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Re: Conservation Organizations' Comments on EPA's Proposed Approval of Iowa's Draft State Implementation Plan Regional Haze Second Implementation Period (EPA-R07-OAR-2024-0313)

Dear Ms. Olson:

Sierra Club, National Parks Conservation Association, Coalition to Protect America's National Parks, Iowa Interfaith Power & Light, Environmental Law & Policy Center, and Iowa Environmental Council ("Conservation Organizations") submit the following comments regarding the Environmental Protection Agency's ("EPA") proposed rule to approve the Iowa Department of Natural Resources' ("IDNR") August 2023 State Implementation Plan ("SIP" or "SIP Revision") for the Regional Haze Second Implementation Period (2019-2028) ("Proposed Rule"). We also submit the reports of Joe Kordzi ("Kordzi Report") and Victoria R. Stamper ("Stamper Report"), which are attached and incorporated by reference into these comments.¹

¹ Attached to the comments is "*Review and Comments on Reasonable Progress Controls for the Iowa Regional Haze Plan for the Second Implementation Period*," which was prepared for Sierra Club by Victoria R. Stamper (Mar. 14, 2023) (Attachment 1) [hereinafter "Stamper Report"]. Ms. Stamper is an independent air quality consultant and engineer with extensive experience in the regional haze program.

Sierra Club is a national nonprofit organization with 67 chapters and approximately 650,000 members dedicated to exploring, enjoying, and protecting the wild places of the earth; to practicing and promoting the responsible use of the earth's ecosystems and resources; to educating and enlisting humanity to protect and restore the quality of the natural and human environment; and to using all lawful means to carry out these objectives. Sierra Club's Iowa Chapter has over 5,200 members. Sierra Club has long participated in Regional Haze rulemaking and litigation across the country in order to advocate for public health and our nation's national parks.

National Parks Conservation Association ("NPCA") is a national organization whose mission is to protect and enhance America's national parks for present and future generations. NPCA performs its work through advocacy and education, with its main office in Washington, D.C. and 24 regional and field offices. NPCA has over 1.7 million members and supporters nationwide and more than 17,600 in Iowa. NPCA is active nationwide in advocating for strong air quality requirements to protect our parks, including submission of petitions and comments relating to visibility issues, regional haze State Implementation Plans, climate change impacts on parks, and emissions from power plants, oil and gas operations and other sources of pollution affecting national parks and communities. NPCA's members live near, work at, and recreate in all the national parks, including those directly affected by emissions from Iowa's sources.

The **Coalition to Protect America's National Parks** ("Coalition") represents over 2,500 current, former, and retired employees and volunteers of the National Park Service, with over 45,000 collective years of stewardship of America's most precious natural and cultural resources. We are protection rangers and interpreters, scientists and maintenance workers, managers and administrators, and specialists in the full spectrum of the parks' resources. Our membership also includes former National Park Service directors, deputy directors, regional directors, and park superintendents. Recognized as the Voices of Experience, the Coalition educates, speaks, and acts for the preservation and protection of the National Park System, and mission-related programs of the National Park Service.

The **Iowa Environmental Council** ("IEC") is an alliance of more than 100 organizations, more than 500 individual members, and an at-large board of farmers, business owners, and conservationists. IEC works to build a safe, healthy environment and sustainable future for Iowa. Our members care about air quality across the state, and they hike, recreate, and enjoy the outdoors in Iowa and beyond.

Environmental Law and Policy Center is a Midwest-based not-for-profit public interest environmental advocacy organization dedicated to improving environmental quality and public health, including protecting the Great Lakes and other Midwest natural resources. For nearly 30

We are also submitting 37 exhibits to the Stamper Report, as listed in the report. The exhibits are also available at this location:

https://drive.google.com/drive/folders/1_LP1IICja8jLmgywfxIPY3QBXgeg6uB?usp=sharing; Joe Kordzi, A High Level Review of the Iowa Regional Haze State Implementation Plan (Aug. 2024) (Attachment 2) [hereinafter Kordzi Report]. Mr. Kordzi is an independent air quality consultant and engineer with extensive experience in the Regional Haze Program. We also attach and incorporate by reference our comments and enclosures submitted to Iowa on June 28, 2024 (Attachment 3).

years, ELPC has used litigation, policy advocacy, and strategic communications to improve environmental quality and protect the Midwest's natural resources. ELPC is headquartered in Chicago, Illinois and has additional offices in Iowa, Wisconsin, Washington, D.C., and Ohio.

Iowa Interfaith Power & Light ("Iowa IPL") envisions a world where we live in right relationship with our neighbors and planet. We build this vision with our supporters by mobilizing advocates for equitable climate solutions at the local, state, and national levels; listening to and equipping those most affected by the climate crisis to lead and take action; focusing on common values; working together with partner organizations on clean energy and water; engaging individuals and communities to adopt a spiritual practice of sustainable living; and inviting all Iowans of faith and conscience into the work of climate justice.

As explained below and in the attached Stamper and Kordzi Reports, IDNR's SIP Revision is flawed in many ways, and EPA must disapprove the SIP and immediately begin the process of promulgating a federal plan. Specifically, IDNR's SIP Revision:

- arbitrarily ignores two sources with visibility impacts greater than the sources it selected for regulation.
- arbitrarily relies on unsupported cost assumptions, including truncated life of emission control equipment, low cost-effectiveness thresholds and unreasonably low control efficiencies to screen out readily-available, cost-effective pollution controls and upgrades for its large coal-burning power plants.
- fails to consider all emissions control options for the Walter Scott Jr. and Louisa coal-burning power plants, including requiring better optimization of existing equipment.
- wrongfully exempts the George Neal North and George Neal South coal-burning power plants from controls based on erroneous use of visibility as a fifth factor and purported compliance by other states with the Uniform Rate of Progress.
- inadequately considers and unlawfully ignores the Federal Land Managers' comments.
- fails to evaluate environmental justice impacts and issue a plan, which reduces emissions and minimizes harms to disproportionately impacted communities, as EPA's regulations and guidance urge it to do.

The Regional Haze program offers a significant opportunity to improve visibility at the Class I areas impacted by Iowa's sources, and also improve air quality for Iowa's most vulnerable communities. Despite these opportunities, EPA's Proposed Rule does neither. Moreover, the Proposed Rule fails to satisfy the requirements of the Clean Air Act. EPA must revise its proposed action to address the fundamental flaws identified in these comments.

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I. INTRODUCTION

Class I areas are iconic, treasured landscapes, and our country is rich in these resources. Congress set aside these and other national parks and wilderness areas to protect our natural heritage for generations. These protected areas provide habitat for a range of wildlife species, offer year-round recreational opportunities for residents and visitors, and generate millions of dollars in tourism revenue. The areas' status as "Class I" under the Clean Air Act ("CAA") entitles them to the highest level of air quality protection.

To improve air quality in our most treasured landscapes, Congress passed the visibility protection provisions of the Clean Air Act in 1977. These provisions established "as a national goal the prevention of any future, and the remedying of any existing, impairment of visibility in the mandatory class I Federal areas which impairment results from manmade air pollution."² "Manmade air pollution" is defined as "air pollution which results directly or indirectly from human activities."³ To protect Class I areas' "intrinsic beauty and historical and archeological treasures," the Clean Air Act's regional haze program establishes a national regulatory floor and requires states to design and implement programs to curb, and prevent future, haze-causing emissions within their jurisdictions. Each state must periodically submit for EPA review a SIP designed to make reasonable progress toward achieving natural visibility conditions.⁴

A regional haze SIP must provide "emission limits, schedules of compliance and other measures as may be necessary to make reasonable progress toward meeting the national goal."⁵ Two of the most critical features of a regional haze SIP are the requirements for installation of Best Available Retrofit Technology (BART) limits on pollutant emissions and a long-term strategy for making reasonable progress toward the national visibility goal.⁶ Although many states addressed the Clean Air Act's BART requirements in their initial regional haze plans, EPA's 2017 revisions to the Regional Haze Rule make clear that BART was not a once-and-done requirement. Indeed, states "will need" to reassess "BART-eligible sources that installed only moderately effective controls (or no controls at all)" for any additional technically-achievable controls in the second planning period.⁷ The haze requirements in the Clean Air Act present an unparalleled opportunity to protect and restore regional air quality by curbing visibility-impairing emissions from a variety of polluting sources.

Implementing the regional haze requirements promises benefits beyond improving views. Pollutants that cause visibility impairment also harm public health. For example, oxides of nitrogen (NO_x) are a precursor to ground-level ozone, which is associated with respiratory disease and asthma attacks. NO_x also reacts with ammonia, moisture, and other compounds to form particulates that can cause and/or worsen respiratory diseases, aggravate heart disease, and lead to premature death. Similarly, sulfur dioxide (SO₂) increases asthma symptoms, leads to

² 42 U.S.C. § 7491(a)(1).

³ *Id.* § 7491(g)(3).

⁴ *Id.* § 7491(b)(2).

⁵ *Id.*

⁶ *Id.* § 7491(b)(2).

⁷ Regional Haze Amendments, 82 Fed. Reg. 3078, 3083 (Jan. 10, 2017); *see also id.* at 3096 ("states must evaluate and reassess all elements required by 40 CFR 51.308(d)").

increased hospital visits, and can form particulates. NO_x and SO₂ emissions also harm terrestrial and aquatic plants and animals through acid rain as well as through deposition of nitrates, which in turn cause ecosystem changes including eutrophication of mountain lakes.

