

FAA Order JO 7400.11, Airspace Designations and Reporting Points, is published yearly and effective on September 15.

**Regulatory Notices and Analyses**

The FAA has determined that this proposed regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current. It, therefore: (1) Is not a “significant regulatory action” under Executive Order 12866; (2) is not a “significant rule” under Department of Transportation (DOT) Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. Since this is a routine matter that will only affect air traffic

procedures and air navigation, it is certified that this proposed rule, when promulgated, will not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

**Environmental Review**

This proposal will be subject to an environmental analysis in accordance with FAA Order 1050.1F, “Environmental Impacts: Policies and Procedures” prior to any FAA final regulatory action.

**List of Subjects in 14 CFR Part 71**

Airspace, Incorporation by reference, Navigation (air).

**The Proposed Amendment**

In consideration of the foregoing, the Federal Aviation Administration proposes to amend 14 CFR part 71 as follows:

**PART 71—DESIGNATION OF CLASS A, B, C, D, AND E AIRSPACE AREAS; AIR TRAFFIC SERVICE ROUTES; AND REPORTING POINTS**

■ 1. The authority citation for 14 CFR part 71 continues to read as follows:

**Authority:** 49 U.S.C. 106(f), 106(g); 40103, 40113, 40120; E.O. 10854, 24 FR 9565, 3 CFR, 1959–1963 Comp., p. 389.

**§ 71.1 [Amended]**

■ 2. The incorporation by reference in 14 CFR 71.1 of FAA Order JO 7400.11F, Airspace Designations and Reporting Points, dated August 10, 2021, and effective September 15, 2021, is amended as follows:

*Paragraph 6011 United States Area Navigation Routes.*

\* \* \* \* \*

**T-232 BARROW, AK (BRW) TO NORTHWAY, AK (ORT) [AMENDED]**

Barrow, AK (BRW)	VOR/DME	(Lat. 71°16'24.33" N, long. 156°47'17.22" W)
OCOCU, AK	WP	(Lat. 67°05'08.90" N, long. 151°45'00.43" W)
Bettles, AK (BTT)	VOR/DME	(Lat. 66°54'18.03" N, long. 151°32'09.18" W)
Fairbanks, AK (FAI)	VORTAC	(Lat. 64°48'00.25" N, long. 148°00'43.11" W)
IMARE, AK	WP	(Lat. 64°33'29.60" N, long. 147°17'20.31" W)
CUTUB, AK	WP	(Lat. 64°17'49.15" N, long. 146°37'11.65" W)
RIVOR, AK	Fix	(Lat. 64°09'46.97" N, long. 146°09'22.50" W)
Big Delta, AK (BIG)	VORTAC	(Lat. 64°00'16.06" N, long. 145°43'02.09" W)
Northway, AK (ORT)	VORTAC	(Lat. 62°56'49.92" N, long. 141°54'45.39" W)

\* \* \* \* \*

Issued in Washington, DC, on January 11, 2022.

**Michael R. Beckles,**  
*Acting Manager, Rules and Regulations Group.*

[FR Doc. 2022-00791 Filed 1-14-22; 8:45 am]

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**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 52**

[EPA-R08-OAR-2020-0441; FRL-9443-01-R8]

**Disapproval of Air Quality Implementation Plans; Wyoming; Proposed Revisions to Regional Haze State Implementation Plan**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Proposed rule.

**SUMMARY:** The Environmental Protection Agency (EPA) is proposing to disapprove a State Implementation Plan (SIP) revision submitted by the State of Wyoming on May 14, 2020, and supplemented in September and October 2020, addressing regional haze

(“Wyoming’s 2020 SIP revision”). Wyoming’s 2020 SIP revision reverses the State’s 2011 decision that emission limits consistent with the installation of selective catalytic reduction (SCR) for the Jim Bridger power plant, Units 1 and 2, are necessary to make reasonable progress under the State’s long-term strategy for the first regional haze planning period. The SIP revision contains a source-specific nitrogen oxide (NO<sub>x</sub>) reasonable progress analysis and determination that currently installed controls (low-NO<sub>x</sub> burners with separated overfire air (LNB/SOFA)) are sufficient for reasonable progress during the first planning period for Jim Bridger Units 1 and 2, and that the emission limits associated with the installation of SCR are no longer necessary. The SIP revision also contains plant-wide monthly and annual NO<sub>x</sub> and sulfur dioxide (SO<sub>2</sub>) emission limits for the Jim Bridger power plant, Units 1–4. EPA is proposing to disapprove this SIP revision in full. The agency is proposing this action pursuant to sections 110 and 169A of the Clean Air Act (CAA).

**DATES:** *Comments:* Written comments must be received on or before February 17, 2022.

**ADDRESSES:** Submit your comments, identified by Docket ID No. EPA-R08-OAR-2020-0441, to the Federal Rulemaking Portal: <https://www.regulations.gov>. Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from [www.regulations.gov](https://www.regulations.gov). 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. 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 EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <http://www.epa.gov/dockets/commenting-epa-dockets>.

*Docket:* All documents in the docket are listed in the [www.regulations.gov](http://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 [www.regulations.gov](http://www.regulations.gov). To reduce the risk of COVID-19 transmission, for this action we do not plan to offer hard copy review of the docket. 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:** Jaslyn Dobrahner, Air and Radiation Division, EPA, Region 8, Mailcode 8P-ARD, 1595 Wynkoop Street, Denver, Colorado, 80202-1129, telephone number: (303) 312-6252, email address: [dobrahner.jaslyn@epa.gov](mailto:dobrahner.jaslyn@epa.gov).

**SUPPLEMENTARY INFORMATION:** Throughout this document wherever “we,” “us,” or “our” is used, we mean EPA.

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- D. Clean Air Act Section 110(I)
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- V. Summary of EPA’s Proposed Action
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#### I. What action is EPA proposing?

On January 30, 2014, EPA promulgated a final rule titled, “Approval, Disapproval and Promulgation of Implementation Plans; State of Wyoming; Regional Haze State Implementation Plan; Federal Implementation Plan for Regional Haze,” approving in part a regional haze SIP revision submitted by the State of Wyoming on January 12, 2011 (2014 final rule).<sup>1</sup> In the 2014 final rule, EPA approved Wyoming’s NO<sub>x</sub> best available retrofit technology (BART) emission limits of 0.26 lb/MMBtu (30-day rolling average) for Jim Bridger Units 1–4, as well as the State’s decision to include in its long-term strategy NO<sub>x</sub> reasonable progress emission limits of 0.07 lb/MMBtu (30-day rolling average) for the same units, among other actions.<sup>2</sup>

Wyoming submitted its 2020 SIP revision on May 14, 2020.<sup>3</sup> The SIP revision contains amendments to Chapters 7 and 8 of Wyoming’s regional haze SIP narrative and would incorporate certain conditions of Wyoming air quality permit #P0025809 into the SIP.<sup>4</sup> Together, the amendments provide a source-specific NO<sub>x</sub> reasonable progress analysis and determination for Jim Bridger Units 1 and 2, remove the NO<sub>x</sub> reasonable progress emission limits currently required for Jim Bridger Units 1 and 2, and add plant-wide monthly and annual NO<sub>x</sub> and SO<sub>2</sub> emission limits for Jim Bridger Units 1–4.<sup>5</sup>

EPA is proposing to disapprove this SIP revision in full. Our proposed disapproval is based on the following: (1) The reasonable cost-effectiveness of the existing reasonable progress control

<sup>1</sup> 79 FR 5032 (January 30, 2014).

<sup>2</sup> The BART determination compliance date for all units was March 4, 2019. Reasonable progress determination compliance dates for each include: Unit 1 = December 31, 2022; Unit 2 = December 31, 2021; Unit 3 = December 31, 2015; and Unit 4 = December 31, 2016.

<sup>3</sup> At the request of EPA, Wyoming supplemented the original SIP submittal with additional documentation on September 8, 2020, and October 6, 2020.

<sup>4</sup> State of Wyoming, “Addressing Regional Haze Visibility Protection For The Mandatory Federal Class I Areas Required Under 40 CFR 51.309,” Revised May 14, 2020 (“Wyoming 2020 SIP Revision”).

<sup>5</sup> Wyoming’s SIP revision refers to these limits as “voluntary visibility enhancing emission limits.” They represent a separate SIP component from Wyoming’s source-specific reasonable progress analysis and determination. The limits were voluntarily proposed by PacifiCorp to reduce regional haze causing pollutants. Wyoming 2020 SIP Revision at 8–9.

requirements for Jim Bridger Units 1 and 2 (emission limits consistent with the installation of SCR); (2) the appreciable visibility improvement estimated to result from compliance with the existing control requirements; and (3) the fact that the State previously determined that the costs of those control requirements were reasonable and that they are necessary to satisfy the statutory requirements, and has not provided any new information that would support a revised determination that the requirements are now unreasonable. In fact, the updated cost information provided by Wyoming indicates that SCR for these units is even more cost-effective than the State estimated in 2011 and EPA estimated in its 2014 final rule, while the estimated visibility benefits remain the same as estimated in the 2014 final rule.

Based on our proposed conclusions in section IV.B in this document, we propose to find that removing the SCR requirement would interfere with the regional haze requirements of the CAA, specifically, with the requirement that SIPs contain the emission limits, schedules of compliance, and other measures that are necessary to make reasonable progress toward the national visibility goal. That is, approving Wyoming’s removal of the SCR requirement would be inconsistent with the statutory requirement that Wyoming’s SIP contain the measures necessary to make reasonable progress toward the national visibility goal. Furthermore, EPA cannot propose to approve Wyoming’s plant-wide NO<sub>x</sub> and SO<sub>2</sub> emission limits while proposing to disapprove the elimination of the SCR requirements for Units 1 and 2, because such a partial approval would render the SIP more stringent than the State intended. Regardless, as discussed in section IV.C, the installation of SCR on Units 1 and 2 is estimated to reduce NO<sub>x</sub> by at least 3,000 tons per year (tpy) based on current utilization. EPA believes it is reasonable to conclude that the plant-wide NO<sub>x</sub> and SO<sub>2</sub> emission limits that Wyoming has required in lieu of the existing control requirements would not provide similar or greater emissions reductions or visibility improvement compared to two additional SCRs, as claimed by the State.

#### II. Background

##### A. Requirements of the Clean Air Act and EPA’s Regional Haze Rule

In section 169A of the CAA, Congress created a program for protecting visibility in national parks and wilderness areas. This section of 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.”<sup>6</sup>

EPA promulgated a rule to address regional haze on July 1, 1999.<sup>7</sup> The Regional Haze Rule revised the existing visibility regulations<sup>8</sup> to integrate provisions addressing regional haze and established a comprehensive visibility protection program for Class I areas. The requirements for regional haze, found at 40 CFR 51.308 and 40 CFR 51.309, are included in EPA’s visibility protection regulations at 40 CFR 51.300 through 40 CFR 51.309.<sup>9</sup>

The CAA requires each state to develop a SIP to meet various air quality requirements, including protection of visibility.<sup>10</sup> Regional haze SIPs must assure reasonable progress toward the national goal of preventing future and remedying existing manmade visibility impairment in Class I areas. A state must submit its SIP and SIP revisions to EPA for approval.<sup>11</sup> Once approved, a SIP is enforceable by EPA and citizens under the CAA; that is, the SIP is federally enforceable.

### B. Best Available Retrofit Technology

Section 169A(b)(2) of the CAA requires SIPs to contain such measures

<sup>6</sup> 42 U.S.C. 7491(a). Areas 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. 42 U.S.C. 7472(a). In accordance with section 169A of the CAA, EPA, in consultation with the Department of Interior, promulgated a list of 156 areas where visibility is identified as an important value. 44 FR 69122 (November 30, 1979). The extent of a mandatory Class I area includes subsequent changes in boundaries, such as park expansions. 42 U.S.C. 7472(a). Although states and tribes may designate as Class I additional areas whose visibility they consider to be an important value, the requirements of the visibility program set forth in section 169A of the CAA apply only to “mandatory Class I Federal areas.” Each mandatory Class I Federal area is the responsibility of a “Federal Land Manager.” 42 U.S.C. 7602(i). When we use the term “Class I area” in this action, we mean a “mandatory Class I Federal area.”

<sup>7</sup> 64 FR 35714, 35714 (July 1, 1999) (codified at 40 CFR part 51, subpart P).

<sup>8</sup> EPA had previously promulgated regulations to address visibility impairment in Class I areas that is “reasonably attributable” to a single source or small group of sources, *i.e.*, reasonably attributable visibility impairment (RAVI). 45 FR 80084, 80084 (December 2, 1980).

<sup>9</sup> EPA revised the Regional Haze Rule on January 10, 2017. 82 FR 3078 (January 10, 2017). Under the revised Regional Haze Rule, the requirements in 40 CFR 51.308(d) and (e) apply to first implementation period SIP submissions and 40 CFR 51.308(f) applies to submissions for the second and subsequent implementation periods. 82 FR 3087; see also 81 FR 26942, 26952 (May 4, 2016).

<sup>10</sup> See 42 U.S.C. 7410(a), 7491, and 7492; CAA sections 110(a), 169A, and 169B.

