period regional haze SIPs.

[254] See 85 FR 57731 (Sept. 16, 2020) and 88 FR 9336 (Feb. 13, 2023).

[255] 80 FR 65292 (Oct. 26, 2015).

[256] The EPA's November 21, 2019 letter to the State of Utah is included in the docket for this action.

[257] The EPA is not proposing any action on the 2008 ozone portion of Utah's January 29, 2020 submittal, or on any of the other infrastructure elements apart from those portions submitted to meet the requirements of CAA section 110(a)(2)(D)(i)(I) for the 2015 ozone NAAQS.

[258] 85 FR 75860.

[259] EPA Legal Tools to Advance Environmental Justice (May 2022) is available at: *https://www.epa.gov/system/files/documents/2022-05/EJ%20Legal%20Tools%20May%202022%20FINAL.pdf;* 2021 Clarifications Memo at 16.

[260] Utah regional haze SIP submission at 122.

[261] The EJSCREEN tool is available at *https://www.epa.gov/ejscreen.*

the 80% percentile at the state level (meaning that 20% of Utah's population has a higher value) for Ash Grove Leamington Cement Plant, Graymont Western Cricket Mountain, PacifiCorp Hunter, PacifiCorp Huntington, Sunnyside Cogeneration, US Magnesium Rowley Plant, Intermountain power plant, Kennecott Power Plant, Kennecott Mine and Copperton Concentrator, and CCI Paradox Lisbon Natural Gas Plant. Utah stated that it ''was not able to draw significant conclusions from this analysis affecting the reasonable progress determinations made in this SIP revision.'' [262]

The EPA also conducted an EJ screening analysis using the latest version of EJScreen (Version 2.3) around the coordinate locations of the facilities associated with Utah's regional haze SIP submission to identify potential environmental stressors on communities. The EPA is providing the information associated with this analysis for informational purposes only; it does not form any part of the basis of this proposed action. Consistent with our notices of proposed rulemaking on regional haze SIP submissions by other states within EPA Region 8, the EPA prepared EJScreen reports covering buffer areas of approximately six miles around the ten facilities included in Utah's EJ analysis. The following facilities showed EJ indicators greater than the 80th national percentiles (meaning that 20 percent of the U.S. population has a higher value): Ash Grove Leamington Cement Plant (drinking water non-compliance); Kennecott Power Plant (ozone, toxic releases to air, Superfund proximity, wastewater discharge); and Sunnyside Cogeneration (ozone, lead paint, drinking water non-compliance).[263] The full, detailed EJScreen reports are provided in the docket for this rulemaking. There is nothing in the record indicating that this proposed action, if finalized, would have disproportionately high or adverse human health or environmental effects on communities with EJ concerns. EJ is further discussed in section VIII. of this document.

[262] Utah regional haze SIP submission at 122.

[263] The EPA identified the 80th percentile filter as an initial starting point for interpreting EJScreen results. The use of an initial filter promotes consistency for the EPA's programs and regions when interpreting screening results.

VIII. Statutory and Executive Order Reviews

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, the EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this action merely proposes to partially approve and partially disapprove the state's SIP submission as meeting Federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this action:

- Is not a ''significant regulatory action'' subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104–4);
- Does not have federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and

In addition, the SIP is not approved to apply on any Indian reservation land or in any other area where the EPA or an Indian Tribe has demonstrated that a Tribe has jurisdiction. In those areas of Indian country, the proposed rule does not have Tribal implications and will not impose substantial direct costs on Tribal governments or preempt Tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 59 FR 7629, Feb. 16, 1994) directs Federal agencies to identify and address disproportionately high and adverse human health or environmental effects of their actions on minority populations and low-income populations to the greatest extent practicable and permitted by law. The EPA defines EJ as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. The EPA further defines the term fair treatment to mean that no group of people should bear a disproportionate burden of environmental harms and risks, including those resulting from the negative environmental consequences of industrial, governmental, and commercial operations or programs and policies.

Utah evaluated EJ considerations as part of its SIP submittal even though the CAA and applicable implementing regulations neither prohibit nor require an evaluation. A summary of Utah's EJ considerations is contained in section VII. of this document. The EPA also performed an EJ analysis, as described above in section VII. of this document. Both Utah's and the EPA's analyses were done for the purpose of providing additional context and information about this rulemaking to the public, not as a basis of the action. The EPA is taking action under the CAA on bases independent of Utah's evaluation of EJ. In addition, there is no information in the record upon which this decision is based that is inconsistent with the stated goal of E.O. 12898 of achieving EJ for people of color, low-income populations, and Indigenous peoples.

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Carbon monoxide, Greenhouse gases, Incorporation by reference, Intergovernmental relations, Lead, Nitrogen dioxide, Ozone, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides, Volatile organic compounds.

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

Dated: August 13, 2024.

KC Becker,

Regional Administrator, Region 8.

[FR Doc. 2024–18462 Filed 8–16–24; 8:45 am]

BILLING CODE 6560–50–P