Unfortunately, the promise of natural visibility is unfulfilled because the air in most Class I areas remains polluted by industrial sources, such as fossil fuel-fired power plants, which are covered in our comments. Pollution from Iowa sources affect Class I areas in Michigan, Minnesota, and Missouri (Isle Royale NP, Seney WA, Boundary Waters Canoe Area WA, Voyageurs NP, and Hercules-Glades WA).⁸ In its Proposed Rule, supported by a perfunctory and wholly inadequate technical support document (“TSD”) devoid of original analysis, EPA proposes to find that IDNR’s SIP Revision meets the Regional Haze Rule’s requirements. Conservation Groups disagree that IDNR has met the source-selection, emission reduction measures, long-term strategy, and consultation requirements. As discussed below, however, IDNR’s SIP Revision is flawed in multiple respects, and EP must disapprove it.

II. LEGAL FRAMEWORK: REQUIREMENTS FOR PERIODIC COMPREHENSIVE REVISIONS FOR REGIONAL HAZE PLANS

A. Clean Air Act’s Visibility Protections and the Regional Haze Rule

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.”⁹ To that end, EPA issued the Regional Haze Rule (“RHR”), which requires the states (or EPA where a state fails to act) to make incremental, “reasonable progress” toward eliminating human-caused visibility impairment at each Class I area by 2064.¹⁰ Together, the CAA and EPA’s RHR require states to periodically develop and implement state implementation plans (“SIPs”), each of which must contain a long-term strategy encompassing *enforceable* “emission limits, schedules of compliance and other measures as may be necessary to make reasonable progress toward the national goal.”¹¹

In developing its long-term strategy, a state must consider its anthropogenic sources of visibility impairment and evaluate different emission reduction strategies including and beyond those prescribed by the best available retrofit technology (“BART”) provisions.¹² A state should consider “major and minor stationary sources, mobile sources and area sources.”¹³ At a minimum, a state must consider the following factors in developing its long-term strategy:

- (A) Emission reductions due to ongoing air pollution control programs, including measures to address reasonably attributable visibility impairment;
- (B) Measures to mitigate the impacts of construction activities;

⁸ Proposed Rule at 63,268.

⁹ 42 U.S.C. § 7491(a)(1).

¹⁰ 40 C.F.R. § 51.308(d)(1), (d)(3).

¹¹ 42 U.S.C. § 7491(b)(2); 42 U.S.C. § 7410(a)(2); 40 C.F.R. § 51.308.

¹² 40 C.F.R. § 51.308(f).

¹³ *Id.* § 51.308(f)(2)(i).

- (C) Emissions limitations and schedules for compliance to achieve the reasonable progress goal;
- (D) Source retirement and replacement schedules;
- (E) Smoke management techniques for agriculture and forestry management purposes including plans as currently exist within the State for these purposes;
- (F) Enforceability of emission limitations and control measures; and
- (G) The anticipated net effect on visibility due to projected changes in point, area, and mobile emissions over the period addressed by the long-term strategy.¹⁴

Additionally, a state:

Must include in its implementation plan a description of the criteria it used to determine which sources or groups of sources it evaluated and how the four factors were taken into consideration in selecting the measures for inclusion in its long-term strategy.¹⁵

In developing its plan, the state must document the technical basis for the SIP, including monitoring data, modeling, and emission information, including the baseline emission inventory upon which its strategies are based.¹⁶ All this information is part of a state's revised SIP and subject to public notice and comment. A state's reasonable progress analysis must consider the four factors identified in the CAA and regulations.¹⁷

B. EPA's 2017 Revisions to the Regional Haze Rule

On January 10, 2017, the EPA revised the RHR to strengthen and clarify the reasonable progress and consultation requirements of the rule.¹⁸ In particular, the rule revisions make clear that a state is to *first* conduct the required Four-Factor Analysis for its sources, considering the four statutory factors, and *then* use the results from its Four-Factor Analyses and determinations to develop the reasonable progress goals.¹⁹ Thus, the rule "codif[ies]" EPA's "long-standing interpretation" of the SIP "planning sequence" states are required to follow:

- (1) [C]alculate baseline, current and natural visibility conditions, progress to-date and the [Uniform Rate of Progress] URP;
- (2) [D]evelop a long-term strategy for addressing regional haze by evaluating the four factors to determine what emission limits and other measures are necessary to make reasonable progress;

¹⁴ *Id.* § 51.308(f)(2)(iv).

¹⁵ 40 C.F.R. § 51.308(f)(2)(i).

¹⁶ 40 C.F.R. § 51.308(f)(2)(i).

¹⁷ *See* 42 U.S.C. § 7491(g)(1); 40 C.F.R. § 51.308(f)(2)(i) ("the costs of compliance, the time necessary for compliance, the energy and non-air quality environmental impacts of compliance, and the remaining useful life of any potentially affected anthropogenic source of visibility impairment.").

¹⁸ *See generally* 82 Fed. Reg. 3078 (Jan. 10, 2017).

¹⁹ 82 Fed. Reg. at 3090-91.

- (3) [C]onduct regional-scale modeling of projected future emissions under the long-term strategies to establish RPGs and then compare those goals to the URP line; and
- (4) [A]dopt a monitoring strategy and other measures to track future progress and ensure compliance.²⁰

Although many states addressed the Clean Air Act’s BART requirements in their initial regional haze plans, EPA’s 2017 revisions to the RHR make clear that BART was not a once-and-done requirement. Indeed, states “will need” to reassess “BART-eligible sources that installed only moderately effective controls (or no controls at all)” for any additional technically-achievable controls in the second planning period.²¹

To the extent that a state declines to evaluate additional pollution controls for any source relied upon to achieve reasonable progress based on that source’s planned retirement or decline in utilization, it must incorporate those operating parameters or assumptions as enforceable limitations in the second planning period SIP. The Act requires that “[e]ach state implementation plan . . . shall” include “enforceable limitations and other control measures” as necessary to “meet the applicable requirements” of the Act.²² The RHR similarly requires each state to include “enforceable emission limitations” as necessary to ensure reasonable progress toward the national visibility goal.²³ Therefore, where the state relies on a sources’ plans to permanently cease operations or projects that future operating parameters (*e.g.*, limited hours of operation or capacity utilization) will differ from past practice, or if this projection exempts additional pollution controls as necessary to ensure reasonable progress, then the state “must” make those parameters or assumptions into enforceable limitations.²⁴

²⁰*Id.*

²¹ 82 Fed. Reg. at 3083; *see also id.* at 3096 (“states must evaluate and reassess all elements required by 40 CFR 51.308(d)”).

²² 42 U.S.C. § 7410(a)(2)(A) (emphasis added).

²³ *See* 40 C.F.R. § 51.308(d)(3) (“The long-term strategy must include enforceable emissions limitations, compliance schedules, and other measures as necessary to achieve the reasonable progress goals established by States having mandatory Class I Federal areas.”)

²⁴ 40 C.F.R. §§ 51.308(i); (d)(3) (“The long-term strategy must include enforceable emissions limitations, compliance schedules . . .”); (f)(2) (the long-term strategy must include “enforceable emissions limitations”); *see also* Guidance on Regional Haze State Implementation Plans for the Second Implementation Period at 22, EPA-457/B-19-003 (Aug. 2019) [hereinafter, “2019 Guidance”] (“in selecting sources for control measure analysis,” the state may choose “not selecting sources that have an enforceable commitment to be retired or replaced by 2028”); *id.* at 34 (To the extent a retirement or reduction in operation “is being relied upon for a reasonable progress determination, the measure would need to be included in the SIP and/or be federally enforceable.”) (citing 40 C.F.R. § 51.308(f)(2)); 2019 Guidance at 43 (“[i]f a state determines that an in-place emission control at a source is a measure that is necessary to make reasonable progress and there is not already an enforceable emission limit corresponding to that control in the SIP, the state is required to adopt emission limits based on those controls as part of its long-term strategy in the SIP via the regional haze second planning period plan submission.”).

Finally, Regional Haze SIP revisions must meet certain procedural and consultation requirements.²⁵ The state must consult with the Federal Land Managers (“FLMs”) and look to the FLMs’ expertise of the lands and knowledge of the way pollution harms them to guide the state to ensure SIPs do what they must to help restore natural skies. The rule also requires that in “developing any implementation plan (or plan revision) or progress report, the State must include a description of how it addressed any comments provided by the Federal Land Managers.”²⁶

C. EPA’s 2021 Regional Haze Clarification Memorandum

On July 8, 2021, EPA issued a memo which additionally clarified certain aspects of the revised RHR and provided further information to states and EPA regional offices regarding their planning obligations for the Second Planning Period.²⁷ EPA’s July 2021 “Clarification Memo” confirms that certain aspects of IDNR’s proposed SIP Revision are fundamentally flawed and cannot be approved. Particularly relevant here, EPA made clear that states must secure additional emission reductions that build on progress already achieved, and there is an expectation that reductions are additive to ongoing and upcoming reductions under other CAA programs.²⁸ In evaluating sources for emission reductions, EPA emphasized that:

Source selection is a critical step in states’ analytical processes. All subsequent determinations of what constitutes reasonable progress flow from states’ initial decisions regarding the universe of pollutants and sources they will consider for the second planning period. States cannot reasonably determine that they are making reasonable progress if they have not adequately considered the contributors to visibility impairment. Thus, while states have discretion to reasonably select sources, this analysis should be designed and conducted to ensure that source selection results in a set of pollutants and sources the evaluation of which has the potential to meaningfully reduce their contributions to visibility impairment.²⁹

Thus, it is generally not reasonable to exclude from further evaluation large sources or entire sectors of visibility impairing pollution.