<sup>11</sup> 42 U.S.C. 7491(b)(2); 7410.

as may be necessary to make reasonable progress toward meeting the national visibility goal. Section 169(b)(2)(A) specifies that one such requirement is for certain categories of existing major stationary sources built between 1962 and 1977 to procure, install, and operate BART as determined by the states through their SIPs. Under the Regional Haze Rule, states (or EPA, in the case of a Federal implementation plan (FIP)) are directed to make BART determinations for such “BART-eligible” sources—typically larger, often uncontrolled, and older stationary sources—that may reasonably be anticipated to cause or contribute to any visibility impairment in a Class I area.<sup>12</sup> Rather than requiring source-specific BART controls, states also have the flexibility to adopt an emissions trading program or other alternative program as long as the alternative will achieve greater reasonable progress toward natural visibility conditions than BART.<sup>13</sup>

One such “BART alternative” is included in 40 CFR 51.309, and is an option for nine states termed the “Transport Region States,” which include Arizona, California, Colorado, Idaho, Nevada, New Mexico, Oregon, Utah, and Wyoming. Transport Region States can adopt regional haze strategies based on recommendations from the Grand Canyon Visibility Transport Commission (GCVTC) for protecting visibility in the 16 Class I areas on the Colorado Plateau.<sup>14</sup>

As part of its overall plan for making reasonable progress toward the national visibility goal for those 16 Class I areas, the GCVTC submitted a program to EPA, known as the Western SO<sub>2</sub> Backstop Trading Program, containing annual SO<sub>2</sub> emissions reduction milestones and detailed provisions for a backstop trading program to be implemented

<sup>12</sup> 40 CFR 51.308(e). EPA designed the Guidelines for BART Determinations Under the Regional Haze Rule (Guidelines) “to help States and others (1) identify those sources that must comply with the BART requirement, and (2) determine the level of control technology that represents BART for each source.” 40 CFR part 51, appendix Y, I.A. Section II of the Guidelines describes the four steps to identify BART sources, and Section III explains how to identify BART sources (*i.e.*, sources that are “subject to BART”).

<sup>13</sup> 40 CFR 51.308(e)(2). *WildEarth Guardians v. EPA*, 770 F.3d 919, 934 (10th Cir. 2014).

<sup>14</sup> The Colorado Plateau is a high, semi-arid tableland in southeast Utah, northern Arizona, northwest New Mexico, and western Colorado. The 16 mandatory Class I areas are the Grand Canyon National Park, Mount Baldy Wilderness, Petrified Forest National Park, Sycamore Canyon Wilderness, Black Canyon of the Gunnison National Park Wilderness, Flat Tops Wilderness, Maroon Bells Wilderness, Mesa Verde National Park, Weminuche Wilderness, West Elk Wilderness, San Pedro Park Wilderness, Arches National Park, Bryce Canyon National Park, Canyonlands National Park, Capital Reef National Park, and Zion National Park.

automatically if states’ measures fail to achieve the SO<sub>2</sub> milestones. EPA approved the Backstop Trading Program as a BART alternative for SO<sub>2</sub> emissions.<sup>15</sup> Transport Region States’ SIPs must also contain BART requirements for stationary-source emissions of NO<sub>x</sub> and particulate matter.<sup>16</sup>

### C. Long-Term Strategy and Reasonable Progress Requirements

In addition to the BART requirements, the CAA’s visibility protection provisions also require that states’ regional haze SIPs contain a “long-term (ten to fifteen years) strategy for making reasonable progress toward meeting the national goal. . . .”<sup>17</sup> The long-term strategy must address regional haze visibility impairment for each mandatory Class I area within the state and each mandatory Class I area located outside the state that may be affected by emissions from the state. It must include the enforceable emission limitations, compliance schedules, and other measures necessary to achieve the reasonable progress goals.<sup>18</sup> The reasonable progress goals, in turn, are calculated for each Class I area based on the control measures states have selected for sources by applying the four statutory “reasonable progress” factors, which are “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 existing source subject to such requirement.”<sup>19</sup> That is, states consider the four reasonable progress factors, and certain other factors listed in § 51.308(d)(3) of the Regional Haze Rule, to determine what controls must be included in the long-term strategy. Those controls are represented in the long-term strategy, *i.e.*, the SIP, as emission limits, schedules of compliance, and other measures. The reasonable progress goals are the predicted visibility outcome of implementing the long-term strategy in addition to ongoing pollution control programs stemming from other CAA requirements.

Unlike BART determinations, which are required only for the first regional haze planning period SIPs,<sup>20</sup> states are

<sup>15</sup> 64 FR 35714 (July 1, 1999); 68 FR 33764 (June 5, 2003).

<sup>16</sup> 40 CFR 51.309(d)(4)(vi).

<sup>17</sup> 42 U.S.C. 7491(b)(2)(B).

<sup>18</sup> See 42 U.S.C. 7491(b)(2); 40 CFR 51.308(d)(3).

<sup>19</sup> 42 U.S.C. 7491(g)(1); 40 CFR 51.308(d)(1)(i)(A).

<sup>20</sup> Under the Regional Haze Rule, SIPs are due for each regional haze planning period, or implementation period. The terms “planning

required to submit updates to their long-term strategies, including new reasonable progress analyses and reasonable progress goals, in the form of SIP revisions on July 31, 2021, and at specific intervals thereafter.<sup>21</sup> In addition, each state must periodically submit a report to EPA at five-year intervals beginning five years after the submission of the initial regional haze SIP, evaluating the state's progress toward meeting the reasonable progress goals for each Class I area within the state.<sup>22</sup>

By meeting all the requirements of 40 CFR 51.309, including but not limited to the section 309-specific BART requirements, a Transport Region State can be deemed to be making reasonable progress toward the national goal for the first implementation period for the 16 Class I areas on the Colorado Plateau.<sup>23</sup> For stationary sources, the section 309 requirements include any necessary long-term strategies for reasonable progress for particulate matter (PM) and NO<sub>x</sub> emissions.<sup>24</sup> Additionally, the State of Wyoming includes several non-Colorado Plateau Class I areas, and thus was also required to submit a long-term strategy for those Class I areas.<sup>25</sup>

#### D. Consultation With Federal Land Managers

The Regional Haze Rule requires that a state consult with Federal Land Managers (FLMs) before adopting and submitting a required SIP submittal or revision. Further, a state must include a summary of the FLMs' conclusions and recommendations in its notice to the public,<sup>26</sup> as well as include in its submission to EPA a description of how it addressed any comments provided by the FLMs.<sup>27</sup>

### III. Wyoming's Regional Haze SIP Revisions

#### A. Background

The Jim Bridger power plant is in Sweetwater County, Wyoming, and is owned in part and operated by PacifiCorp. The power plant is composed of four 530 megawatt (MW) tangentially fired boilers burning

pulverized coal for a total net generating capacity of 2,120 MW. Wyoming determined that all four units are subject to BART.<sup>28</sup>

Wyoming submitted a SIP on January 12, 2011, that addressed regional haze requirements under 40 CFR 51.309 for the first regional haze planning period. The State's regional haze SIP determined that NO<sub>x</sub> BART for Jim Bridger Units 1–4 was new LNB/SOFA. Compliance with the BART emission limits was required by March 4, 2019, for all four Jim Bridger units.<sup>29</sup> The State also determined that emission limits consistent with the installation of SCR were necessary to satisfy the reasonable progress (not BART) requirements. Wyoming's SIP required compliance with these emission limits by December 31, 2022, December 31, 2021, December 31, 2015, and December 31, 2016, for Units 1–4, respectively.<sup>30</sup> The State indicated that the delayed timeline for installing SCR was based on the large number of retrofits that PacifiCorp was undertaking or helping to finance at power plants in Wyoming, Utah, Colorado, and Arizona.<sup>31</sup>

In June 2012, we proposed to find the State's BART determination for Jim Bridger Units 1 and 2 unreasonable. We explained that the cost-effectiveness values for LNB/SOFA + SCR were reasonable and within the range that Wyoming had determined to be reasonable for other BART sources. We further explained that the associated visibility improvement and NO<sub>x</sub> emissions reductions were significant. Because the State's compliance date for installing SCR was beyond the five years allowed by the statute for BART sources, we proposed to disapprove the State's BART determination and proposed a FIP requiring a NO<sub>x</sub> emission limit consistent with the installation of SCR with a compliance deadline of no later than five years after EPA took final action.<sup>32</sup>

Alternatively, EPA proposed to conclude that while BART for all four Jim Bridger units was LNB/SOFA + SCR when the units were considered individually, *i.e.*, without regard to other units in the PacifiCorp system, when considering all PacifiCorp's units with their additional retrofit obligations,

BART was LNB/SOFA + SCR on Units 3 and 4 and LNB + OFA on Units 1 and 2. EPA explained that, based on claims by the State and PacifiCorp, costs, considered broadly across all four units as well as for units in other states, could be unreasonable for PacifiCorp to incur within five years of EPA's final action. EPA then proposed in the alternative to approve Wyoming's BART and reasonable progress determinations for Units 1 and 2, the latter of which would require an SCR emission limit by December 31, 2021, for Unit 2, and December 31, 2022, for Unit 1. EPA noted that the Agency believed it "may be reasonable and feasible for [SCR] to be completed somewhat earlier" but that, given the context, it "may be appropriate to give considerable deference to the State's conclusions about what controls are reasonable and when they should be implemented."<sup>33</sup>

In 2013, EPA issued another proposal after the Agency conducted its own cost analyses and visibility modeling. As in 2012, EPA proposed two options in the alternative. In proposing to approve the State's BART and reasonable progress determinations for Jim Bridger Units 1 and 2, EPA again cited the fact that PacifiCorp may be required to install several additional retrofits at units in Wyoming and in other states and proposed to give deference to the State under the circumstances.<sup>34</sup>

In the alternative, EPA again proposed in 2013 to determine that BART for Jim Bridger Units 1 and 2 is LNB/SOFA + SCR and is required within five years of EPA's final action. EPA explained that the cost-effectiveness values for installing SCR were reasonable and the visibility improvement at the most impacted Class I area was significant. EPA further explained that the cost estimates were within the range that Wyoming in its SIP and EPA in other SIP and FIP actions have considered reasonable in the BART context.<sup>35</sup>

After considering comments received on the 2012 and 2013 proposals, in the 2014 final rule, EPA finalized approval of Wyoming's determination that BART for Jim Bridger Units 1 and 2 was LNB/SOFA and that SCR should be required for reasonable progress as part of the State's long-term strategy by 2021 and 2022. EPA explained that the updated source-wide visibility improvement associated with the installation of LNB/SOFA + SCR would be significant (1.25–

period" and "implementation period" are used interchangeably in this document.

<sup>21</sup> 40 CFR 51.308(f). The 2021 deadline was originally in 2018; EPA revised this deadline in 2017. 82 FR 3078 (January 10, 2017); see also 40 CFR 51.308(f). Following the 2021 SIP revision deadline, the next SIP revision is due in 2028. 40 CFR 51.308(f).

<sup>22</sup> 40 CFR 51.308(g); 51.309(d)(10).

<sup>23</sup> 40 CFR 51.309(a).

<sup>24</sup> 40 CFR 51.309(d)(4)(vii).

<sup>25</sup> 79 FR 5199.

<sup>26</sup> 42 U.S.C. 7491(d).

<sup>27</sup> 40 CFR 51.308(i).

<sup>28</sup> 77 FR 33022, 33030, 33035 (June 4, 2012).

<sup>29</sup> 79 FR 5221. Installation of new LNB with SOFA (LNB/SOFA) corresponds to a NO<sub>x</sub> emission limit of 0.26 lb/MMBtu (30-day rolling average).

<sup>30</sup> Id. Installation and operation of SCR corresponds to a NO<sub>x</sub> emission limit of 0.07 lb/MMBtu (30-day rolling average).

<sup>31</sup> 77 FR 33053; see also State of Wyoming, "Addressing Regional Haze Visibility Protection For The Mandatory Federal Class I Areas Required Under 40 CFR 51.309," January 7, 2011, at 102.

<sup>32</sup> 77 FR 33053.

<sup>33</sup> 77 FR 33054.

<sup>34</sup> 78 FR 34738, 34755–56 (June 10, 2013).

However, of the twenty retrofit actions referenced in EPA's 2013 proposal, PacifiCorp has installed only two SCRs in Wyoming and three SCRs and one SNCR in Colorado to date.

<sup>35</sup> 78 FR 34780.

1.5 deciviews) with unit-specific visibility benefits for Units 1 and 2 at 0.27–0.37 deciviews at the most impacted Class I area (Bridger), respectively. We explained that “[t]he fact that Jim Bridger Station affects a number of other Class I areas [(in addition to Bridger)], which would also see appreciable visibility improvement with the installation of LNB/SOFA + SCR, also weighs in favor of selecting this option as BART.”<sup>36</sup> We also found that the updated average cost-effectiveness of LNB/SOFA + SCR at \$2,635 and \$3,403/ton for Units 1 and 2, respectively, was in line with what we had found to be acceptable in other determinations.<sup>37</sup> In addition to finding that the incremental cost-effectiveness of \$7,447 and \$8,968/ton for Units 1 and 2, respectively, was on the high end of what we had found to be reasonable in other determinations.<sup>38</sup> However, EPA ultimately concluded that, “while we believe that these costs and visibility improvements could potentially justify LNB/SOFA + SCR as BART, because this is a close call and because the State has chosen to require SCR as a

reasonable progress control, we believe deference to the State is appropriate in this instance.”<sup>39</sup> We thus finalized the State’s determination to require LNB/SOFA as BART controls with a corresponding emission limit of 0.26 lb/MMBtu by March 4, 2019, for Jim Bridger Units 1 and 2, and the State’s determination to require SCR as part of the State’s long-term strategy necessary to achieve reasonable progress with a corresponding emission limit of 0.07 lb/MMBtu (30-day rolling average) by 2022 and 2021 for Jim Bridger Units 1 and 2, respectively.<sup>40</sup>

*B. May 14, 2020 Submittal*

Notwithstanding the State’s 2011 determination to require the installation of SCR as being necessary for reasonable progress in the State’s long-term strategy for Jim Bridger 1 and 2 in 2021 and 2022, and the deference EPA afforded the State’s determination in the 2014 final rule (instead of requiring SCR as BART controls within five years of EPA’s action), on May 14, 2020, Wyoming submitted a SIP revision for the purpose of amending the State’s regional haze SIP and removing the SCR

requirement for Jim Bridger Units 1 and 2.<sup>41</sup> Wyoming stated that “[d]ue to the significant costs of installing SCR on Units 1 and 2, and the potential impact of those costs to PacifiCorp’s customers, PacifiCorp reassessed its compliance with the Regional Haze Rule and developed an alternative regional haze compliance strategy . . . .”<sup>42</sup>

The State’s 2020 SIP revision contains a source-specific, NO<sub>x</sub>-only reasonable progress analysis and determination for Jim Bridger Units 1 and 2, as well as plant-wide annual and monthly NO<sub>x</sub> and SO<sub>2</sub> emission limits for Jim Bridger Units 1–4. Specifically, the amendments provide a source-specific reasonable progress four-factor analysis and consideration of visibility benefits for Jim Bridger Units 1 and 2 to demonstrate that the current LNB/SOFA NO<sub>x</sub> BART controls also satisfy the reasonable progress requirements for those units for the first planning period. The SIP revision thereby would remove the existing reasonable progress requirement for Jim Bridger Units 1 and 2 to comply with emission limits of 0.07 lb/MMBtu in 2021 and 2022 (Table 1).