For sources that have previously installed controls, states should still evaluate the “full range of potentially reasonable options for reducing emissions,” including options that may “achieve greater control efficiencies, and, therefore, lower emission rates, using their existing measures.”³⁰ Moreover, “[i]f a state determines that an in-place emission control at a source is a measure that is necessary to make reasonable progress and there is not already an enforceable emission limit corresponding to that control in the SIP, the state is required to adopt emission

²⁵ For example, in addition to the Regional Haze Rule requirements, states must also follow the SIP processing requirements in 40 C.F.R. §§ 51.104, 51.102.

²⁶ *Id.* § 51.308(i)(3).

²⁷ Memo from Peter Tsirogotis to Regional Air Directors, Clarifications Regarding Regional Haze State Implementation Plans for the Second Implementation Period at 3, (July 8, 2021), <https://www.epa.gov/visibility/clarifications-regardingregional-haze-state-implementation-plans-second-implementation> [hereinafter, “2021 Clarification Memo”].

²⁸ *Id.* at 2.

²⁹ *Id.* at 3.

³⁰ *Id.* at 7.

limits based on those controls as part of its long-term strategy in the SIP via the regional haze second planning period plan submission.”³¹ This means that so-called “on-the-way” measures, including anticipated shutdowns or reductions in a source’s emissions or utilization, that are relied upon to forgo a Four-Factor Analysis or to shorten the remaining useful life of a source “*must* be included in the SIP” as enforceable emission reduction measures.³² In addition, the Clarification Memo makes clear that a state should generally not reject cost-effective and otherwise reasonable controls merely because there have been emission reductions since the first planning period owing to other ongoing air pollution control programs or merely because visibility is otherwise projected to improve at Class I areas. Finally, the 2021 Clarification Memo confirms EPA’s recommendation that states take into consideration environmental justice concerns and impacts in issuing any SIP revision for the second planning period.

In sum, EPA’s 2021 Clarification Memo makes clear that the states’ regional haze plans for the second planning period must include meaningful emission reductions to make reasonable progress towards the national goal of restoring visibility in Class I areas. The 2021 Clarification Memo confirms that IDNR’s efforts to avoid emission reductions—by asserting, for example, that reductions are not necessary because visibility has improved, because reductions are anticipated at some later date or due to implementation of another program, or because a source has some level of control—is at odds with Iowa’s haze obligations under the Clean Air Act and the Regional Haze Rule itself.

D. Emission Reductions to Make Reasonable Progress Must be Included in Practically Enforceable SIP Measures.

The Clean Air Act requires states to submit implementation plans that “contain such emission limits, schedules of compliance and other measures as may be necessary to make reasonable progress toward meeting the national goal” of achieving natural visibility conditions at all Class I Areas.³³ The Regional Haze Rule requires that states must revise and update its regional haze SIP, and the “periodic comprehensive revisions must include the “enforceable emissions limitations, compliance schedules, and other measures that are necessary to make reasonable progress as determined pursuant to [40 C.F.R. §§ 51.308](f)(2)(i) through (iv).”³⁴ As discussed in our comments, specific required measures are missing from IDNR’s SIP Revision.

EPA issued regional haze guidance in 2019 and that guidance further explains these emission limitation requirements:

This provision requires SIPs to include enforceable emission limitations and/or other measures to address regional haze, deadlines for their implementation, and provisions to make the measures practicably enforceable including averaging times, monitoring requirements, and record keeping and reporting requirements.³⁵

³¹ *Id.* at 8.

³² *Id.* at 8-9 (emphasis added).

³³ 42 U.S.C. §§ 7491(a)(1), (b)(2).

³⁴ 40 C.F.R. § 51.308(f)(2); *see also id.* § 51.308(d)(3)(v)(F) (enforceability of emission limitations and control measures).

³⁵ 2019 Guidance at 42-43.

Thus, while the SIP is the basis for demonstrating and ensuring state plans meet Regional Haze Rule requirements, state-issued permits must complement the SIP.³⁶ In addition, to the extent that a state relies on any expected retirement, reduction in utilization, or reduction in emissions as a result of a permit provision in its reasonable progress analysis, those emission reductions *must* be included as enforceable emission limitations in the SIP itself.³⁷ These specific required measures are missing from IDNR’s SIP.

E. EPA Must Not Approve SIPs that Rely on Purportedly Insignificant Visibility Impacts or Benefits to Dismiss Otherwise Cost Effective Controls.

The state’s reasonable progress analyses (*i.e.*, Four-Factor Analyses) for selected sources, which form the basis for the state’s long-term strategy, must address the four factors identified in the Clean Air Act and RHR: (1) the cost of compliance, (2) the time necessary for compliance, (3) the energy and non-air quality environmental impacts of compliance, and (4) the remaining useful life of the source.³⁸ Notably, neither the statute nor the RHR lists visibility improvement as a fifth factor in the Four-Factor Analysis. EPA has made clear for round two that, “a state should not use visibility to summarily dismiss cost-effective potential controls.”³⁹ EPA must expressly disapprove the state’s Four-Factor Analysis for sources where the state unreasonably rejected otherwise available and cost-effective controls to reduce emissions. Accordingly, EPA’s recent regional haze actions follow this approach.⁴⁰

F. EPA Must Ensure that States Provide a Reasoned Basis for Determining Cost Effectiveness.

Although the Clean Air Act does not require a state to “use [a] bright line rule” for determining cost effectiveness, the Ninth Circuit has explained that “the law does require [the State] to cogently explain why it has exercised its discretion in a given manner.”⁴¹ To provide a reasoned basis for its decisions, the states and EPA must first establish a threshold, or explain and justify some other objective measure, for determining cost effectiveness that is in line with

³⁶ 74 Fed. Reg. at 13,568.

³⁷ 42 U.S.C. §§ 7410(a)(2), 7491(b)(2); *see also* 40 C.F.R. § 51.308(d), (f).

³⁸ 42 U.S.C. § 7491(g)(1); 40 C.F.R. § 51.308(f)(2)(i).

³⁹ 2021 Clarification Memo at 13.

⁴⁰ 89 Fed. Reg. 47,398, 47,430 (May 31, 2024) (EPA’s notice for Arizona explained that “[i]n the absence of any opportunities for larger emissions reductions and corresponding visibility benefits, we find that ADEQ’s reliance on “small” visibility benefits as an additional justification for not adopting more stringent controls at these units is not persuasive.”); 89 Fed. Reg. 67,208 (Aug. 19, 2024) (Utah); 89 Fed. Reg. 56,693, 56,705, 56,706 (July 10, 2024) (EPA’s notice explained that North Dakota relied on “non-statutory rationales to reject controls it evaluated under the four statutory factors at Coyote Station and Antelope Valley” that included “modeling showed no significant change in visibility at Lostwood Wilderness Area and Theodore Roosevelt National Park because improvements were smaller than could be perceived by an unaided human eye; and (2) Lostwood Wilderness Area and Theodore Roosevelt National Park were projected to achieve the adjusted URP by 2028” to reject controls that are cost-effective.).

⁴¹ *Nat’l Parks Conservation Ass’n v. EPA*, 788 F.3d 1134, 1142-43 (9th Cir. 2015) (citation and internal quotation omitted).

other states' chosen measures and EPA actions, and apply that threshold consistently across the Four-Factor Analyses.⁴² During the regional haze second planning period both Colorado and Nevada used a \$10,000/ton of pollution reduced threshold.⁴³ As Colorado explained its selection of a threshold value of \$10,000 per ton of pollution reduced, “[t]his threshold value is an increase from Round 1 and reflects the fact that with each successive round of planning, less costly and easier to implement strategies have already been adopted.”⁴⁴ Just as Colorado noted in setting its cost threshold, Nevada explained that it doubled its cost-effectiveness threshold from the first implementation “to ensure that the entire fleet of potential new control measures throughout Nevada are thoroughly considered, as well as, to ensure that enough controls are implemented during the second period to continue achieving reasonable progress at . . . [Class I Areas].”⁴⁵ New Mexico has adopted a \$7,000/ton threshold,⁴⁶ and a number of other states have adopted relatively higher cost-effectiveness thresholds for the second planning period, including Arizona (\$6,500/ton),⁴⁷ Texas (\$5000 per ton), Washington (\$6,300/ton for Kraft pulp and paper power boilers),⁴⁸ and Oregon (\$10,000/ton).⁴⁹ EPA’s recent actions on the regional haze SIPs identified SIPs where states’ Four-Factor Analysis included flaws in the cost analyses, and other SIPs where the states rejected cost-effective controls based on flawed analyses, which have formed the bases for EPA’s disapprovals.⁵⁰ EPA has explained that:

⁴² 2019 Guidance at 38 (“Absent a thorough explanation, inconsistent control determinations are ‘the hallmark of arbitrary action.’” (quoting *Nat’l Parks Conservation Ass’n v. EPA*, 788 F.3d at 1145).

⁴³ In the Matter of Proposed Revisions to Regulation Number 23, Colo. Dep’t Pub. Health & Env’t, Air Pollution Control Div., Prehearing Statement at 7 (Oct. 7, 2021) [hereinafter “Colorado SIP Revision”] (Attachment 4); Nev. Div. of Env’t Prot., Nevada Regional Haze State Implementation Plan for the Second Planning Period at 5-6 (Aug. 2022) [hereinafter “Nevada SIP Revision”] (Attachment 5).

⁴⁴ Colorado SIP Revision at 7.

⁴⁵ Nevada SIP Revision at 5-6; Kordzi Report at 2-6.

⁴⁶ NMED and City of Albuquerque, Regional Haze Stakeholder Outreach Webinar #2 at 12, https://www.env.nm.gov/air-quality/wp-content/uploads/sites/2/2017/01/NMED_EHD-RH2_8_25_2020.pdf (Attachment 6).

⁴⁷ 89 Fed. Reg. 47,398, 47,429 (May 31, 2024).

⁴⁸ See, e.g., Washington Department of Ecology, Draft Responses to comments for chemical pulp and paper mills, at 5, 6, and 8, <https://fortress.wa.gov/ecy/ezshare/AQ/RegionalHaze/docs/RespondFLM20210111.pdf> (Attachment 7).

⁴⁹ September 9, 2020 letter from Oregon Department of Environmental Quality to Collins Forest Products, at 1-2, available at <https://www.oregon.gov/deq/air/Documents/18-0013CollinsDEQletter.pdf>. (Attachment 8).

⁵⁰ See e.g., 89 Fed. Reg. at 47,428-31 (EPA’s action proposing to disapprove the Arizona RH SIP explained the following: emission rates used by Arizona did not appropriately reflect the emissions rate achievable with the relevant controls, the Four-Factor Analyses deviated from the Control Cost Manual, Arizona failed to provide an adequate justification for the cost-effectiveness threshold, Arizona uses of mass-based emission caps, and as part of Arizona’s analysis of whether existing effective measures are necessary to make reasonable progress, the State should have considered whether the relevant sources are subject to enforceable emissions limits that ensure their emissions rates will not increase.); 89 Fed. Reg. at 55,154 (EPA’s action proposing to disapprove Missouri’s RH SIP explained that it was based primarily on Missouri’s unreasonable justification and use of the selected cost threshold (\$3,658/ton) and cost effectiveness calculations that do not fully align with EPA guidance such as the Control Cost Manual.) Moreover, EPA’s recent disapprovals include electric generating units with similar MW capacity as those in Iowa. For example, WSEC-3 at 725.8 MW is similar in capacity to AECI Thomas Hill Power Plant is located in Clifton Hill, Missouri and is 777 MW; WSEC-4 at 922.5 MW is similar to Huntington in Utah,

One reason for considering higher cost effectiveness thresholds for the second planning period (compared to the first planning period) is that most of the cheapest available cost-effective emissions reductions were required and implemented during the first planning period. These were typically SO₂ and NO_x controls at the largest uncontrolled point sources (mostly electric generating units), which in many cases had cost-effectiveness values well under \$1,000 per ton. These relatively cheap controls lead to a low bias when using first planning period cost database numbers to calculate mean costs (even when adding in one standard deviation). Most remaining point sources have smaller emissions and do not have cost effective controls at those previously “cheap” levels. However, by itself, that is not a reasonable justification to reject otherwise potentially cost-effective controls in the second planning period and beyond. As we move forward in time to subsequent planning periods, source emissions will get smaller and potential controls will get more expensive on a cost per ton basis. However, the statute still requires states to continue to make reasonable progress towards the national goal.⁵¹

G. EPA Must Act Consistently Across Its SIP Actions.

To ensure EPA’s SIP actions are reasoned, the Agency must act consistently across SIPs. In 1977, Congress amended the Clean Air Act to direct EPA to promulgate rules of general applicability governing EPA’s actions to “assure fairness and uniformity in the criteria, procedures, and policies applied by the various [EPA] regions in implementing and enforcing” the Act and to “provide a mechanism for identifying and standardizing inconsistent or varying criteria, procedures, and policies being employed . . . in implementing and enforcing” the Act.⁵² EPA, thus, interprets the statutory provision “as a mandate to assure greater consistency among the Regional Offices in implementing the Act [and] certainly not as a license to institutionalize the kind of inconsistencies that prompted Congress to enact this provision.”⁵³ EPA promulgated final regulations to implement this mandate in 1980, providing a system for assuring fair and consistent application of rules, regulations, and policies throughout the country by establishing procedures and policies that EPA regional staff must follow in implementing the Clean Air Act programs delegated to the regions.⁵⁴ Since that time, EPA has issued numerous guidance documents outlining the SIP consistency process Regional Offices must adhere to in their review of state-submitted SIPs to assure consistent application of national programs, policy and guidance.⁵⁵

which is a 960 MW plant; and GNS at 569 MW is similar to AECI New Madrid Power Plant is located near Marston, Missouri at 640 MW.

⁵¹ 89 Fed. Reg. 55,155.

⁵² 42 U.S.C. § 7601(a)(2).

⁵³ 44 Fed. Reg. 13,043, 13,045 (March 9, 1979).

⁵⁴ 40 C.F.R. Part 56; *see generally* 45 Fed. Reg. 85,400 (Dec. 24, 1980).

⁵⁵ *See e.g.*, Memorandum from Janet McCabe, Deputy Assistant Admin., Off. Air & Radiation, Env’t Prot. Agency, to Reg’l Admins., Regions I – X (April 6, 2011), <https://www.epa.gov/ground-level-ozone-pollution/streamlining-sip-process>; Memorandum from William L. Wehrum, Acting Assistant Admin., Off. of Air & Radiation, Env’t Prot. Agency, to Air Div. Dirs., Region I - X (Sept. 7, 2007),

H. EPA Must Ensure That States Respond to Significant Public Comments on the Proposed Regional Haze SIPs.

The key element of a state's final regional haze rulemaking action is the state agency's response to significant public comments.⁵⁶ The purpose of the final SIP "is, at least in part, to respond in a reasoned manner to the comments received, to explain how the agency resolved any significant problems raised by the comments, and to show how that resolution led the agency to the ultimate rule."⁵⁷ "Consideration of comments as a matter of grace is not enough.' It must be made with a mind that is open to persuasion."⁵⁸ "[T]here must be an exchange of views, information, and criticism between interested persons and the agency" to make agency rulemaking legitimate.⁵⁹ "[A] dialogue is a two-way street: the opportunity to comment is meaningless unless the agency responds to significant points raised by the public."⁶⁰

I. State-to-State and FLM Consultations

The Clean Air Act and RHR further require states to consult with both FLMs and other states on their Regional Haze SIPs. For state-to-state consultations, the RHR requires states to: (1) consult with other states that have Class I Areas that are impacted by in-state sources to develop "coordinated emission management strategies"; (2) demonstrate they have included in their SIPs all measures agreed to during state-to-state consultation or regional planning processes; and (3) consider the emission reduction measures identified by other states as being necessary to make reasonable progress.⁶¹ As part of this process, "states must exchange their four factor analyses and the associated technical information," including "modeling, monitoring and emissions data and cost and feasibility studies"⁶² and must thoroughly document their interstate consultations in their SIPs.⁶³ "Congress was clear that both downwind states (i.e., 'a State in which any [Class I Federal] area . . . is located[']) and upwind states (i.e., 'a State the emissions from which may reasonably be anticipated to cause or contribute to any impairment of visibility in any such area') must revise their SIPs to include measures that will make reasonable progress at all affected Class I areas."⁶⁴

For FLM consultation, states must provide FLMs with an opportunity to consult in person and at a point early enough in the SIP development process that states "can meaningfully"

https://www3.epa.gov/ttn/naaqs/aqmguide/collection/cp2/20050911_wehrum_revised_consistency_proce ss.pdf.

⁵⁶ App'x V to 40 C.F.R. Part 51, ¶ 2.1(h).

⁵⁷ *Ohio v. EPA*, 144 S. Ct. 2040, 1054 (2024) (agency action arbitrary where the agency "offered no reasoned response" to a problem that had been "posed" by "commenters . . . during the notice and comment period."); *Indep. U.S. Tank Owners Comm. v. Lewis*, 690 F.2d 908, 919 (D.C. Cir. 1982) (invalidating an agency rule for inadequate response to comments).

⁵⁸ *Advocates for Hwy. & Auto Safety v. Fed. Hwy. Admin.*, 28 F.3d 1288, 1292 (D.C. Cir. 1994) (citing *McLouth Steel Products Corp. v. Thomas*, 838 F.2d 1317, 1323 (D.C. Cir. 1988)).

⁵⁹ *Home Box Office, Inc. v. F.C.C.*, 567 F.2d 9, 35 (D.C. Cir. 1977).

⁶⁰ *Id.* at 35-36 (footnote omitted) (citing *Portland Cement Ass'n v. Ruckelshaus*, 486 F.2d 375, 393-94 (D.C. Cir. 1973)).

⁶¹ 40 C.F.R. § 51.308(f)(2)(ii).

⁶² 82 Fed. Reg. at 3088.