TABLE 1—EXISTING AND PROPOSED NO<sub>x</sub> EMISSION LIMITS FOR JIM BRIDGER UNITS 1–4

Unit	Existing NO <sub>x</sub> BART emission limit (30-day rolling average; lb/MMBtu) <sup>1</sup>	Existing NO <sub>x</sub> reasonable progress emission limit (30-day rolling average; lb/MMBtu) <sup>2</sup>	Proposed NO <sub>x</sub> reasonable progress emission limit (30-day rolling average; lb/MMBtu)
1	0.26	0.07	0.26
2	0.26	0.07	0.26
3	0.26	0.07	<sup>3</sup> N/A
4	0.26	0.07	<sup>3</sup> N/A

<sup>1</sup> Compliance date is March 4, 2019; no changes to the NO<sub>x</sub> BART emission limits are proposed.

<sup>2</sup> Compliance dates for each is: Unit 1 = December 31, 2022; Unit 2 = December 31, 2021; Unit 3 = December 31, 2015; and Unit 4 = December 31, 2016.

<sup>3</sup> No change to existing NO<sub>x</sub> reasonable progress emission limit of 0.07 lb/MMBtu (30-day rolling average).

<sup>36</sup> 79 FR 5048.

<sup>37</sup> 79 FR 5040, 5048. Note that the text at 79 FR 5048 misstates the average cost-effectiveness for LNB/SOFA + SCR at Units 1 and 2. The correct figures are stated in Table 5 and 6 at 79 FR 5040. Note that for Jim Bridger Units 3 and 4, we disagreed with Wyoming’s conclusion that BART was not LNB/SOFA + SCR, but we nonetheless approved the State’s BART and reasonable progress

determinations of 0.26 lb/MMBtu (30-day rolling average) and 0.07 lb/MMBtu (30-day rolling average), respectively, because the compliance deadlines for SCR were all within the statutory timeframe for BART. 77 FR 33035–36; 79 FR 5046, 5221.

<sup>38</sup> 79 FR 5048.

<sup>39</sup> Id.

<sup>40</sup> 79 FR 5048–49.

<sup>41</sup> Letter dated May 12, 2020, from Todd Parfitt, Director, Wyoming Department of Environmental Quality, to Gregory Sopkin, Regional Administrator, EPA Region 8, Subject: State Implementation Plan Approval Request—Regional Haze 309(g) SIP revision for PacifiCorp Jim Bridger Power Plant.

<sup>42</sup> Wyoming 2020 SIP Revision at 3.

In addition, Wyoming’s 2020 SIP revision would add federally enforceable month-by-month plant-wide NO<sub>x</sub> and SO<sub>2</sub> emission limits across all four Jim Bridger units, as well as an

enforceable annual plant-wide NO<sub>x</sub> and SO<sub>2</sub> emissions cap of 17,500 tpy, effective January 1, 2022 (Table 2). The plant-wide monthly and annual emission limits for Jim Bridger Units 1–

4 are already State-enforceable through Wyoming air quality permit #P0025809. The final permit was issued on May 5, 2020.<sup>43</sup>

TABLE 2—ENFORCEABLE MONTHLY PLANT-WIDE BLOCK NO<sub>x</sub> AND SO<sub>2</sub> EMISSION LIMITS FOR JIM BRIDGER UNITS 1–4, EFFECTIVE JANUARY 1, 2022

Month	Total units 1–4 NO <sub>x</sub> emission limit (monthly average basis) (lb/hour)	Total units 1–4 SO <sub>2</sub> emission limit (monthly average basis) (lb/hour)
January	2,050	2,100
February	2,050	2,100
March	2,050	2,100
April	2,050	2,100
May	2,200	2,100
June	2,500	2,100
July	2,500	2,100
August	2,500	2,100
September	2,500	2,100
October	2,300	2,100
November	2,030	2,100
December	2,050	2,100

C. Summary of Wyoming’s Reasonable Progress Reassessment

Pursuant to CAA section 169A(g)(1) and 40 CFR 51.308(d)(1)(i)(A), in determining the measures necessary to make reasonable progress, a state must take into account the following four factors and demonstrate how they were taken into consideration in making a reasonable progress determination:

- Costs of Compliance;
- Time Necessary for Compliance;
- Energy and Non-Air Quality

Environmental Impacts of Compliance; and

- Remaining Useful Life of Any Potentially Affected Sources.

In order to conduct a source-specific reasonable progress assessment for Jim Bridger Units 1 and 2, the State took into consideration the four required factors and also included visibility

improvement as an additional factor in its reasonable progress analysis.<sup>44</sup> Wyoming relied on information provided by PacifiCorp and EPA for evaluating potential reasonable progress NO<sub>x</sub> emissions controls—LNB/SOFA, LNB/SOFA + selective non-catalytic reduction (SNCR), and LNB/SOFA + SCR—at Jim Bridger.<sup>45</sup>

1. Costs of Compliance

For the source-specific reasonable progress analysis associated with this action, Wyoming relied on cost information provided by PacifiCorp. PacifiCorp used NO<sub>x</sub> emission rates for LNB/SOFA of 0.187 lb/MMBtu and 0.192 lb/MMBtu (annual average) reflective of the actual emissions rate (2013–2015) for Units 1 and 2, respectively. The anticipated NO<sub>x</sub> emission rate for LNB/SOFA + SNCR

was assumed to be 0.15 lb/MMBtu (annual) for both Units 1 and 2. The NO<sub>x</sub> emission rate for LNB/SOFA + SCR was assumed to be 0.05 lb/MMBtu (annual), which corresponds to the 0.07 lb/MMBtu LNB/SOFA + SCR NO<sub>x</sub> 30-day rolling average emission limits for Units 1 and 2 that EPA approved in the 2014 final rule.

Wyoming’s source-specific reasonable progress analysis for Units 1 and 2 based capital costs and annual operating and maintenance (O&M) costs on the actual costs incurred to install and operate SCR technology on Jim Bridger Units 3 and 4, as well as the actual costs to install LNB/SOFA on Units 1 and 2 (Table 3). Capital costs for SNCR technology were estimated based on recent similarly sized projects (Table 3).<sup>46</sup>

TABLE 3—PACIFICORP’S TOTAL CAPITAL AND O&M COSTS FOR THE JIM BRIDGER UNITS 1 AND 2 REASONABLE PROGRESS ANALYSIS

NO <sub>x</sub> control technology	Total installed capital costs (\$)		Total O&M costs (\$/year)	
	Unit 1	Unit 2	Unit 1	Unit 2
LNB/SOFA	\$8,410,000	\$7,986,000	.....	.....
SNCR	15,538,000	15,538,000	2,954,000	3,158,000
SCR	140,428,000	140,428,000	2,580,000	2,527,000

<sup>43</sup> Letter dated May 5, 2020, from Nancy E. Vehr, Administrator, Air Quality Division, Wyoming Department of Environmental Quality, to James Owens, Director, Environmental Services, PacifiCorp, Subject: Permit #P0025809 (Permit #0025809).

<sup>44</sup> The visibility benefit of an emissions reduction measure is not listed as a required factor, but

neither the CAA nor the Regional Haze Rule prohibits a state from considering visibility benefits when it determines what emissions control measures are required for a source to make reasonable progress at a Class I area. Therefore, a state may consider the visibility benefits of potential control measures when determining what is necessary to make reasonable progress.

<sup>45</sup> Wyoming 2020 SIP Revision at 3; see also PacifiCorp, Jim Bridger Power Plant Reasonable Progress Determination to Support PacifiCorp’s Reasonable Progress Reassessment (PacifiCorp Reassessment), February 2019.

<sup>46</sup> Wyoming 2020 SIP Revision, PacifiCorp, Corrected JB RP Reassessment NO<sub>x</sub> Comparison Tables, October 6, 2020.

PacifiCorp annualized capital costs using the capital recovery factor (CRF) approach described in EPA’s Control Cost Manual using 20-year and 30-year amortization periods for SNCR and SCR, respectively.<sup>47</sup> Total annual costs were calculated as the sum of the annualized capital costs and total O&M costs. The cost-effectiveness of each NO<sub>x</sub> control technology was calculated on a dollar-per-ton of pollutant removed basis by dividing the total annual costs by the

reduction in annual NO<sub>x</sub> emissions associated with each NO<sub>x</sub> emissions control technology (*i.e.*, LNB/SOFA, LNB/SOFA + SNCR, LNB/SOFA + SCR). Similarly, PacifiCorp calculated the incremental cost-effectiveness of each NO<sub>x</sub> control technology on a dollar-per-ton of pollutant removed basis by dividing the difference of the total annual costs (of one control technology compared to that of the next most stringent control technology) by the

difference in the reduction in annual NO<sub>x</sub> emissions (of the two control technologies).

The summary of cost-effectiveness figures for Wyoming’s reasonable progress analysis for Jim Bridger Units 1 and 2 is shown in Table 4. Baseline NO<sub>x</sub> emissions (2001–2003) are 8,432 tpy and 7,575 tpy for Units 1 and 2, respectively.

TABLE 4—SUMMARY OF JIM BRIDGER UNITS 1 AND 2 NO<sub>x</sub> REVISED REASONABLE PROGRESS COST ANALYSIS<sup>48</sup>

NO <sub>x</sub> control technology	NO <sub>x</sub> emissions rate (lb/MMBtu; annual)	Emissions reduction (tpy)	Annualized cost (\$/year)	Average cost-effectiveness (\$/ton)	Incremental cost-effectiveness (\$/ton)
<b>Unit 1</b>					
LNB/SOFA .....	<sup>1</sup> 0.187	4,414 .....	\$794,000 .....	\$180	
LNB/SOFA + SNCR .....	<sup>2</sup> 0.15	5,209 .....	5,215,000 .....	1,001	5,560
LNB/SOFA + SCR .....	0.05	7,358 .....	14,692,000 .....	1,997	4,410
<b>Unit 2</b>					
LNB/SOFA .....	<sup>1</sup> 0.192	3,649 .....	754,000 .....	207	
LNB/SOFA + SNCR .....	<sup>2</sup> 0.15	4,508 .....	5,379,000 .....	1,193	5,385
LNB/SOFA + SCR .....	0.05	6,552 .....	14,599,000 .....	2,228	4,510

<sup>1</sup> lb/MMBtu, annual average.

<sup>2</sup> lb/MMBtu, annual. The controlled NO<sub>x</sub> emission rate with SNCR was assumed to be 0.15 lb/MMBtu, which corresponds with a reduction of approximately 20 percent.

Wyoming also summarized the total estimated capital costs and annual costs combined for Units 1 and 2 for the

installation of SCR and SNCR, in addition to the LNB/SOFA NO<sub>x</sub> emissions controls already installed, for

the revised reasonable progress analysis (Table 5).

TABLE 5—TOTAL CAPITAL AND ANNUAL COSTS FOR JIM BRIDGER UNITS 1 AND 2 REVISED REASONABLE PROGRESS ANALYSIS<sup>49</sup>

NO <sub>x</sub> control technology	Control efficiency (%)	Capital costs (\$)	Annual costs (\$/year)
LNB/SOFA .....	53	\$16,396,000	\$1,548,000
LNB/SOFA + SNCR .....	63	47,472,000	10,594,000
LNB/SOFA + SCR .....	87	297,252,000	29,291,000

Although Jim Bridger Units 3 and 4 are not included in the reasonable progress analysis, Wyoming noted that the total capital cost for LNB/SOFA + SCR installation on Units 3 and 4, which are already installed, was \$310,959,000. Ultimately, Wyoming concluded that the installation of SCR on Jim Bridger Units 1 and 2 would cost “hundreds of millions more” than the costs already incurred for LNB/SOFA NO<sub>x</sub> emissions controls while SNCR would cost “tens of millions more” than

the costs already incurred for LNB/SOFA NO<sub>x</sub> emissions controls.<sup>50</sup>

2. Time Necessary for Compliance

As stated previously, the SIP approved by EPA on January 30, 2014, requires an emission limit of 0.07 lb/MMBtu associated with the installation of LNB/SOFA + SCR on Jim Bridger Unit 1 by December 31, 2022, and on Unit 2 by December 31, 2021. Wyoming stated in the 2020 SIP revision that if SNCR installation was required, the compliance timelines would match the

SCR timeline. The current LNB/SOFA NO<sub>x</sub> emissions controls were installed in 2010 and 2005 for Units 1 and 2, respectively.<sup>51</sup>

3. Energy and Non-Air Quality Environmental Impacts of Compliance

The State identified that SCR control technology would periodically produce solid waste when the catalyst is changed. Additionally, Wyoming stated that SCR control technology would require the storage and use of ammonia, while SNCR would require the storage

<sup>47</sup> EPA, “Control Cost Manual,” Section 4, Chapter 1, April 25, 2019, page 1–53–54, and Chapter 2, June 2019, page 80, available at [https://www.epa.gov/economic-and-cost-analysis-air-](https://www.epa.gov/economic-and-cost-analysis-air-pollution-regulations/cost-reports-and-guidance-air-pollution)

[pollution-regulations/cost-reports-and-guidance-air-pollution](https://www.epa.gov/economic-and-cost-analysis-air-pollution-regulations/cost-reports-and-guidance-air-pollution) (last visited December 2021).

<sup>48</sup> Wyoming 2020 SIP Revision, PacifiCorp, Corrected JB RP Reassessment NO<sub>x</sub> Comparison Tables, October 6, 2020.

<sup>49</sup> Wyoming 2020 SIP Revision at 5.

<sup>50</sup> *Id.*

<sup>51</sup> *Id.* at 6.

and use of urea. With respect to energy use, the State estimated that SNCR would require 6 times the energy required by the current NO<sub>x</sub> control technology (LNB/SOFA), and SCR would require 150 times the energy required by LNB/SOFA. Wyoming further stated that SCR would require the use of an additional 10.4 megawatts of energy. Wyoming did not anticipate any additional negative non-air environmental impacts associated with the current LNB/SOFA NO<sub>x</sub> emissions controls.<sup>52</sup>

4. Remaining Useful Life

For this evaluation, Wyoming stated that the expected life of the source is

less than the expected life of the emissions control technology, which is 30 years for SCR and 20 years for SNCR. However, Wyoming did not provide an enforceable shutdown date that would ensure that the expected life of the source would in fact be reduced.<sup>53</sup> Therefore, notwithstanding the State's expectation of a shortened remaining useful life for the source, it used the full 30-year and 20-year periods for SCR and SNCR, respectively, in its analyses.

5. Visibility Improvement

Although visibility improvement is not one of the four statutory factors for reasonable progress, Wyoming elected to include visibility improvement in the

reasonable progress analysis for Jim Bridger Units 1 and 2. Wyoming did not complete new visibility modeling for the reasonable progress analysis and determination. Instead, the State relied upon EPA's CALPUFF modeling results contained in the 2014 final rule to assess the visibility impacts of the NO<sub>x</sub> emissions control technologies evaluated, *i.e.*, for LNB/SOFA, LNB/SOFA + SNCR, LNB/SOFA + SCR.<sup>54</sup> In our 2014 final rule, we evaluated the CALPUFF visibility modeling of the Jim Bridger power plant for the most impacted Class I area, Bridger Wilderness (Table 6).<sup>55</sup>

TABLE 6—SUMMARY OF JIM BRIDGER POWER PLANT NO<sub>x</sub> VISIBILITY ANALYSIS IN EPA'S 2014 FINAL RULE

Jim Bridger	Visibility Improvement (deciviews) <sup>1</sup> (modeled results using an ammonia background based on a monitored monthly varying concentration/modeled results using IWAQM default 0.5 ppb background ammonia) <sup>3</sup>		
	LNB/SOFA	LNB/SOFA + SNCR	LNB/SOFA + SCR
Unit 1 .....	0.17/0.23	0.20/0.27	0.27/0.37
Unit 2 .....	0.16/0.21	0.19/0.25	0.27/0.36
Unit 3 .....	0.14/0.19	0.17/0.23	0.26/0.35
Unit 4 .....	0.25/0.23	0.30/0.28	0.45/0.42
Total <sup>2</sup> .....	0.72/0.86	0.86/1.03	1.25/1.5

<sup>1</sup> For most impacted Class I area, Bridger Wilderness.

<sup>2</sup> The total visibility improvement was estimated as the sum of the visibility improvement from each unit.

<sup>3</sup> EPA, Air Quality Modeling Protocol; Wyoming Regional Haze Implementation Plan, January 2014.

The State noted that EPA determined in 2014 that the unit-specific visibility benefits for LNB/SOFA + SCR installation on Units 1 and 2 were “modest” at 0.27 to 0.37 deciviews. In addition, the State noted that the incremental visibility improvement, as determined by EPA, of LNB/SOFA + SCR over LNB/SOFA, was 0.10 to 0.14 deciviews for Unit 1 and 0.11 to 0.15 deciviews for Unit 2. The State further noted that incremental improvement of LNB/SOFA + SNCR over LNB/SOFA was smaller at between 0.03–0.04 deciviews for both Units 1 and 2.<sup>56</sup>

In addition to comparing the visibility impacts associated with each NO<sub>x</sub>

emissions control technology, Wyoming also pointed to PacifiCorp's estimated NO<sub>x</sub> emissions reductions. The State asserted that the current LNB/SOFA NO<sub>x</sub> emissions controls already have reduced NO<sub>x</sub> emissions from the 2001–2003 baseline by a combined 8,063 tpy for Units 1 and 2. The installation of SCR would reduce NO<sub>x</sub> emissions from the 2001–2003 baseline by an additional 5,848 tpy (Units 1 and 2 combined), while the installation of SNCR would reduce NO<sub>x</sub> emissions from the baseline by an additional 1,655 tpy.<sup>57</sup>

According to the State, in spite of the additional NO<sub>x</sub> emissions reductions achievable through each NO<sub>x</sub> control

technology, EPA's 2014 modeling demonstrates that the installation of SCR on Units 1 and 2 would result in only modest incremental visibility benefits of 0.10–0.15 deciviews (per unit) when compared to current LNB/SOFA NO<sub>x</sub> emissions controls on Units 1 and 2. The State concluded that these visibility improvements are not significant enough to outweigh the substantial cost of installing SCR. Instead, Wyoming concluded that relying on the current NO<sub>x</sub> emissions controls (LNB/SOFA) is the reasonable choice for Jim Bridger Units 1 and 2.<sup>58</sup>

6. Reasonable Progress Demonstration

<sup>52</sup> Id. at 6.

<sup>53</sup> Id. at 4.

<sup>54</sup> See id. at 7. In the 2014 final rule, EPA addressed comments on the visibility improvement modeling by developing a new protocol that makes several improvements in the modeling, including the latest regulatory version of the CALPUFF model at the time of the rule (version 5.8), the use of an

improved method to assess the effects of pollutants on light scattering and visibility impairment (Method 8), the use of background ammonia concentrations based on monitoring data and regulatory default concentrations for the area, and the use of an ammonia-limiting correction to treat sources with multiple units. We used two sets of background ammonia concentrations based on

representative monthly varying ammonia concentrations and default concentrations for forested areas.

<sup>55</sup> 79 FR 5048.

<sup>56</sup> Wyoming 2020 SIP Revision at 7.

<sup>57</sup> Id.

<sup>58</sup> Id. at 7–8.



After considering each of the four reasonable progress factors, states must demonstrate how those factors, and visibility improvement if included in the analysis, were taken into consideration in making a reasonable progress determination.<sup>59</sup> Thus, after consideration of the four factors, along with an evaluation of the modeled visibility impacts at the most impacted Class I area (Bridger Wilderness), Wyoming determined that no additional controls beyond BART are necessary for Jim Bridger Units 1 and 2 under the reasonable progress provisions for the first regional haze planning period. Wyoming determined that, “[w]hile SCR installation on Units 1 & 2 could be expected to be more efficient in controlling NO<sub>x</sub> emission than either SNCR installation or relying on Current Unit 1–2 NO<sub>x</sub> Controls [(LNB/SOFA)], the estimated capital costs, annual costs, and cost-effectiveness are far higher for SCR and SNCR, compared with little modeled visibility benefit.”<sup>60</sup> In addition, the State explained that SCR will produce solid waste every time the catalyst must be replaced and will have higher electricity requirements. The State further explained that the current NO<sub>x</sub> controls are already in use and do not require additional time for compliance.<sup>61</sup>

Wyoming stated that its reasonable progress determination for Jim Bridger Units 1 and 2 is consistent with several similar EPA decisions where EPA rejected SNCR and SCR because the cost-effectiveness values associated with the control measures were significantly higher and/or the NO<sub>x</sub> emissions reductions achieved were not that much more than combustion controls (LNB) alone.<sup>62</sup> Furthermore, Wyoming stated that it considers the costs that PacifiCorp has already incurred on NO<sub>x</sub> emissions control technology at the Jim Bridger power plant and the associated improvement in visibility to be sufficient for reasonable progress.<sup>63</sup>

In summary, Wyoming concluded that the reasonable progress analysis demonstrates that the current NO<sub>x</sub> emissions controls (LNB/SOFA) on Units 1 and 2, including the current NO<sub>x</sub> emission limits of 0.26 lb/MMBtu (30-day rolling average), which apply to each unit, constitute NO<sub>x</sub> reasonable progress for Jim Bridger Units 1 and 2.

Therefore, Wyoming’s 2020 SIP revision would remove the emission limits of 0.07 lb/MMBtu (30-day rolling average) associated with the installation of SCR at Jim Bridger Units 1 and 2 as part of the State’s long-term strategy to achieve reasonable progress at several Class I areas for the first planning period.<sup>64</sup>

#### *D. Summary of Wyoming’s Plant-Wide Monthly and Annual NO<sub>x</sub> and SO<sub>2</sub> Emission Limits for Jim Bridger*

In addition to concluding that emission limits consistent with LNB/SOFA are sufficient for reasonable progress for Jim Bridger Units 1 and 2, the State asserted that PacifiCorp’s plant-wide monthly and annual NO<sub>x</sub> and SO<sub>2</sub> emission limits for Jim Bridger Units 1–4 strengthen and support the reasonable progress determination for Jim Bridger Units 1 and 2. Specifically, the State quoted EPA’s 2007 Reasonable Progress Goals Guidance (2007 Guidance), which provides that States “have flexibility in how to take into consideration [the] statutory factors and any other factors [the state has] determined to be relevant,”<sup>65</sup> in claiming that PacifiCorp’s monthly plant-wide NO<sub>x</sub> and SO<sub>2</sub> emission limits (shown in Table 2) and the annual plant-wide NO<sub>x</sub> and SO<sub>2</sub> emissions cap of 17,500 tpy are relevant in Wyoming’s revised reasonable progress analysis and determination. The State pointed to a number of factors to describe how the plant-wide monthly and annual NO<sub>x</sub> and SO<sub>2</sub> emission limits bolster the revised reasonable progress analysis. These include what the State asserted are greater modeled visibility improvement, lower costs, and fewer overall energy and environmental impacts than the installation of SCR and SNCR on Units 1 and 2.<sup>66</sup>

Wyoming relied on CALPUFF visibility modeling conducted by PacifiCorp to evaluate visibility improvement associated with the plant-wide monthly and annual NO<sub>x</sub> and SO<sub>2</sub> emission limits compared to LNB/SOFA + SCR and LNB/SOFA + SNCR.<sup>67</sup> The CALPUFF modeling report used the following three metrics to evaluate the results:

- The 98th percentile modeled delta-deciview, averaged over the 3 years

modeled and applied to each Class I area individually;

- The number of modeled days (summed over the 3 years modeled) with a plant-wide impact above 0.5 delta-deciview, applied to each Class I area individually; and
- The number of modeled days (summed over the 3 years modeled) with a plant-wide impact above 1.0 delta-deciview, applied to each Class I area individually.

Under all three metrics, Wyoming asserted that the updated CALPUFF modeling results demonstrate that the plant-wide monthly and annual NO<sub>x</sub> and SO<sub>2</sub> emission limits resulted in greater visibility improvement than SCR and SNCR.<sup>68</sup>

With respect to the 98th percentile metric, the State asserted that the visibility impacts for the Jim Bridger power plant under the SCR, SNCR, and plant-wide monthly and annual NO<sub>x</sub> and SO<sub>2</sub> emission limits scenarios are 0.760, 0.930, and 0.653 deciviews, respectively.<sup>69</sup> Wyoming further asserted that the number of CALPUFF-modeled days resulting in a plant-wide visibility impact above 0.5 delta-deciviews over a three-year period under the SCR, SNCR, and plant-wide monthly and annual NO<sub>x</sub> and SO<sub>2</sub> emission limits scenarios are 475, 597, and 371 days, respectively. Finally, with respect to the number of CALPUFF-modeled days resulting in a plant-wide visibility impact above 1.0 delta-deciview over a three-year period under the SCR, SNCR, and plant-wide monthly and annual NO<sub>x</sub> and SO<sub>2</sub> emission limits scenarios are 127, 195, and 108 days, respectively, according to the State.<sup>70</sup>

According to Wyoming, installation of SCR and SNCR on Units 1 and 2 will result in the reduction of NO<sub>x</sub> emissions of 5,848 and 1,655 tpy respectively, relative to “current operating potential.” “Current operating potential,” as defined in PacifiCorp’s technical analysis, is based on a combination of recent emission rates with plant-wide heat input (*i.e.*, utilization) from the 2001–2003 period.<sup>71</sup> Implementation of the plant-wide monthly and annual NO<sub>x</sub> and SO<sub>2</sub> emission limits will result in the reduction of NO<sub>x</sub> and SO<sub>2</sub>

<sup>68</sup> Id. at 11–12.

<sup>69</sup> Averaged across all impacted Class I areas, including Bridger Wilderness, Fitzpatrick Wilderness, Grand Teton National Park, Mt. Zirkel Wilderness, Rocky Mountain National Park, Rawah Wilderness, Teton Wilderness, Washakie Wilderness, and Yellowstone National Park. PacifiCorp Reassessment at 15.

<sup>70</sup> Id. at 11–12.

<sup>71</sup> See PacifiCorp Reassessment, Attachment 1 at 21.

<sup>59</sup> 40 CFR 51.308(d)(1)(i)(A).

<sup>60</sup> Wyoming 2020 SIP Revision at 7.

<sup>61</sup> Id.

<sup>62</sup> Id. at 7, 8 (citing 77 FR 24794 (April 25, 2012), 77 FR 11879 (February 28, 2012), 77 FR 18052 (March 26, 2012), 77 FR 23988 (April 20, 2012), 83 FR 62204 (November 30, 2018), 80 FR 18944 (April 8, 2015), 77 FR 21896 (April 12, 2012)).

<sup>63</sup> Id. at 7.

<sup>64</sup> Id. at 8.