⁶³ 40 C.F.R. § 51.308(f)(2)(ii)(C), (iii).

⁶⁴ 82 Fed. Reg. at 3094.

consider information and recommendations provided by FLMs in making decisions on their long-term strategies.⁶⁵ States must consult with FLMs on (1) their assessment of visibility impairment in impacted Class I Areas and (2) their recommendations on the development and implementation of strategies to address such impairment.⁶⁶ Finally, in order for the public and EPA to assess whether states have satisfied their consultation requirements, states must also document the timing and content of their consultation with FLMs, including a description of how states addressed any comments provided by FLMs.⁶⁷ The FLM consultation process is not a mere box checking exercise. Rather, it is a mandatory, iterative, and substantive process, requiring states to meaningfully consider and incorporate into their SIPs the FLMs' recommendations and to ensure the public has an opportunity to review and comment on those efforts.

J. EPA's Review of Regional Haze SIPs

The Clean Air Act's Regional Haze Program provides states with the initial opportunity to develop Regional Haze SIPs that clean up the air in our national parks and wilderness areas. However, EPA must determine if a state's SIP complies with the requirements of the Clean Air Act and RHR and is authorized to approve, disapprove, or partially approve and partially disapprove of a SIP or a SIP revision.⁶⁸ As courts have recognized, EPA has broad oversight authority over the Regional Haze Program,⁶⁹ highlighting EPA's "substantive role in deciding whether state SIPs are compliant with the [Clean Air Act] and its implementing regulations."⁷⁰ EPA is not limited to a ministerial role of verifying whether states made the required determinations under the Act but must instead review the substantive content of those same determinations "for consistency with the statute and regulations."⁷¹ EPA may only approve of those SIPs, or portions of SIPs, that meet all the applicable requirements of the Act and must disapprove of SIPs or portions of SIPs that are based upon analyses that are neither reasoned nor moored to the Act's provisions.⁷²

Moreover, where EPA disapproves a SIP that does not comply with the requirements of the Clean Air Act or RHR, the Agency has authority to immediately issue a FIP to fill the

⁶⁵ 40 C.F.R. § 51.308(i)(2); 42 U.S.C. § 7491(d).

⁶⁶ 40 C.F.R. § 51.308(i)(2).

⁶⁷ *Id.* § 51.308(i)(2)-(4).

⁶⁸ 42 U.S.C §§ 7410(c)(1), (k)(3), (l), 7491.

⁶⁹ *North Dakota v. EPA*, 730 F.3d 750, 760-62 (8th Cir. 2013); *Oklahoma v. EPA*, 723 F.3d 1201, 1207-10 (10th Cir. 2013).

⁷⁰ *Arizona ex rel. Darwin v. EPA*, 815 F.3d 519, 532 (9th Cir. 2016); *see also Alaska Dep't of Env'tl. Conservation v. EPA*, 540 U.S. 461, 485 (2004).

⁷¹ *Arizona ex rel. Darwin*, 815 F.3d at 525 (citing 42 U.S.C. § 7410(c)(1)(A)); *see also North Dakota*, 730 F.3d at 761; *Nat'l Parks Conservation Ass'n v. U.S. Dep't of Interior*, 794 F. Supp. 2d 39, 41 (D.C. 2011) ("EPA must require these SIPs to include 'such emission limits, schedules of compliance, and other measures as may be necessary to make reasonable progress.'").

⁷² *Arizona ex rel. Darwin*, 815 F.3d at 531; *North Dakota*, 730 F.3d at 760-62; *Oklahoma*, 723 F.3d at 1207-10; *see also* 89 Fed. Reg. at 55,156 & nn.57-59.

regulatory gap left by a disapproval.⁷³ Indeed, EPA “shall promulgate a [FIP] at any time within 2 years after [the Agency] . . . disapproves a [SIP] submission in whole or in part,” unless EPA approves a corrected SIP before promulgating a FIP.⁷⁴ Although EPA must issue a FIP or approve a corrected SIP within two years, the Supreme Court has held that the Agency “is not obliged to wait two years or postpone its action even a single day: The Act empowers the Agency to promulgate a FIP ‘at any time’ within the two-year limit.”⁷⁵ Other courts have confirmed EPA’s authority to issue a Regional Haze FIP once the Agency disapproves a SIP, including cases where EPA simultaneously disapproved a Regional Haze SIP and issued a FIP.⁷⁶

Separately, EPA has an independent statutory duty to issue a FIP or approve a lawful, late-submitted SIP within two years of finding that a state failed to timely submit a required haze SIP revision, as EPA did with respect to Iowa on August 30, 2022.⁷⁷ Specifically, in 2017, EPA revised the Regional Haze Rule to require each state to revise and submit a “comprehensive” regional haze implementation plan, including enforceable emission limits to ensure reasonable progress, by July 31, 2021.⁷⁸ Because Iowa failed to timely submit a revised Regional Haze SIP by the regulatory deadline, on August 30, 2022, EPA issued a formal “finding of failure to submit,” effective September 29, 2022.⁷⁹ That finding triggered a mandatory statutory duty for EPA to issue a FIP or fully approve a late-submitted SIP by September 29, 2024.⁸⁰ As EPA has noted in similar contexts, Iowa’s late-submitted SIP “does not supersede or reset” EPA’s FIP clock.⁸¹ Thus, the agency must still issue a FIP by September 29, 2024, unless it fully approves the state’s late-submitted SIP first. For the reasons discussed below, however, Iowa’s late-submitted SIP fails to meet all of the applicable requirements of the Clean Air Act and the Regional Haze Rule, and is therefore unapprovable.⁸² Consequently, EPA must disapprove the Iowa SIP and issue FIP.

Finally, EPA actions on Regional Haze plans under the Clean Air Act cannot be “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law” and cannot be “in excess of” EPA’s authority under the Act.⁸³ The “arbitrary and capricious” standard under the Clean Air Act is the same as that under the Administrative Procedure Act.⁸⁴

⁷³ 42 U.S.C. § 7410(c)(1)(B) (providing that “[t]he Administrator shall promulgate a Federal implementation plan . . . after the Administrator . . . disapproves a State implementation plan submission in whole or in part”); *Arizona ex rel. Darwin*, 815 F.3d at 543.

⁷⁴ 42 U.S.C. § 7410(c)(1).

⁷⁵ *EPA v. EME Homer City Generation, L.P.*, 572 U.S. 489, 507-09 (2014).

⁷⁶ *See, e.g., Arizona ex rel. Darwin*, 815 F.3d at 542-44; *Oklahoma*, 723 F.3d at 1223.

⁷⁷ 87 Fed. Reg. 52856 (Aug. 30, 2022); 42 U.S.C. § 7410(c)(1)(B).

⁷⁸ 40 C.F.R. § 51.308(f); 82 Fed. Reg. 3078, 3116.

⁷⁹ 87 Fed. Reg. 52,856 (Aug. 30, 2022).

⁸⁰ *Id.*; *see also* 42 U.S.C. § 7410(c)(1) (requiring EPA to issue a federal implementation plan within two years of finding that a state “has failed to make a required submission,” unless the state “corrects the deficiency, and the Administrator approves the plan or plan revision, before the Administrator promulgates such Federal implementation plan.”).

⁸¹ 89 Fed. Reg. 55,140, 55,165 n.75 (July 3, 2024).

⁸² 42 U.S.C. § 7410(k)(3).

⁸³ 42 U.S.C. § 7607(d)(9)(A), (C).

⁸⁴ *Nat’l Ass’n of Clean Air Agencies v. EPA*, 489 F.3d 1221, 1228 (D.C. Cir. 2007).

III. EPA CANNOT APPROVE IDNR'S SOURCE-SPECIFIC CONTROL ANALYSES.

The Regional Haze rules require IDNR to engage in “Four-Factor Analysis” considering the following with respect to each source that may be causing visibility impairment in a Class I area: (1) the cost of compliance, (2) the time necessary for compliance, (3) the energy and non-air quality impacts of compliance, and (4) the remaining useful life of the pollution source. This Four-Factor Analysis is used “to determine what emission limits and other measures are necessary to make reasonable progress.” The outcome of the Four-Factor Analysis must determine whether controls are implemented. Thus, if a control is cost-effective, it must be implemented.

As discussed further below, MidAmerican avoided finding that controls are cost-effective at certain units by inappropriately inflating the interest rate, truncating the useful life of controls, and understating the effectiveness of control options. In addition, a pound per hour SO₂ emissions limit will result in exceedances of a pound per MMBtu SO₂ rate and so cannot be used. IDNR failed to correct these deficiencies and EPA must reject the SIP and find that:

- FGD upgrades to meet a 90% reduction level or an annual average emission rate of 0.05 lb/MMBtu at LGS and at WSEC Unit 3 are cost effective, and so EPA must impose an SO₂ emission limit of 0.06 lb/MMBtu on a 30-day rolling average basis at both units.
- SCR is cost effective at WSEC Unit 3 and at least SNCR is cost effective at LGS. EPA must require WSEC 3 to meet an annual NO_x rate of 0.04 lb/MMBtu, which would reduce NO_x by over 4,100 tons per year of NO_x on average, and require LGS to meet an annual NO_x emission rate of 0.15 lb/MMBtu, which would reduce NO_x emissions from the facility by 778 tons per year on average.
- EPA must require WSEC 4 to meet an annual average SO₂ rate of 0.05 lb/MMBtu, which reflects the upgrade to its dry FGD system.
- IDNR arbitrarily excluded George Neal South and George Neal North from Four-Factor Analysis. Upgrades to those plants' dry FGD systems would be highly cost effective. EPA must adopt reasonable progress measures for the George Neal South and George Neal North power plants to reduce SO₂ emissions based on the additional use of lime in the units' dry FGD systems to achieve annual SO₂ rates at or below 0.05 lb/MMBtu while achieving 30-day average SO₂ emission rates of 0.06 lb/MMBtu.