<sup>65</sup> Wyoming 2020 SIP Revision at 8–9 (quoting EPA’s “Guidance for Setting Reasonable Progress Goals Under the Regional Haze Program,” June 1, 2007 (2007 Guidance)).

<sup>66</sup> Wyoming 2020 SIP Revision at 8–12.

<sup>67</sup> Wyoming chose the CALPUFF visibility model because it was the same model used to analyze the existing reasonable progress requirements (79 FR 5039). See Wyoming 2020 SIP Revision at 11.

emissions of 6,056 tpy relative to a baseline of 2001–2003 utilization. In addition to reductions in NO<sub>x</sub> and SO<sub>2</sub> emissions, Wyoming stated that the plant-wide emission limits will reduce all emissions from the Jim Bridger power plant, including PM, mercury (Hg), greenhouse gases (GHG), carbon

monoxide (CO), carbon dioxide (CO<sub>2</sub>), and sulfuric acid (H<sub>2</sub>SO<sub>4</sub>), as well as reduce coal consumption, coal combustion residual production and disposal, and raw water consumption.<sup>72</sup> To compare cost-effectiveness estimates, the State relied on PacifiCorp’s analysis using total tons of

SO<sub>2</sub> and NO<sub>x</sub> reduced from “current operating potential” under the assumption that the pollutants would have equivalent visibility impacts (Table 7).

TABLE 7—PACIFICORP’S SUMMARY OF JIM BRIDGER UNITS 1–4, COST ANALYSIS FOR SCR, SNCR, AND PLANT-WIDE MONTHLY AND ANNUAL NO<sub>x</sub> AND SO<sub>2</sub> EMISSION LIMITS

Jim Bridger	Control technology	Capital cost (\$)	Annualized cost (\$/year)	Cost-effectiveness (\$/ton)
Units 1–2 .....	SCR .....	280,856,000	27,743,000	4,744
Units 1–2 .....	SNCR .....	31,076,000	9,046,000	5,469
Units 1–4 .....	Monthly and Annual Plant-Wide Emission Limits.	4,659,000	2,115,000	349

Wyoming also asserted that the plant-wide monthly and annual NO<sub>x</sub> and SO<sub>2</sub> emission limits are more cost-effective than SCR or SNCR. Furthermore, Wyoming claimed that even if all three emissions control measures are compared on a NO<sub>x</sub>-only basis (excluding SO<sub>2</sub>), the plant-wide monthly and annual NO<sub>x</sub> and SO<sub>2</sub> emission limits remain the most cost-effective option.<sup>73</sup>

In addition to the asserted visibility and cost benefits associated with the plant-wide monthly and annual NO<sub>x</sub> and SO<sub>2</sub> emission limits, Wyoming compared the energy and non-air quality environmental impacts of compliance. First, Wyoming contended that, as compared to the use of SCR, the plant-wide monthly and annual NO<sub>x</sub> and SO<sub>2</sub> emission limits would allow approximately 10.4 megawatts of electrical energy required by SCR for Units 1 and 2 to be instead directed to the electrical grid to power approximately 8,761 average homes. Second, Wyoming asserted that the installation of SCR controls on Units 1 and 2 would not restrict the capacity factor of these units (*e.g.*, the annual heat output), so these units could operate with a potential average annual capacity factor of 100 percent. In contrast, Wyoming explained that implementation of the plant-wide monthly and annual NO<sub>x</sub> and SO<sub>2</sub> emission limits would limit the capacity of all four units and effectively limit annual boiler heat input, thereby also providing a reduction in the consumption of natural resources (*i.e.*,

water and coal). Third, Wyoming asserted that the installation of SCR at Units 1 and 2 would result in additional storage and use of ammonia and create more coal combustion residuals. Likewise, the installation of SNCR on Units 1 and 2 would result in additional storage and use of urea and would also create more coal combustion residuals compared to the plant-wide monthly and annual NO<sub>x</sub> and SO<sub>2</sub> emission limits. Finally, Wyoming asserted that the plant-wide monthly and annual NO<sub>x</sub> and SO<sub>2</sub> emission limits provide the entire facility the flexibility to “load follow” or accommodate intermittent influx of renewable energy into the western power grid, which has larger scale environmental impacts in Wyoming and across the West.<sup>74</sup>

**IV. EPA’s Evaluation and Proposed Disapproval of Wyoming’s Regional Haze SIP Revisions**

*A. Basis for Proposed Disapproval*

Although states have discretion under the Regional Haze Rule to balance the four statutory factors in making control determinations for sources, their analyses must be both reasoned and moored to the statutory requirement to make reasonable progress toward the national visibility goal.<sup>75</sup> The Regional Haze Rule provides that, “in determining whether the State’s goal for visibility improvement provides for reasonable progress toward natural visibility conditions, the Administrator will evaluate” the state’s demonstration under 40 CFR 51.308(d)(1)(i) and (ii).<sup>76</sup>

Thus, our regulations and the CAA require that we review the reasonableness of the State’s reasonable progress determination in light of the goal of achieving natural visibility conditions. This approach is also inherent in our role as the administrative agency empowered to review and approve SIPs. In this SIP review action, EPA is not only authorized, but required to exercise independent technical judgement in evaluating the adequacy of the State’s regional haze SIP, including its reasonable progress determinations.<sup>77</sup>

For the reasons described in section IV.B. below, EPA proposes to disapprove Wyoming’s regional haze SIP revision. Our proposed action is based on an evaluation of Wyoming’s 2020 SIP revision under the regional haze requirements at 40 CFR 51.300–51.309 and CAA section 169A. The revisions were also evaluated against the general SIP requirements contained in CAA section 110 and our regulations applicable to this action. Additionally, EPA is not reopening, and thus not accepting comment on, EPA’s 2014 approval of Wyoming’s BART determinations for Jim Bridger Units 1–4 or EPA’s 2014 approval of the emission limits Wyoming required as reasonable progress controls for Jim Bridger Units 3 and 4. Any comments on these issues will be deemed beyond the scope of this action.

<sup>72</sup> Id. at 9–10.

<sup>73</sup> Id. at 9–10.

<sup>74</sup> Id. at 10–11.

<sup>75</sup> Cf. *Arizona v. EPA*, 815 F.3d 519, 531 (9th Cir. 2016) (While states have discretion to balance the

five BART factors, they must also adhere to certain requirements when conducting BART analyses. EPA may not approve BART determinations that are based on analyses that are unreasoned or unmoored to the statutory provisions.) (citing *N. Dakota v. EPA*, 730 F.3d 750, 761 (8th Cir. 2013)).

<sup>76</sup> 40 CFR 51.308(d)(1)(iii).

<sup>77</sup> 42 U.S.C. 7410(a)(2)(J), (I), (k)(3); 7491(a)(1), (b)(2)(B); *Oklahoma v. EPA*, 723 F.3d 1201 (10th Cir. 2013).

*B. EPA's Proposed Disapproval of Wyoming's Reasonable Progress Determination for Jim Bridger Units 1 and 2*

We are proposing to disapprove Wyoming's regional haze SIP revision for the NO<sub>x</sub> reasonable progress determination for Jim Bridger Units 1 and 2.

In our analysis of the Wyoming 2020 SIP revision, we evaluated Wyoming's reasonable progress determination for Jim Bridger Units 1 and 2 under 40 CFR 51.308(d)(1)(i)(A). Under this requirement, a state must consider the following four factors and include a demonstration of how they were taken into consideration in making a reasonable progress determination:

- Costs of Compliance;
- Time Necessary for Compliance;
- Energy and Non-Air Quality

Environmental Impacts of Compliance; and

- Remaining Useful Life of Any Potentially Affected Sources.

The State has discretion to reasonably weigh these four factors, along with visibility improvement if it so chooses, to determine what controls are necessary to include in the long-term strategy for a specific source. States exercise this discretion within the context of the statutory requirement to make reasonable progress toward the national visibility goal.<sup>78</sup>

#### 1. Basis of Our Proposed Disapproval

We are proposing to find that Wyoming's 2020 SIP revision does not provide a reasonable basis for reversing the State's 2011 determination of what reasonable progress controls are necessary for Jim Bridger Units 1 and 2 for the first planning period. Our proposed disapproval is based on the following: (1) The reasonable cost-effectiveness of the existing control requirements for Jim Bridger Units 1 and 2 (emission limits consistent with the installation of SCR); (2) the appreciable visibility improvement estimated to result from compliance with the existing reasonable progress control requirements; and (3) the fact that the State previously determined that the costs of those control requirements were reasonable and that they are necessary to satisfy the statutory requirements, and has not provided any new information that would support a revised determination that the existing control requirements are now unreasonable. Because the State has not provided adequate justification for reversing its 2011 determination,

removing the existing emission limits reflecting LNB/SOFA + SCR from the SIP would be inconsistent with the requirement that SIPs contain the measures necessary to make reasonable progress toward the national visibility goal. We therefore propose to disapprove the State's 2020 SIP revision.

As an initial matter, we propose to find that the State reasonably characterized the four factors required in a reasonable progress analysis, including the costs of compliance, the time necessary for compliance, energy and non-air quality environmental impacts of compliance, and the remaining useful life of any potentially affected sources. In addition, we agree with the State that, although visibility improvement is not one of the four factors required by CAA section 169A(g)(1) and 40 CFR 51.308(d)(1)(i)(A), visibility improvement (along with the statutory factors) can be considered to determine what control measures are necessary to make reasonable progress.<sup>79</sup>

We are also specifically proposing to find that Wyoming's revised cost calculation is appropriate, including: (1) The use of actual annual average (2013–2015) NO<sub>x</sub> emissions rates for LNB/SOFA; (2) the use of NO<sub>x</sub> emissions rates of 0.15 and 0.05 lb/MMBtu (annual) for LNB/SOFA + SNCR and LNB/SOFA + SCR, respectively; (3) the use of amortization periods of 20, 20, and 30 years for LNB/SOFA, SNCR and SCR, respectively; (4) the use of actual costs for the installation and operation of SCR taken from those incurred for Units 3 and 4; and (5) the use of a baseline of 2001–2003 emissions to analyze cost and visibility associated with LNB/SOFA, LNB/SOFA + SNCR, and LNB/SOFA + SCR.

However, as explained previously, notwithstanding our proposed finding that Wyoming reasonably characterized relevant information under each of the four statutory factors, we are proposing to find that the State did not reasonably consider that information in reaching its revised reasonable progress determination.

Of the four reasonable progress factors and the optional visibility improvement factor, the State placed significant emphasis on the costs of compliance in its analysis of controls for Jim Bridger Units 1 and 2. Consistent with the State's analysis, we afford this factor similar significance in our evaluation

here. We are also evaluating the visibility improvement information that Wyoming considered in the SIP revision, as well as the other three factors—remaining useful life, time necessary for compliance, and energy and non-air environmental impacts. After a consideration of all five of these factors, we propose to conclude that the State's determination that the installation of SCR is not necessary for reasonable progress is unreasonable.

#### a. Costs of Compliance

In order to evaluate Wyoming's 2020 SIP revision with respect to the cost of compliance, we first evaluate Wyoming's characterization of the costs using the updated Control Cost Manual. Next, we evaluate the reasonableness of the costs associated with the installation of SCR on Units 1 and 2 with respect to average and incremental cost-effectiveness and the State's explanation for why requiring SCR on Units 1 and 2 is unreasonable.

The revised NO<sub>x</sub> control cost estimates in Wyoming's 2020 SIP revision are based on the current version of the Control Cost Manual, which has been revised since our 2014 final rule. As updated, the Control Cost Manual includes a 30-year equipment life for SCR.<sup>80</sup> The change in equipment life estimate from 20 to 30 years for SCR affects annual cost estimates, as well as average cost-effectiveness and incremental cost-effectiveness estimates. We propose to find Wyoming's use of the updated Control Cost Manual appropriate.

In the 2020 SIP revision, Wyoming provided updated capital costs, annual costs, and average and incremental cost-effectiveness figures for SNCR, SCR, and the plant-wide annual and monthly limits.<sup>81</sup> The 2007 Guidance instructs that states should evaluate both average and incremental costs according to the Control Cost Manual to maintain and improve consistency.<sup>82</sup> These figures take into account capital and annual costs and allow states and EPA to compare costs of controls industry wide. EPA's guidance further cautions against

<sup>80</sup> EPA, "Control Cost Manual," Section 4, Chapter 2, June 2019, page 80, available at <https://www.epa.gov/economic-and-cost-analysis-air-pollution-regulations/cost-reports-and-guidance-air-pollution> (last visited December 2021).

<sup>81</sup> Wyoming 2020 SIP Revision at 4–5.

<sup>82</sup> 2007 Guidance at page 5–1, 2 (referring to the BART Guidelines and Control Cost Manual). See also 40 CFR part 51, appendix Y, IV.D.4.b ("For purposes of air pollutant analysis, 'effectiveness' is measured in terms of tons of pollutant emissions removed, and 'cost' is measured in terms of annualized control costs. We recommend two types of cost-effectiveness calculations—average cost effectiveness, and incremental cost effectiveness.")

<sup>78</sup> 42 U.S.C. 7491(a)(1), (b)(2)(B); 40 CFR 51.308(d)(1)(iii).

<sup>79</sup> See 77 FR 57864, 57899 (September 18, 2012), 79 FR 9318, 9353–54 (February 18, 2014), 81 FR 296, 309–310 (January 5, 2016). See also 2007 Guidance at page 5–1.

considering in isolation the capital costs of a control option, as large or small capital costs alone are not dispositive of the reasonableness of a potential control.<sup>83</sup> Thus, we deem the average and incremental cost-effectiveness figures most relevant to our consideration of Wyoming's revised cost analysis.

In the revised cost analysis for the 2020 SIP revision, Wyoming's cost estimates show an average cost-effectiveness for LNB/SOFA + SCR for Units 1 and 2 of \$1,997 and \$2,228 per ton of NO<sub>x</sub> removed, respectively.<sup>84</sup> Wyoming's cost estimates also show an incremental cost-effectiveness for LNB/SOFA + SCR for Units 1 and 2 of \$4,410 and \$4,510 per ton of NO<sub>x</sub> removed, respectively, relative to the next-most-stringent control (LNB/SOFA + SNCR).<sup>85</sup>

Based on the State's estimates, the costs of the existing control requirements (LNB/SOFA + SCR) are eminently reasonable. Indeed, in 2011, the State deemed reasonable an average cost-effectiveness of \$2,258 per ton of NO<sub>x</sub> removed (LNB/SOFA + SCR) and incremental cost-effectiveness of \$5,721 per ton of NO<sub>x</sub> removed (LNB/SOFA + SCR) for each unit when it required SCRs as reasonable progress controls.<sup>86</sup> Similarly, EPA concluded in our 2014 final rule that our revised average cost-effectiveness figures for LNB/SOFA + SCR for Units 1 and 2 of \$2,635 and \$3,403 per ton and our revised incremental cost-effectiveness figures for LNB/SOFA + SCR for Units 1 and 2 of \$7,447 and \$8,968 were reasonable.<sup>87</sup>

Relatedly, in our 2014 final rule, we required through a Federal implementation plan an emission limit consistent with the installation of new LNB/OFA + SCR at four other units in Wyoming with higher cost-effectiveness figures: LNB/OFA + SCR at Laramie River Station Units 1, 2, and 3 had an average cost-effectiveness of \$4,461, \$4,424, and \$4,375 per ton and incremental cost-effectiveness of \$5,449, \$5,871, and \$5,667 per ton, respectively,<sup>88</sup> and LNB/OFA + SCR at

Wyodak had an average cost-effectiveness of \$4,036 per ton and incremental cost-effectiveness of \$6,233 per ton.<sup>89</sup>

Thus, the revised average cost-effectiveness and incremental cost-effectiveness for installing SCR on Jim Bridger Units 1 and 2 in Wyoming's 2020 SIP revision are even lower than what Wyoming determined were reasonable for the same units in 2011. And the revised cost-effectiveness figures are even lower than what EPA in 2014 determined were reasonable for Jim Bridger Units 1 and 2 and for four other units addressed in the 2014 final rule.<sup>90</sup>

In 2014, EPA ultimately deferred to Wyoming's BART and reasonable progress determinations for Jim Bridger, even though the available information suggested that SCR was reasonable as BART, given the State's commitment to require SCR as reasonable progress controls. But here, the State submitted a SIP revision that does not warrant such deference. Specifically, the cost associated with installing and operating the currently required controls on Jim Bridger Units 1 and 2 has not increased beyond what the State determined in 2011 was reasonable. Wyoming has asserted only that not requiring emission limits reflecting SCR for Units 1 and 2 will be less costly than requiring them and the amount that PacifiCorp has spent to date on NO<sub>x</sub> control technology at Jim Bridger is sufficient for reasonable progress. Neither of these justifications offers a compelling basis for removing the existing control requirements, as both were expected and acknowledged at the time of Wyoming's 2011 decision to require the controls. Additionally, we note again that the expected fleetwide installations of SCRs that PacifiCorp had previously

anticipated have not come to pass.<sup>91</sup> Regardless, in 2011, Wyoming determined the costs the source would incur were reasonable and that emission limits reflecting LNB/SOFA + SCR are necessary to meet the statutory requirements. The State has offered no reasonable explanation for its reversal, *i.e.*, for why the revised, even lower cost-effectiveness estimates for SCR are now unreasonable such that an emission limit associated with SCR is no longer necessary to meet the requirement to make reasonable progress.

In summary, we disagree with Wyoming that the cost analysis strongly favors removing the existing SCR-based requirement<sup>92</sup> for the following reasons: (1) The average cost-effectiveness and incremental cost-effectiveness for installing SCR on Units 1 and 2 in Wyoming's 2020 SIP revision are even lower than what Wyoming determined were reasonable in 2011 and lower than what we found to be reasonable for the installation of LNB/SOFA + SCR in similar instances in 2014; (2) the State has offered no reasonable explanation for why the revised, lower cost-effectiveness estimates for SCR are now unreasonable; and (3) Wyoming has not provided any new information that would support a revised determination that the costs of the existing control requirements are now unreasonable.

#### b. Visibility Improvement

For Jim Bridger, the projected visibility improvements associated with the installation of LNB/SOFA and SCR are between 0.27–0.37 and 0.27–0.36 deciviews for Units 1 and 2, respectively, at the most impacted Class I area, Bridger Wilderness (Table 6). Additionally, the installation of SCR at Units 1 and 2 would result in visibility improvement at numerous other Class I areas.<sup>93</sup>

<sup>91</sup> See *supra* note 37.

<sup>92</sup> Wyoming 2020 SIP Revision at 5.

<sup>93</sup> For Jim Bridger Unit 1, using monthly varying ammonia concentrations, model visibility improvements with LNB/OFA + SCR were 0.37 deciviews at Bridger; 0.26 deciviews at Fitzpatrick; 0.29 deciviews at Mt Zirkel; 0.35 deciviews at Rawah; 0.36 deciviews at Rocky Mountain; 0.17 deciviews at Grand Teton; 0.14 deciviews at Teton; 0.19 deciviews at Washakie; and 0.15 deciviews at Yellowstone. For Jim Bridger Unit 1, using a constant 0.5 ppb ammonia concentration, model visibility improvements with LNB/OFA/SCR were: 0.37 deciviews at Bridger; 0.26 deciviews at Fitzpatrick; 0.29 deciviews at Mt Zirkel; 0.35 deciviews at Rawah; 0.36 deciviews at Rocky Mountain; 0.17 deciviews at Grand Teton; 0.14 deciviews at Teton; 0.19 deciviews at Washakie; and 0.15 deciviews at Yellowstone. For Jim Bridger Unit 2, using monthly varying ammonia concentrations, model visibility improvements with LNB/OFA/SCR were: 0.36 deciviews at Bridger; 0.26 deciviews at Fitzpatrick; 0.28 deciviews at Mt Zirkel; 0.35 deciviews at Rawah; 0.36 deciviews at

<sup>89</sup> 79 FR 5044. The NO<sub>x</sub> emission limit at Wyodak is subject to ongoing litigation and settlement discussions.

<sup>90</sup> The examples cited by Wyoming in the 2020 SIP revision do not establish that the revised cost-effectiveness figures for Jim Bridger Units 1 and 2 are unreasonable. Indeed, the average cost-effectiveness figures in the examples are higher than or similar to Wyoming's revised cost estimates. See 80 FR 18944, 18975 (April 8, 2015) (proposed rule stating that LNB/SOFA + SCR average (\$3,552 and \$2,749 per ton) and incremental (\$6,717 and \$5,736 per ton) cost-effectiveness figures were "within the range of what we consider to be cost-effective" for BART but incremental visibility improvement of 0.069 deciviews at a single Class I area is "relatively small" in light of incremental cost-effectiveness figures); 77 FR 21896, 21901 (April 12, 2012) (proposed rule stating that LNB/OFA + SCR average cost-effectiveness figures of \$2,110, \$1,967, and \$2,183 and incremental cost-effectiveness figures of \$4,534, \$4,330, and \$2,756 were not cost prohibitive or sufficiently large to warrant eliminating SCR from consideration as BART).

<sup>83</sup> See 40 CFR part 51, appendix Y, IV.D.4.g.

<sup>84</sup> See Table 4 in this document. Because we are finding the most stringent control technology (SCR) reasonable, and because Wyoming did not request that we evaluate other control technologies, we are not evaluating additional control technologies. See 40 CFR part 51, appendix Y, IV.D.1.9.

<sup>85</sup> See Table 4 in this document.

<sup>86</sup> 77 FR 33053.

<sup>87</sup> 79 FR 5048.

<sup>88</sup> 79 FR 5039–40. The NO<sub>x</sub> emission limit for Units 1, 2, and 3 were revised (through settlement) on May 20, 2019, to 0.06 lb/MMBtu by July 1, 2019, 0.15 lb/MMBtu by December 31, 2018, and 0.15 lb/MMBtu by December 31, 2018, respectively. 84 FR 22711 (May 20, 2019).

As an initial matter, Wyoming mischaracterizes our 2014 final rule in its 2020 SIP revision when it asserts that EPA “determined that the unit-specific visibility benefits for LNB/SOFA + SCR installation on Units 1 and 2 were ‘modest’ (0.27 to 0.37 deciviews).”<sup>94</sup> In the 2014 final rule, EPA stated that the visibility improvement associated with the installation of SCR is “significant on a source-wide basis (1.25 to 1.5 deciviews),” while “[t]he unit-specific benefits for Units 1 and 2 are *somewhat more* modest (0.27–0.37 deciviews).”<sup>95</sup> That is to say, the unit-specific benefits were relatively less than the benefits for the entire source, which will always be the case. Thus, we did not characterize the visibility improvement associated with the installation of SCR at Jim Bridger Units 1 and 2 as merely “modest,” and we do not agree with Wyoming’s characterization of the associated visibility improvement as such now. The fact remains that the installation of SCR at Jim Bridger Units 1 and 2 would yield appreciable visibility improvement at a reasonable cost.

States choosing to consider visibility benefits as an optional additional factor should not use visibility to summarily dismiss cost-effective potential controls. This is because the CAA does not explicitly list visibility as a factor that must be considered in reasonable progress determinations.<sup>96</sup> In this case, Wyoming is rejecting additional controls at Units 1 and 2, regardless of whether they are cost-effective, because “installation of SCR on Units 1 & 2

Rocky Mountain; 0.16 deciviews at Grand Teton; 0.14 deciviews at Teton; 0.19 deciviews at Washakie; and 0.14 deciviews at Yellowstone. For Jim Bridger Unit 2, using a constant 0.5 ppb ammonia concentration, model visibility improvements with LNB/OFA/SCR were: 0.36 deciviews at Bridger; 0.26 deciviews at Fitzpatrick; 0.28 deciviews at Mt Zirkel; 0.35 deciviews at Rawah; 0.36 deciviews at Rocky Mountain; 0.16 deciviews at Grand Teton; 0.14 deciviews at Teton; 0.19 deciviews at Washakie; and 0.14 deciviews at Yellowstone. 79 FR 5041.

<sup>94</sup> Wyoming 2020 SIP Revision at 7.

<sup>95</sup> 79 FR 5048 (emphasis added).

<sup>96</sup> Compare 42 U.S.C. 7491(g)(2) (including visibility as a factor in BART determinations) with id. 7491(g)(1) (visibility not included as an explicit factor in reasonable progress determinations); see also EPA, “Clarifications Regarding Regional Haze State Implementation Plans for the Second Implementation Period,” July 8, 2021 (“July 2021 Clarifications Memo”) at 12–13, available at <https://www.epa.gov/system/files/documents/2021-07/clarifications-regarding-regional-haze-state-implementation-plans-for-the-second-implementation-period.pdf>; 82 FR 3078, 3093 (January 10, 2017) (because regional haze is caused by emissions from numerous sources, in order to address it, states may not abandon controls they already have determined are reasonable based on the four statutory factors on the basis that impact on visibility conditions is subjectively assessed as not “meaningful”).

would result in only modest incremental visibility benefits of .10 to .15 deciviews (per unit) when compared to LNB/SOFA on Units 1 and 2.” This is a generally inappropriate basis on which to make reasonable progress determinations for sources. Furthermore, because Units 1 and 2 already have been controlled under BART, additional controls would be expected to make relatively smaller contributions to visibility improvement as a proportion of total impairment. This does not mean, however, that such sources need not be controlled in order to achieve the national visibility goal.<sup>97</sup> To the contrary, the evaluation and control of BART sources such as Jim Bridger Units 1 and 2 under the reasonable progress requirements will be necessary to achieve the national goal of the prevention of any future, and the remedying of any existing manmade impairment of visibility in Class I areas.<sup>98</sup>

Finally, in Wyoming’s 2020 SIP revision, the visibility improvement remains unchanged from our 2014 final rule, and the State has provided no new visibility information to support a revised NO<sub>x</sub> reasonable progress determination that the existing control requirements are now unreasonable. In summary, we disagree with Wyoming’s assertion that the visibility benefits are not sufficiently meaningful to warrant cost-effective controls.

<sup>97</sup> See *id.*; see also 40 CFR 51.308(e)(5) (after a state has met BART requirements, BART-eligible sources are subject to reasonable progress requirements in the same manner as other sources).

<sup>98</sup> As with Wyoming’s cost-effectiveness examples, Wyoming’s visibility examples do not support Wyoming’s conclusions regarding visibility improvement. Each is an example of a proposed BART determination that does not address the fact that, in many instances, reasonable progress controls naturally yield relatively smaller visibility improvement over already-installed BART controls. Thus, the fact that we proposed to reject controls of a certain cost-effectiveness and visibility improvement for BART does not necessitate rejecting similar controls for reasonable progress. See 77 FR 24794, 24818 (April 25, 2012) (proposed rule stating that SCR is cost-effective for BART at \$5,358 per ton but visibility improvement at the most impacted Class I area of 0.254 deciviews and cumulative visibility improvement at seven Class I areas of 0.273 deciviews are small and thus EPA proposed to approve determination that BART is not SCR); 77 FR 11879, 11891 (February 28, 2012) (proposed rule stating that EPA proposed to agree with state determination that certain controls for a refinery were not BART due to high costs (unavailable) and small visibility gains (0.045 to 0.16 deciview range)); 77 FR 18052, 18066 (March 26, 2012) (proposed rule stating that EPA proposed to agree with the state’s determination that SCR was not BART given high cost-effectiveness (\$9,900 and \$15,290 per ton) and low visibility improvement (under 0.2 deciviews)); 77 FR 23988, 24013 (April 20, 2012) (proposed rule stating that SO<sub>2</sub> BART controls were cost-effective when values ranged from \$1400 to \$4800 per ton but visibility improvement ranges of 0.033 and 0.18 were “relatively small”).