A. IDNR Must Correct the Cost Analyses for MidAmerican Energy Company's Louisa Generating Station and Walter Scott Jr. Energy Center Unit 3.

The interest rate at which a source borrows money to pay for controls is a key variable in calculation of the annualized cost of a control, and impacts the cost-effectiveness of that control. EPA's Control Cost Manual explains that “the bank prime rate can be an appropriate estimate for interest rates given the potential difficulties in eliciting accurate private nominal interest rates

since these rates may be regarded as confidential business information or difficult to verify.”⁸⁵ States must not allow sources to develop “firm-specific” interest rates if the proposed interest rate fails to follow the methodology specified in EPA’s Control Cost Manual, is inconsistent with prior EPA directions to states, and if the source fails to provide adequate documentation to the state (and the public) to ensure that the methods used meet the legal requirements. As explained in the Stamper Report:

Until MidAmerican Energy and IDNR present sufficient documentation on the assumptions and costs underlying MidAmerican’s stated cost of capital that ensures that the company’s firm-specific interest rate is consistent with the requirements and methodology of EPA’s Control Cost Manual, only the cost analyses done based on the prime lending rate should be considered in determining whether there are cost-effective controls for its facilities.⁸⁶

The Stamper Report presents the errors made by MidAmerican Energy in developing its firm-specific interest rate of 7.862% in determining annualized capital costs of control for the Louisa Generation Station and the Walter Scott Jr. Energy Center Unit 3.⁸⁷ Although the current prime rate remains stubbornly high, the rate is likely to come down over the next month,⁸⁸ and it is critical that EPA use a rate that is supported by the record at the time of the final decision.⁸⁹

The Stamper Report identifies numerous additional errors that EPA must correct. First, MidAmerican’s analysis includes costs that are not allowed under EPA’s Control Cost Manual. For example, the Control Cost Manual uses an “overnight” estimation method, as if no interest was incurred during construction and thus estimates capital as if the project was completed “overnight.”⁹⁰ Accordingly, Allowance for Funds Used During Construction (“AFUDC”), which is defined as “the amount credited to a firm’s statement of income and charged to construction in progress on the firm’s balance sheet” and which EPA has repeatedly found should not be included in cost effectiveness analyses under the Control Cost Manual methodology.⁹¹ As EPA has explained:

A proper evaluation of cost-effectiveness allows for a reasoned comparison not only of different control options for a given facility, but also of the relative costs of controls for similar facilities. If the cost-effectiveness of a control technology

⁸⁵ EPA Control Cost Manual, Section 1, Chapter 2 Cost Estimation: Concepts and Methodology, at 15 (Nov. 2017).

⁸⁶ Stamper Report at 9.

⁸⁷ Stamper Report at 6-9.

⁸⁸ *Fed Chair Powell: 'The time has come' for interest rate cuts*, Wash. Post, Aug. 24, 2024, <https://www.washingtonpost.com/business/2024/08/23/fed-powell-jackson-hole-rate-cuts/>.

⁸⁹ 89 Fed. Reg. at 47,429 (EPA’s Arizona proposal proposing to disapprove that State’s use of values well above the bank prime.).

⁹⁰ EPA Control Cost Manual, Section 1, Chapter 2 Cost Estimation: Concepts and Methodology, at 11 (Nov. 2017).

⁹¹ See EPA Control Cost Manual, Section 1, Chapter 2 Cost Estimation: Concepts and Methodology, at 11 (Nov. 2017), and Section 4, Chapter 2 Selective Catalytic Reduction, at pdf 65 (June 2019), https://www.epa.gov/sites/default/files/2017-12/documents/scrcostmanualchapter7thedition_2016revisions2017.pdf.

for a particular facility is outside the range for other similar facilities, the control technology may be rejected as not cost-effective.... Without an ‘apples-to-apples’ comparison of costs, it is impossible to draw rational conclusions about the reasonableness of the costs of compliance for particular control options. Use of the [Cost Manual] methodology is intended to allow a fair comparison of pollution control costs between similar applications for regulatory purposes.⁹²

Courts have upheld EPA’s findings that AFUDC costs skews that apples-to-apples comparison, and affirmed EPA’s findings that such costs are not to be used in evaluating the cost effectiveness of controls.⁹³

Second, EPA must disapprove the IDNR’s use of “weighted cost of capital” because as the Stamper Report explains, that approach is inconsistent with EPA’s Control Cost Manual and EPA final agency actions. For example, EPA’s 2011 final action on the Oklahoma Regional Haze and Visibility Transport Federal Implementation Plan *disapproved* use of the Oklahoma Gas & Electric (“OG&E”) interest rate methodology that used a capital recovery factor that “include[d] not only recovery of principal but also a return on the principal, with the rate of return equal to the discount rate” and that “for an investor-owned utility such as OG&E, which is financed by a mix of debt and equity, the discount rate is equal to the weighted average of the equity return and debt return.”⁹⁴

Third, EPA must disapprove IDNR’s unreasonable use of a firm-specific interest rate based on approval by the Iowa Utilities Board and supplemental information⁹⁵ in MidAmerican Energy’s Four-Factor Analysis. As the Stamper Report explains “MidAmerican Energy has not explained the details of how its cost of capital is calculated, other than to refer to the utility commission docket numbers in which the cost of capital was approved.”⁹⁶ MidAmerican Energy’s calculations for cost of capital must be consistent with the methodology and requirements of the EPA Control Cost Manual. Because neither MidAmerican Energy nor IDNR demonstrates how the methodology used in the ratemaking case is consistent with EPA’s requirements, the Four-Factor Analyses must include “only the cost analyses done based on the prime lending rate in determining whether there are cost-effective controls for its facilities,”⁹⁷

In its response to comments, IDNR fails to meaningfully address any of these issues, asserting only that control analyses are “evaluated on a case-by-case basis” and MidAmerican’s assumptions are “unique” to its circumstances.⁹⁸ But IDNR fails to provide any documentation supporting MidAmerican’s inclusion of AFUDC costs, its weighted cost of capital, or its use of a

⁹² *Arizona ex. rel. Darwin*, 815 F.3d at 540

⁹³ *Arizona ex. rel. Darwin*, 815 F.3d at 540; *Oklahoma*, 723 F.3d at 1212.

⁹⁴ Stamper Report at 7, citing 76 Fed. Reg. 81,728 at 81,745 (Dec. 28, 2011).

⁹⁵ SIP Revision, Appendix D-2.

⁹⁶ Stamper Report at 8; *see also* SIP Revision, Appendix D-2 at 2.

⁹⁷ Stamper Report at 9.

⁹⁸ Final Iowa SIP, Response to Comment at 68.

firm-specific interest rate.⁹⁹ Nor does IDNR explain how MidAmerican’s situation is “unique.” EPA’s record is similarly devoid of any explanation supporting MidAmerican’s inclusion of costs and cost assumptions that are not supported by the Control Cost Manual. EPA cannot simply rubberstamp IDNR’s analysis, and must instead disapprove the failure to document the basis for its cost analysis, or explain why it is applying its Cost Control Manual differently in Iowa than it has consistently applied it in other states,¹⁰⁰ and immediately begin the process of issuing a FIP.

B. IDNR Must Assume 30-Years for the Useful Life of Pollution Controls in the Cost Effectiveness Analyses.

In conducting the Four-Factor Analyses, the life of all the pollution controls evaluated should be equivalent to the typical life of such controls. Where a SIP assumes a shorter life for pollution controls, the state’s SIP must include justification for doing so.¹⁰¹ MidAmerican Energy failed to justify use of a truncated life for numerous pollution controls. For example, contrary to the Control Cost Manual and determinations made in EPA rulemakings, which apply a 30-year useful life, MidAmerican and IDNR erroneously assume the following:

- 20-year useful life in determining annualized costs of the SO₂ controls evaluated. As the Stamper Report discusses, there is no justification for assuming such a short life of a new wet FGD system or for the operational upgrades to the existing DFGD system. Indeed, EPA has found that FGD systems can last 30 years or longer.¹⁰²
- 20-year useful life for controlling NO_x emissions with SCR or SNCR systems. The Stamper report explains that EPA’s Control Cost Manual indicates that, for EGUs, SCR has a useful life of 30 years.¹⁰³ For SNCR, EPA has assumed a 30-year life of SNCR in control cost calculations for coal-fired EGUs in the context of the regional haze program,¹⁰⁴ and therefore it is reasonable to assume a 30-year life of SNCR for application to LGS and WSEC Unit 3.¹⁰⁵

⁹⁹ 89 Fed. Reg. at 47,429 (EPA’s Arizona proposal proposing to disapprove that State’s deviations from the Control Cost Manual in the absence of adequate documentation.).