### c. Other Factors

Relevant to energy and non-air quality environmental impacts, the State noted that SCR will produce solid waste when the catalyst is replaced periodically, and that requiring SCR will require significantly more electricity than LNB/SOFA. EPA’s 2007 Guidance provides that to the extent energy and non-air quality environmental impacts of compliance are quantifiable, they should be included in the engineering analysis supporting the cost of compliance estimates.<sup>99</sup> PacifiCorp did so in the revised cost analysis for the 2020 SIP revision. As explained elsewhere in this document, even with the energy and non-air environmental costs incorporated into the cost analysis, the cost-effectiveness of SCR remains reasonable.

Additionally, the 2007 Guidance points to EPA’s BART Guidelines, which provide, among other things, that (1) the fact that a control technology uses energy in and of itself does not disqualify that technology, and (2) the fact that a control technology creates waste that must be disposed of does not necessarily argue against selection of that technology, especially if the control has been applied to similar facilities elsewhere and the waste is similar to those other applications.<sup>100</sup> Wyoming has merely pointed out that the existing controls on Units 1 and 2 (LNB/SOFA) require less electricity to operate than SNCR or SCR and that SCR requires periodic catalyst replacement. The State has not demonstrated that the anticipated energy expenditure or waste that would be generated at Units 1 and 2 would be any different from the numerous other units for which states or EPA have required SCR. Indeed, Wyoming has already determined that energy and non-air environmental impacts did not disqualify SCR from being a reasonable control technology for two units at the same facility, *i.e.*, at Jim Bridger Units 3 and 4.<sup>101</sup> Based on EPA’s long-standing guidance and the fact that the State has not provided any evidence to support a conclusion that the energy and non-air environmental impacts of SCR at Units 1 and 2 are unreasonable, we disagree that these factors support a conclusion that SCR is not the reasonable choice of control.

<sup>99</sup> 2007 Guidance at 5–2 and 5–3.

<sup>100</sup> 2007 Guidance at 5–2 and 5–3; 40 CFR part 51, appendix Y, IV.D.4.h–i.

<sup>101</sup> Additionally, in its 2011 SIP submission Wyoming did not identify any energy or non-air quality environmental impacts that would preclude selection of any of the controls evaluated for Jim Bridger, including LNB/SOFA + SCR. See 78 FR 34753.

With respect to remaining useful life, as stated above, Wyoming did not provide an enforceable shutdown date that would ensure that the expected life of Jim Bridger Units 1 and 2 would be less than the expected life of the control technology. Thus, Wyoming appropriately used the Control Cost Manual remaining useful life for SCR of 30 years in the cost analysis.

With respect to time necessary for compliance, Wyoming noted that the LNB/SOFA are already in use and thus, in contrast to SCR and SNCR, do not need any additional time for compliance. The deadline for Jim Bridger Units 1 and 2 to comply with the existing control requirements reflecting installation and operation of SCR by December 31, 2022 and December 31, 2021, respectively has existed in the SIP since 2014. We thus do not believe it is reasonable for the State to consider the time necessary for compliance as weighing in favor of not requiring SCRs as reasonable progress controls.

#### d. Summary of EPA's Evaluation of Wyoming's Reasonable Progress Demonstration

In summary, we propose to disapprove Wyoming's reasonable progress demonstration concluding that the NO<sub>x</sub> emission limits associated with LNB/SOFA controls are the reasonable choice for Jim Bridger Units 1 and 2. We base our proposed disapproval on the following: (1) The reasonable average cost-effectiveness and incremental cost-effectiveness of the existing control requirements for Jim Bridger Units 1 and 2; (2) the appreciable visibility improvement estimated to result from compliance with the existing reasonable progress control requirements; (3) the fact that the State previously determined that the costs of those control requirements were reasonable given the visibility benefits, and thus necessary to satisfy the statutory requirements, and has not provided any new information that would support a revised determination that the existing control requirements are now unreasonable. Ultimately, we propose to find that because the State failed to justify its conclusion that the existing SCR requirements should be removed such that no further controls beyond BART are required for Jim Bridger Units 1 and 2, we cannot reasonably approve Wyoming's 2020 SIP revision. Because removing the existing SCR requirements would be inconsistent with the statutory requirement that SIPs contain the measures necessary to make reasonable progress, we are proposing to

disapprove Wyoming's 2020 SIP revision.

#### C. Plant-Wide Monthly and Annual NO<sub>x</sub> and SO<sub>2</sub> Emission Limits for Jim Bridger Units 1–4

Wyoming's SIP revision includes "an alternative regional haze compliance strategy for the Jim Bridger Power Plant"<sup>102</sup> that Wyoming considered as supplemental information to its revised four-factor reasonable progress analysis and determination. Wyoming asserts that the alternative regional haze compliance strategy's plant-wide monthly and annual NO<sub>x</sub> and SO<sub>2</sub> emission limits are designed to reduce regional haze and create numerous other environmental benefits toward achieving natural visibility conditions at its Class I areas.<sup>103</sup>

The 2020 SIP revision provides that the State "considered it appropriate to re-balance and reconsider its [reasonable progress/long-term strategy] determination and complete a four factor reasonable progress analysis on a NO<sub>x</sub>-only basis."<sup>104</sup> Our proposed disapproval of Wyoming's reasonable progress determination for Jim Bridger Units 1 and 2 is thus based solely on the source-specific NO<sub>x</sub> reasonable progress analysis, as this analysis and resulting determination were intended to replace the State's previous NO<sub>x</sub>-only determination. However, we are also proposing to find that we cannot approve, and are therefore proposing to disapprove, the plant-wide emission limits, which rely on a comparative analysis that includes both NO<sub>x</sub> and SO<sub>2</sub> emissions reductions.

EPA is proposing to disapprove the plant-wide monthly NO<sub>x</sub> and SO<sub>2</sub> emission limits because we cannot render a SIP more stringent than intended by the state through a partial SIP approval.<sup>105</sup> While Wyoming has discretion to consider these limits,<sup>106</sup> it is our understanding that Wyoming intended to adopt and make enforceable the plant-wide monthly and annual NO<sub>x</sub> and SO<sub>2</sub> emission limits, as

<sup>102</sup> Letter from Todd Parfitt, Director, Wyoming Department of Environmental Quality, to Gregory Sopkin, Regional Administrator, USEPA Region 8, Subject: State Implementation Plan Approval Request—Regional Haze 309(g) SIP Revision for PacifiCorp Jim Bridger Power Plant (May 12, 2020). See also Wyoming 2020 SIP Revision at 3.

<sup>103</sup> Wyoming 2020 SIP Revision at 9.

<sup>104</sup> *Id.* at 3.

<sup>105</sup> *Bethlehem Steel Corp. v. Gorsuch*, 742 F.2d 1028, 1036 (7th Cir. 1984).

<sup>106</sup> As stated above, Wyoming has discretion to evaluate factors (beyond the four factors) that it considers relevant in formulating its long-term strategy, 2007 Guidance at page 5–1, so long as it does so reasonably and in a manner consistent with the statute and other applicable requirements. 42 U.S.C. 7491(b)(2)(B); 40 CFR 51.308(d)(1)(iii).

proposed by PacifiCorp, *in lieu of* the required emission limits associated with the installation of SCR on Units 1 and 2 and not *in addition to* the required emission limits associated with the installation of SCR.<sup>107</sup> That is, we understand that Wyoming did not intend to implement the plant-wide monthly and annual NO<sub>x</sub> and SO<sub>2</sub> emission limits together with SCR on Jim Bridger Units 1 and 2. Implementing a NO<sub>x</sub> emission limit consistent with the installation of SCR together with plant-wide monthly and annual NO<sub>x</sub> and SO<sub>2</sub> emission limits would effectively increase the stringency of the SIP beyond what was intended in the Wyoming 2020 SIP revision.<sup>108</sup> Thus, because EPA cannot render Wyoming's SIP more stringent than intended by the State through a partial SIP approval, and because we are proposing to disapprove Wyoming's revised NO<sub>x</sub> reasonable progress determination as unreasonable, we are also proposing to extend our disapproval to the State's plant-wide monthly and annual NO<sub>x</sub> and SO<sub>2</sub> emission limits. Wyoming may choose to submit the plant-wide monthly and annual NO<sub>x</sub> and SO<sub>2</sub> emission limits to EPA in a stand-alone SIP submittal if the State would like to incorporate these emission limits into its SIP independent of the revised NO<sub>x</sub> reasonable progress analysis and determination for Jim Bridger Units 1 and 2 contained in the 2020 SIP revision. For example, some form of plant-wide mass limits could serve as a SIP strengthening measure.

In addition to the legal basis for proposing to disapprove the plant-wide monthly and annual NO<sub>x</sub> and SO<sub>2</sub> emission limits, we also note two additional considerations. These considerations relate to Wyoming and PacifiCorp's quantitative analyses in support of the plant-wide limits, which assume that Jim Bridger is still operating at historical (2001–2003) levels. Although we are not relying on these considerations as the basis of our proposed disapproval, we provide them here for completeness.

First, Wyoming analyzed the plant-wide limits assuming Jim Bridger's emissions are consistent with the plant's "current operating potential."<sup>109</sup> As explained above, PacifiCorp's analysis defines "current operating potential" as

<sup>107</sup> Wyoming 2020 SIP Revision at 9, 10, and 12.

<sup>108</sup> Implementation of NO<sub>x</sub> limits consistent with installing SCRs on Units 1 and 2, combined with the plant-wide monthly SO<sub>2</sub> limits would likely result in some SO<sub>2</sub> reductions (from the monthly plant-wide limits) plus additional NO<sub>x</sub> reductions (from meeting the 0.07 lb/MMBtu limits on Units 1 and 2) that are beyond what was intended in the SIP revision.

<sup>109</sup> Wyoming 2020 SIP Revision at 9.

a combination of recent emission rates with plant-wide heat input (*i.e.*, utilization) from the 2001–2003 period. Thus, the majority of the emissions reductions that Wyoming credited to the plant-wide limits<sup>110</sup> would be realized only if Jim Bridger was utilized at levels consistent with the 2001–2003 period. However, recent utilization of the plant, based on the 2017–2020 period, has been much lower.<sup>111</sup> EPA examined emissions and operations data from the 2017 to 2020 period because it reflects (1) full operation of the SCRs on Units 3 and 4 that were installed in 2015 and 2016, respectively, (2) earlier SO<sub>2</sub> scrubber upgrades on all four units, and (3) recent trends in plant operations, as hours of operation and heat input. To the extent Wyoming's demonstration relies on historical (2001–2003) utilization to show that the plant-wide monthly and annual NO<sub>x</sub> and SO<sub>2</sub> emission limits achieve greater emissions reductions (and therefore greater visibility improvement) than SCRs on Units 1 and 2,<sup>112</sup> neither the CAA nor the Regional Haze Rule provide a basis for such reliance.<sup>113</sup>

Second (and relatedly), based on recent (2017–2020) operation of the plant, we believe it is reasonable to conclude that the plant-wide monthly and annual NO<sub>x</sub> and SO<sub>2</sub> emission limits would not actually achieve similar or greater emissions reductions and visibility improvement compared to the installation of SCR on Units 1 and 2 as Wyoming contends.

Wyoming claims that the plant-wide limits will produce greater visibility improvement compared to the installation of two additional SCRs on Units 1 and 2. However, the CALPUFF visibility modeling inputs, and therefore visibility modeling results, are premised on assumptions about Jim Bridger's baseline utilization and emissions. Again, Wyoming analyzed the plant-

wide emission limits assuming Jim Bridger's emissions were consistent with its plant-wide heat input from the 2001–2003 period. That is, the modeling analysis assumes heat input from a historical period that does not correspond to how the facility is currently operated.<sup>114</sup> The plant-wide 2017–2020 average utilization is approximately 29 percent below 2001–2003 average levels.<sup>115</sup> Based on the assumption of plant-wide heat input from the 2001–2003 period, the analysis of the plant-wide limits by PacifiCorp and Wyoming estimates a reduction of 5,049 tpy of SO<sub>2</sub> and 1,007 tpy of NO<sub>x</sub>. Had the quantitative analysis been based on Jim Bridger's current utilization, it would have shown that the plant-wide limits would actually achieve far fewer emissions reductions going forward.<sup>116</sup> For example, the proposed annual plant-wide SO<sub>2</sub> + NO<sub>x</sub> emission limit is 17,500 tpy. However, in the 2017–2020 period, plant-wide annual SO<sub>2</sub> + NO<sub>x</sub> emissions have ranged from 14,823 to 16,004 tpy.<sup>117</sup> Therefore, Jim Bridger is already operating well below the proposed annual plant-wide SO<sub>2</sub> + NO<sub>x</sub> emission limits. Consequently, any annual SO<sub>2</sub> and NO<sub>x</sub> reductions based on the source's *actual* current operations

<sup>114</sup> PacifiCorp Reassessment at 7. The PacifiCorp Reassessment also references annual heat input values that were not disclosed to EPA due to confidential forecasted capacity factors (see Attachment 3B to Attachment 1). Therefore, some assumptions are unknown and impossible to replicate.

<sup>115</sup> Compare PacifiCorp Reassessment, Attachment 1 at 21 (providing 2001–2003 average heat input used as baseline for cost-effectiveness analysis) with EPA Calculations for Wyoming 2020 SIP Revision (January 7, 2022) (Tab 1).

<sup>116</sup> Wyoming and PacifiCorp used the 2001–2003 period as the baseline for the revised cost estimates in the Wyoming 2020 SIP Revision's NO<sub>x</sub>-only four-factor analysis for Jim Bridger Units 1 and 2. EPA believes this is a reasonable approach given the circumstances, particularly that the purpose was to compare the costs of different controls against a common baseline and that the cost and visibility figures relied on for that analysis were originally calculated for BART purposes. In contrast, EPA understands the purpose of the quantitative analysis accompanying the plant-wide monthly and annual NO<sub>x</sub> and SO<sub>2</sub> emission limits was to determine whether they will result in greater prospective emissions reductions and visibility improvement than SCR. See, *e.g.*, Wyoming 2020 SIP Revision at 12 (“In addition, PacifiCorp's visibility enhancing proposal to limit overall operations at all four Jim Bridger Units adds support to Wyoming's reasonable progress revision, and ensures that visibility improvements greater than SCR installation will be achieved for the State of Wyoming.”). In this context, using a historical utilization baseline that does not reflect current or likely future plant operation obfuscates the assessment of future potential emissions reductions.

<sup>117</sup> EPA Calculations for Wyoming 2020 SIP Revision (January 7, 2022) (Tab 1). Data based on the information obtained from EPA's Clean Air Markets Division (CAMD) database, available at: <https://ampd.epa.gov/ampd/>.

would be much smaller than estimated from the analysis of a potential historical operation basis.

Due to the complicated nature of the proposed monthly limits and a lack of complete information,<sup>118</sup> EPA could not complete a full evaluation of the impact of the monthly limits on emissions and emissions reductions. However, based on the information available to EPA, it appears that while the proposed additional plant-wide monthly SO<sub>2</sub> and NO<sub>x</sub> limits may restrict SO<sub>2</sub> emissions (and to a lesser extent NO<sub>x</sub> emissions) in some months, the facility's recent operation has been emitting at levels similar to the proposed monthly limits.<sup>119</sup> Thus, the plant-wide annual and monthly limits appear to result in few actual emissions reductions based on Jim Bridger's recent operation.

In contrast, installation of two additional SCRs on Units 1 and 2 will provide significant and certain additional NO<sub>x</sub> emissions reductions under any operating scenario compared to either recent operation or potential historical operation. With the current SIP emission limits of 0.07 lb/MMBtu (30-day rolling average) for Units 1 and 2, additional SCRs on those two units would reduce annual NO<sub>x</sub> emissions by at least 3,000 tpy relative to the 2017–2020 period (based on actual calendar month operation over that time period).<sup>120</sup> Because the more recent data reflect the facility as it operates today (including emissions controls and limits that PacifiCorp and Wyoming assumed in the analysis of plant-wide limits), we believe it presents a reasonable set of operating conditions from which to evaluate which scenario would achieve greater combined NO<sub>x</sub> and SO<sub>2</sub> emissions reductions in future years. Furthermore, neither PacifiCorp nor Wyoming included any information that would indicate increased operation in the future.

In conclusion, unlike the plant-wide NO<sub>x</sub> and SO<sub>2</sub> emission limits, installation of two additional SCRs provides significant NO<sub>x</sub> reductions of *at least* 3,000 tpy. Based on the information we have before us, we believe it is reasonable to conclude that the proposed plant-wide annual and monthly limits would not provide similar or greater emissions reductions or visibility improvement compared to the installation of two additional SCRs. This is especially true in comparison to recent operation of the Jim Bridger plant in the 2017 to 2020 period.

<sup>118</sup> See *supra* note 114.

<sup>119</sup> EPA Calculations for Wyoming 2020 SIP Revision (January 7, 2022) (Tabs 3 and 4).

<sup>120</sup> *Id.* at Tab 2.

<sup>110</sup> See Wyoming 2020 SIP Revision at 9 (plant-wide emission limits would result in combined NO<sub>x</sub> and SO<sub>2</sub> reduction of 6,056 tons/year).

<sup>111</sup> Compare PacifiCorp Reassessment, Attachment 1 at 21 (providing 2001–2003 average heat input used as baseline for cost-effectiveness analysis) with EPA Calculations for Wyoming 2020 SIP Revision (January 7, 2022) (Tab 1).

<sup>112</sup> See, *e.g.*, Wyoming 2020 SIP Revision at 9 (PacifiCorp's comparative analysis of the existing control requirements and plant-wide emission limits indicates the limits “produce better modeled visibility and greater environmental benefits than installation of SCR or SNCR”).

<sup>113</sup> Unlike the BART program, which includes an extensive regulatory framework under which states can rely on such historical emissions and utilization data to demonstrate that a BART alternative achieves greater reasonable progress than BART, neither the CAA nor the Regional Haze Rule contain a similar framework for reasonable progress. Compare 40 CFR 51.308(e)(2) and (3) with (d)(1)(i)(A) and (d)(3).

#### D. Clean Air Act Section 110(l)

Under CAA section 110(l), the EPA cannot approve a plan revision “if the revision would interfere with any applicable requirement concerning attainment and reasonable further progress (as defined in section 7501 of this title), or any other applicable requirement of this chapter.”<sup>121</sup> Wyoming states that the 2020 SIP revision will not interfere with reasonable further progress or other applicable requirements because there are no areas in Wyoming that are currently designated nonattainment for NO<sub>x</sub> or particulate matter, and that with the reductions anticipated from the plant-wide annual and monthly limits, the SIP revision will not interfere with attainment or maintenance of the National Ambient Air Quality Standards (NAAQS).<sup>122</sup>

As an initial matter, we note that Wyoming’s evaluation pursuant to CAA section 110(l) is overly narrow and does not address all relevant NAAQS-related considerations. Additionally, CAA section 110(l) applies to *all* requirements of the CAA, not just the attainment and maintenance of the NAAQS. The previous sections of this document explain how the State failed to justify its conclusion that the existing SCR requirements should be removed such that no further controls beyond BART are necessary for Jim Bridger Units 1 and 2 for reasonable progress in the first planning period. Based on our proposed conclusions in section IV.B in this document, we propose to find that removing the SCR requirement would interfere with the regional haze requirements of the CAA, specifically, with the requirement that SIPs contain the emission limits, schedules of compliance, and other measures that are necessary to make reasonable progress toward the national visibility goal. Accordingly, we propose to disapprove the Wyoming 2020 SIP revision under

CAA section 110(l) in addition to the basis stated in section IV.B above.

#### E. Consultation With Federal Land Managers

Under 40 CFR 51.308(i)(2), Wyoming was obligated to provide the FLMs with an opportunity for consultation in development of the State’s proposed SIP revision no less than sixty days prior to the associated public hearing or public comment opportunity. On March 29, 2019, the State of Wyoming informed the FLMs of the State’s draft proposed regional haze SIP revision for the Jim Bridger power plant. In doing so, the State provided the FLMs with a copy of the draft regional haze SIP revision and provided the FLMs with sixty days to provide comments as well as the opportunity to discuss the draft SIP during a phone call on May 21, 2019.<sup>123</sup> The State did not receive any comments from the FLMs. Therefore, we propose to find that Wyoming met its obligations for consultation in development of the Wyoming 2020 SIP revision.

#### V. Summary of EPA’s Proposed Action

In this action, EPA is proposing to disapprove the Wyoming 2020 SIP revision (as submitted in May 2020 and supplemented in September and October 2020), which includes amendments to Chapters 7.3.6 and 8 of Wyoming’s regional haze SIP narrative, *Addressing Regional Haze Visibility Protection For The Mandatory Federal Class I Areas Required Under 40 CFR 51.309*, that contain a source-specific NO<sub>x</sub> reasonable progress analysis and revised determination for Jim Bridger Units 1 and 2. EPA is also proposing to disapprove the plant-wide monthly and annual NO<sub>x</sub> and SO<sub>2</sub> emission limits for Jim Bridger Units 1–4. Because we are proposing to disapprove the State’s proposed revisions to its existing SIP requirements, we are not proposing to change any regulatory text, including text in 40 CFR 52.2620 or 40 CFR 52.2636.

#### VI. 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,

EPA’s role is to approve state choices, provided that they meet the requirements of the CAA. As explained above, Wyoming’s SIP submission does not meet the requirements of the CAA. Accordingly, this action merely proposes to disapprove state law as not 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 (Pub. L. 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
- Does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, the SIP is not approved to apply on any Indian reservation land or in any other area where 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).

<sup>121</sup> 43 U.S.C. 7410(l). Note that “reasonable further progress” as used in CAA section 110(l) is a reference to that term as defined in section 301(a) (*i.e.*, 42 U.S.C. 7501(a)), and as such means reductions required to attain the National Ambient Air Quality Standards (NAAQS) set for criteria pollutants under section 109. This term as used in section 110(l) (and defined in section 301(a)) is *not* synonymous with “reasonable progress” as that term is used in the regional haze program. Instead, section 110(l) provides that EPA cannot approve plan revisions that interfere with regional haze requirements (including reasonable progress requirements) insofar as they are “other applicable requirement[s]” of the CAA.

<sup>122</sup> Wyoming 2020 SIP Revision at 13. We note, however, that NO<sub>x</sub> is not a criteria pollutant itself but instead represents a group of highly reactive gases that includes the criteria pollutant nitrogen dioxide (NO<sub>2</sub>).

<sup>123</sup> Amber Potts, Wyoming Department of Environmental Quality, Record of State of Wyoming, PacifiCorp, and Federal Land Manager Consultation Meeting for the Proposed Updates to the Regional Haze (Round 1) SIP Concerning the Jim Bridger Facility, May 21, 2019. See also Wyoming Department of Environmental Quality, FLM Consultation Meeting Slides.



**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: January 11, 2022.

**KC Becker,**

*Regional Administrator, Region 8.*

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**DEPARTMENT OF COMMERCE**

**National Oceanic and Atmospheric Administration**

**50 CFR Part 648**

[Docket No. 220110-0007]

**RTID 0648-XX075**

**Fisheries of the Northeastern United States; Northeast Skate Complex; 2022 and 2023 Specifications**

**AGENCY:** National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

**ACTION:** Proposed rule; request for comments.

**SUMMARY:** NMFS proposes Northeast skate specifications for the 2022 fishing year, and projects specifications for fishing year 2023, as recommended by the New England Fishery Management Council. This action is necessary to establish annual allowable harvest levels for the skate fishery that prevent overfishing while enabling optimum yield, using the best scientific information available. This rule also informs the public of the proposed fishery specifications and provides an opportunity for comment.

**DATES:** Comments must be received by February 17, 2022.

**ADDRESSES:** You may submit comments on this document, identified by NOAA-NMFS-2021-0116, by the following method:

*Electronic Submission:* Submit all electronic public comments via the Federal e-Rulemaking Portal.

1. Go to <https://www.regulations.gov>, and enter “NOAA-NMFS-2021-0116” in the Search box;

2. Click the “Comment” icon, complete the required fields; and

3. Enter or attach your comments.

*Instructions:* Comments sent by any other method, to any other address or individual, or received after the end of the comment period, may not be considered by NMFS. All comments received are a part of the public record and will generally be posted for public viewing on [www.regulations.gov](http://www.regulations.gov) without change. All personal identifying information (*e.g.*, name, address, etc.), confidential business information, or otherwise sensitive information submitted voluntarily by the sender will be publicly accessible. NMFS will accept anonymous comments (enter “N/A” in the required fields if you wish to remain anonymous).

Copies of the Supplemental Information Report (SIR) and other supporting documents for this action are available upon request from Thomas A. Nies, Executive Director, New England Fishery Management Council, 50 Water Street, Newburyport, MA 01950. These documents are also accessible via the internet at <https://www.nefmc.org/management-plans/skates>.

**FOR FURTHER INFORMATION CONTACT:** Cynthia Ferrio, Fishery Policy Analyst, (978) 281-9180.

**SUPPLEMENTARY INFORMATION:**

**Background**

The New England Fishery Management Council (Council) manages a complex of seven skate species (barndoor, clearnose, little, rosette, smooth, thorny, and winter skate) in the

New England and Mid-Atlantic regions under the Northeast Skate Complex Fishery Management Plan (FMP). Skates are harvested and managed in two different fishery sectors, one for food (the wing fishery) and one for bait used in other fisheries (the bait fishery). The FMP requires the review and specification of annual skate harvest limits, including: An annual catch limit (ACL), an annual catch target (ACT), a fishery-level total allowable landings limit (TAL), separate TALs for the wing and bait fisheries, and other management measures, as needed, for up to two fishing years (FY) at a time. This action proposes skate specifications for the 2022 fishing year, and projects specifications for 2023, as recommended by the Council. The current specifications that were implemented through Framework Adjustment 8 to the FMP (85 FR 33579; June 2, 2020) expire on April 30, 2022, but will roll over beyond that date until a final rule for new specifications is in effect.

**Proposed Specifications**

This action proposes the Council’s recommended northeast skate fishery specifications for fishing year 2022 and projects unchanged specifications for fishing year 2023. These proposed catch limits are consistent with recommendations from the Council’s SSC, Skate Committee, and Skate Plan Development Team (Skate PDT). The resulting proposed specifications would increase all catch limits by at least 14 percent in fishing year 2022, largely as a result of increased skate biomass throughout the complex. A comparison of the current 2021 and the proposed 2022–2023 specifications is summarized below in Table 1. The Council will review the projected 2023 specifications to determine if any changes need to be made prior to the 2023 fishing year. We will publish a notice prior to the 2023 fishing year to confirm these limits as projected or a proposed rule for any necessary changes.

TABLE 1—COMPARISON OF CURRENT 2021, AND PROPOSED 2022–2023 SKATE FISHERY SPECIFICATIONS, IN METRIC TONS

	2021 (current)	2022–23 (proposed)	Percent change
ABC/ACL .....	32,715	37,236	+14
ACT .....	29,444	33,513	+14
Overall Fishery TAL .....	17,864	21,142	+18
Wing TAL (66.5% of Overall TAL) .....	11,879	14,059	+18
Wing Season 1 TAL (57% of Wing TAL) .....	6,771	8,014	+18
Wing Season 2 TAL .....	5,108	6,045	+18
Bait TAL (33.5% of Overall TAL) .....	5,984	7,082	+18
Bait Season 1 TAL (30.8% of Bait TAL) .....	1,843	2,181	+18
Bait Season 2 TAL (37.1% of Bait TAL) .....	2,220	2,627	+18