¹⁰⁰ 42 U.S.C. § 7601(a)(2); *see e.g.*, Memorandum from Janet McCabe, Deputy Assistant Admin., Off. Air & Radiation, Env’t Prot. Agency, to Reg’l Admins., Regions I – X (Apr. 6, 2011), <https://www.epa.gov/ground-level-ozone-pollution/streamlining-sip-process>; Memorandum from William L. Wehrum, Acting Assistant Admin., Off. of Air & Radiation, Env’t Prot. Agency, to Air Div. Dirs., Region I - X (Sept. 7, 2007), https://www3.epa.gov/ttn/naaqs/aqmguide/collection/cp2/20050911_wehrum_revised_consistency_proce [ss.pdf](https://www3.epa.gov/ttn/naaqs/aqmguide/collection/cp2/20050911_wehrum_revised_consistency_proce).

¹⁰¹ *Id.*

¹⁰² Stamper Report at 9.

¹⁰³ Stamper Report at 9, citing EPA Control Cost Manual, Section 4, Chapter 2 Selective Catalytic Reduction, at pdf 80 (June 2019); *see also* EPA Control Cost Manual, Section 4, Chapter 1 Selective Noncatalytic Reduction, at 1-54 (Apr. 25, 2019).

¹⁰⁴ *See e.g.*, 80 Fed. Reg. 18,944, 18,968 (Apr. 8, 2015).

¹⁰⁵ Stamper Report at 10.

Moreover, MidAmerican Energy did not identify any limitations on the remaining useful life of either LGS or WSEC Unit 3, stating that no specific retirement date is planned for either LGS or the WSEC units.¹⁰⁶ Although IDNR's SIP Revision fails to include any enforceable limitations on the remaining useful life of LGS or WSEC Unit 3, the cost-effectiveness analyses assume only a 20-year remaining useful life, instead of EPA's 30-year assumption. Absent enforceable limits on the remaining useful life of the source, EPA must disapprove IDNR's approach and in its process of issuing a FIP, evaluate the cost-effectiveness of controls based on the typical life of such controls, which is 30 years or longer.¹⁰⁷

As with its response to comments regarding IDNR's cost assumptions, *supra*, IDNR failed to meaningfully address MidAmerican's remaining useful life assumptions, simply asserting that remaining useful life is determined on a case-by-case basis.¹⁰⁸ But that truism fails to satisfy the Regional Haze Rule requirement that IDNR provide supporting documentation, and ultimately provide a reasonable explanation for its assumed remaining useful life. In the absence of such information, EPA must assume a typical 30-year life for the control equipment in question. This assumption is critical because shorter useful life assumptions skew the analysis, making post-combustion controls seem less cost effective. In the process of issuing a FIP, EPA must conduct a new cost analysis that includes the appropriate useful life assumptions EPA has consistently applied.¹⁰⁹

C. IDNR Must Correct Deficiencies in the Regional Haze Control Evaluation for MidAmerican Energy Co – Louisa Generating Station and Walter Scott Jr. Energy Center.

1. Analysis of SO₂ Control Options for LGS and WSEC Unit 3.

Louisa Generating Station ("LGS") is an 811.9 MW unit that burns subbituminous coal and is equipped with a dry lime flue gas desulfurization ("dry FGD") system, low NO_x burners with overfire air, and a baghouse. Walter Scott Jr. Energy Center 3 ("WSEC Unit 3") is a 725.8 MW that burns subbituminous coal and is equipped with a dry FGD system, low NO_x burners with overfire air, and a baghouse. LGS achieved an average 2017-2019 SO₂ rate of 0.292 lbs/MMBtu (annual) and average NO_x emissions rate of 0.183 tons per year (annual). WSEC Unit 3 achieved an average 2017-2019 SO₂ rate of 0.357 lbs/MMBtu (annual) and average NO_x emissions rate of 0.223 tons per year (annual).

As part of the cost effectiveness evaluation, IDNR failed to evaluate reasonable SO₂ emission rates that could be achieved with upgrades to the units' existing dry flue gas desulfurization (FGD) systems with the use of additional lime and also with new retrofit wet FGD systems. MidAmerican evaluated improvements to the dry FGD systems at these plants that

¹⁰⁶ See Final Iowa SIP, Appendix D-1 at 10, 12, 19.

¹⁰⁷ Stamper Report at 10.

¹⁰⁸ Final Iowa SIP, Response to Comment at 68.

¹⁰⁹ See Stamper Report at 10; *see also* 89 Fed. Reg. at 47,429 (EPA proposed to disapprove Arizona's regional haze SIP where the State applied a useful life assumption of less than that specified in the Control Cost Manual and the equipment life assumption used was not constrained by an enforceable retirement date for the source in the SIP.).

would achieve an SO₂ rate of 0.10 lb/MMBtu.¹¹⁰ This reflects an SO₂ control efficiency of approximately 78%.¹¹¹

As reflected in the Stamper Report, this SO₂ control efficiency is unreasonably low. The existing systems at the plants were designed for efficiency greater than 90%.¹¹² Moreover, as presented in Table 3 of Ms. Stamper's report, several plants with dry FGD systems are achieving SO₂ rates lower than 0.06 lb/MMBtu on an annual basis.¹¹³ This data provides support that annual average SO₂ emissions rates of 0.05 lb/MMBtu or lower can be met with dry FGD systems. As the Stamper Report makes clear, IDNR (or EPA, if IDNR refuses) must evaluate FGD upgrades to meet a 90% reduction level or an annual average emission rate of 0.05 lb/MMBtu at LGS and at WSEC Unit 3. Based on that analysis, EPA's FIP must also impose an SO₂ emission limit of 0.06 lb/MMBtu on a 30-day rolling average basis at both units.¹¹⁴ Moreover, as reflected in the Stamper Report, it also appears that the dry FGD system installed at LGS in 2007 is equipped with scrubber bypass, and EPA's FIP must evaluate the elimination of this FGD bypass, in addition to an increase in the amount of lime used, as a reasonable progress control.¹¹⁵

In response to these comments, IDNR stated that the haze rule "does not establish a presumptive level of control," and that the IDNR "determined, based on site-specific considerations, that the 800 lb/hr and 770 lb/hr limits and associated conditions established for LGS and WSEC-3, respectively, are comparable to a 0.10 lb/MMBtu limit." IDNR further stated that the 78% control efficiency is "not applicable to the four-factor analysis and do [sic] not impact the determination of the emission limits that are both achievable in practice and reasonable for regional haze purposes."¹¹⁶

As the attached Kordzi Report explains,¹¹⁷ it is impossible to know whether a pollution control measure can be improved without first knowing its efficiency, and whether a control technology in use (here, a scrubber) relies on a bypass diverting a portion of the exhaust gas from the scrubber. IDNR's response to comments demonstrated that it failed to thoroughly investigate the LGS bypass concerns, instead it relied on a few years' of reported data instead of contacting the facility directly for information regarding bypass.¹¹⁸ Moreover, IDNR's response to comments that "the emission limits apply at all times, thus the presence or absence of FGD bypass at LGS is irrelevant,"¹¹⁹ did not address the issue that IDNR improperly skewed the analysis to make it appear that the facility is achieving greater emission reductions than it actually is, and effectively ignores cost-effective pollution reductions. Thus, in the process of

¹¹⁰ Stamper Report at 12.

¹¹¹ *Id.*

¹¹² *Id.*

¹¹³ *Id.* at 13

¹¹⁴ *Id.* at 14

¹¹⁵ *Id.* at 13

¹¹⁶ SIP Revision, Response to Comments at 69.

¹¹⁷ Kordzi Report at 7-8.

¹¹⁸ SIP Revision, Response to Comments at 69 (IDNR did not contact the Facility to address the issue of whether a bypass system is installed, rather it looked at a few years of EIA data, without specifying how many years of data were examined. IDNR also failed to provide the EIA data it examined.).

¹¹⁹ SIP Revision, Response to Comments at 69.

issuing a FIP, EPA must evaluate and address the potential for eliminating LGS's bypass system as part of any Four-Factor Analysis.

In any case, EPA has itself repeatedly found that SDA scrubber systems like those employed at LGS and WSEC are capable of much better performance, and must be evaluated in Four-Factor Analyses. EPA's own Control Cost Manual indicates in multiple locations that SDA systems are capable of meeting a 95% control efficiency while treating coals with sulfur contents up to 3% (the latter being much higher than the coal burned by LGS and WSEG).¹²⁰ EPA's record for its Oklahoma FIP indicates that underperforming SDA scrubbers should be evaluated at 95% control (with a floor of 0.06 lbs/MMBtu).¹²¹ And EPA has long indicated that states must evaluate controls at their most efficient levels.¹²² As the Stamper Report makes clear, SDA technology can consistently achieve an emission rate of 0.05 lbs/MMBtu or even lower.¹²³

As reflected in the attached Stamper Report, and in the table below, once EPA corrects IDNR's cost-effectiveness analysis, it will demonstrate that dry FGD upgrades designed to achieve an annual SO₂ rate of 0.05 lb/mmbtu for both the LGS and WSEC dry scrubber systems, would be extremely cost-effective. Indeed, dry scrubber upgrades with a 0.05 lb/mmbtu limit at LGS and WSEC Unit 3 could achieve 4,900 to more than 6,900 tons per year of SO₂ emission reduction, respectively, at each unit from 2017-2019 baseline emissions, at a cost effectiveness of just \$281/ton. Notably, these dry scrubber upgrades would require *zero* capital costs and would only require modest O&M costs. As discussed elsewhere in these comments, this is well within the range of costs that EPA has determined are reasonable.

More recent data confirms that the LGS and WSEC Unit 3 scrubber systems could be improved. As explained in the attached Kordzi Report, more-recent emission data from those existing scrubbers shows that they are capable of consistently better emission rates.¹²⁴ This has likely been accomplished by simply using more reagent or using it more efficiently. In any case, each unit has been able to achieve SO₂ emissions below IDNR's 0.10 lbs/MMBtu rate, indicating that a lower emission limitation is achievable and likely cost-effective. Still, the scrubber efficiency of each unit remains far below the 95% level that EPA has historically used to evaluate SDA scrubber systems. Consequently, EPA must disapprove Iowa's SO₂ Four-Factor Analyses for LGS and WSEC Unit 3 and in its FIP require that these scrubber upgrades achieve at least 95% control, with a floor of 0.05 lbs/MMBtu.

IDNR also failed to evaluate the lowest SO₂ removal efficiency that could be achieved with a wet FGD system at the two plants. IDNR and MidAmerican Energy evaluated a wet FGD retrofit to achieve an SO₂ rate of 0.06 lb/MMBtu. But data shows that several coal-fired power plant units with wet scrubbers achieve SO₂ rates lower than 0.04 lb/MMBtu on an annual basis.¹²⁵ Further, those units also have achieved 30-boiler operating day averages of 0.04 lb/MMBtu or lower while meeting annual lb/MMBtu SO₂ emission rates of 0.03 lb/MMBtu or

¹²⁰ Kordzi Report at 7-8, citing Control Cost Manual.

¹²¹ 76 Fed. Reg. 81,742 (Dec. 28, 2011).

¹²² 70 Fed. Reg. 39,166 (July 6, 2005).

¹²³ Stamper Report at 13; Kordzi Report at 7-8.

¹²⁴ Kordzi Report at 8-11.

¹²⁵ Stamper Report at 14.

lower.¹²⁶ Based on the average annual uncontrolled SO₂ in the coal utilized at LGS and at WSEC Unit 3 of 0.46 lb/MMBtu, the units should readily be able to achieve an annual SO₂ rate no higher than 0.03 lb/MMBtu and achieve a 30-boiler operating day average limit of 0.04 lb/MMBtu with a wet FGD retrofit.¹²⁷ Thus, EPA’s FIP must include an evaluation of and requirements for a wet FGD retrofit to achieve an annual average SO₂ rate of 0.03 lb/MMBtu at LGS and at WSEC Unit 3.

A new wet FGD should also be considered by EPA in its FIP as a cost-effective option at WSEC Unit 3, as it could reduce SO₂ emissions by 7,365 tons per year from 2017-2019 baseline emissions at a cost effectiveness of \$4,907/ton (in 2021 dollars), which is below IDNR’s threshold and also within the range of EPA determinations in the first planning period.¹²⁸ A new wet FGD could also be considered by EPA in its FIP as cost-effective at LGS, at a cost effectiveness of \$6,968/ton. As discussed elsewhere in these comments, Colorado and Nevada use a cost effectiveness threshold of \$10,000/ton and New Mexico uses a threshold of \$7,000/ton.¹²⁹

Table 5. Cost Effectiveness of SO₂ Control Upgrade Options at Louisa Generating Station and at Walter Scott Jr. Energy Center Unit 3, Based on 30-Year Life of Controls and the EPA Cost Spreadsheets (2021 \$)⁵⁸

	Annual SO ₂ Rate, lb/MMBtu	Capital Cost	Net Increase in O&M Costs	Total Annualized Costs	SO ₂ Reduced, tpy	Cost Effectiveness, \$/ton
Louisa Generating Station						
New Wet FGD	0.03	\$411,250,091	\$1,430,496	\$37,204,832	5,340	\$6,968/ton
Upgraded Dry FGD	0.05	\$0	\$1,384,818	\$1,384,818	4,931	\$281/ton
Walter Scott Jr. Unit 3						
New Wet FGD	0.03	\$390,170,764	\$2,198,820	\$36,141,784	7,365	\$4,907/ton
Upgraded Dry FGD	0.05	\$0	\$1,942,039	\$1,942,039	6,914	\$281/ton

IDNR’s response to public comments and FLM consultation comments also failed to meaningfully address the comments regarding the cost effectiveness values. First, IDNR’s response “that other states established costs thresholds at various levels demonstrates the inherent flexibility within the regional haze program,”¹³⁰ failed to recognize the CAA and

¹²⁶ *Id.*

¹²⁷ *Id.* at 15.

¹²⁸ 89 Fed. Reg. at 56,706 n.61.

¹²⁹ *Id.* at 19.

¹³⁰ SIP Revision, Response to Comments at 69.

regulatory requirements that provide for national consistency in SIPs, as discussed above in section II. D. Notably, the Act and EPA's implementing regulations assure fairness and uniformity in the criteria, procedures, and policies applied across the country in implementing the Regional Haze Program and assure affected facilities are treated by a level playing field. Thus, IDNR was wrong to suggest that there is inherent flexibility on costs, as Congress clearly set requirements for national consistency throughout the country in implementing the Act's programs.

Second, it was also unreasonable for IDNR to take the "degree of anticipated progress"¹³¹ and projections regarding the URP at the impacted Class I areas¹³² into account in evaluating costs. A state cannot exclude sources from a reasonable progress analysis or reject controls identified in an analysis because the Class I Areas impacted by in-state sources are projected to be at or below their respective URP glidepaths. EPA has made clear that the URP is not a "safe harbor."¹³³ Rather, the rate of progress that is achieved by the implementation of all reasonable controls as determined by a review of the four statutory factors "is, by definition, a reasonable rate of progress."¹³⁴ Indeed, EPA's recent regional haze actions underscore EPA's implementation of this requirement.¹³⁵

Third, IDNR's assertions that compare NO_x and SO₂ emission reductions and select one pollutant failed to recognize EPA's expectation of the states. EPA made clear that regarding the pollutants considered for source selection and control strategy analysis for the second planning period is that "each state will analyze sulfur dioxide (SO₂) and nitrogen oxide (NO_x) in selecting sources and determining control measures"¹³⁶ and has explained that "the rate of progress that will be achieved by the emission reductions resulting from all reasonable control measures is, by definition, a reasonable rate of progress."¹³⁷ "A state that chooses not to consider at least these two pollutants should demonstrate why such consideration would be reasonable."¹³⁸ IDNR ignored NO_x controls because they are more expensive than SO₂ controls,¹³⁹ and used visibility as an "optional fifth factor" to argue that "SO₂ emissions will provide greater visibility benefits than NO_x controls, and concluded that "costs of NO_x controls are not reasonable."¹⁴⁰ EPA's proposal does not evaluate the details in IDNR's Four-Factor Analysis, rather summarily proposes that "[b]ased on the EPA's review" IDNR's "four-factor analyses" that were

¹³¹ SIP Revision, Response to Comments at 67.

¹³² SIP Revision, Response to Comments at 67.

¹³³ 82 Fed. Reg. at 3093.

¹³⁴ *Id.*

¹³⁵ *See e.g.*, 89 Fed. Reg. 56,709 (EPA notice for North Dakota's RH SIP explained that "Notably, the CAA and RHR do not include the URP among the four statutory factors states must consider in developing their long-term strategies. North Dakota relied on this consideration to reject controls that its four-factor analysis did not show to be unreasonable. Thus, North Dakota's conclusion that no new controls are necessary (whether in whole or in part) because the State's Class I areas are below the adjusted URP is inconsistent with the plain text of the CAA and RHR.").

¹³⁶ 89 Fed. Reg. at 63,263, citing 2021 Clarification Memo at 4, citing 2019 Guidance at 12.

¹³⁷ 82 Fed. Reg. at 3093; 2021 Clarification Memo at 7 (explaining that "[a] reasonable four-factor analysis will consider the full range of potentially reasonable options for reducing emissions").

¹³⁸ 89 Fed. Reg. at 63,263, citing 2021 Clarification Memo at 4.

¹³⁹ SIP Revision, Response to FLM Consultation Comments at 64.

¹⁴⁰ SIP Revision, Response to FLM Consultation Comments at 64.

“performed by MidAmerican Energy Company for each of the two sources” “was both reasonable and consistent with the EPA Air Pollution Control Cost Manual.”¹⁴¹ EPA’s proposed conclusion is contradicted by the record and these comments, which demonstrate there are additional significant NO_x emissions that IDNR should have, but failed to, analyze for NO_x controls. By endorsing IDNR’s decision to consider NO_x controls, EPA ignores an important aspect of the problem.¹⁴²

Fourth, IDNR’s attempt to ignore the cost effectiveness thresholds set by other states because none of them are in the Midwest was unreasonable.¹⁴³ The CAA is a nationwide program and as discussed in section II.G., EPA must ensure that the SIPs are consistent across the country. Moreover, IDNR’s assertion that the other states provided as examples all contain at least one Class I area and thus it can ignore the determinations made in other states was also unreasonable.¹⁴⁴ All states must submit regional haze SIPs because EPA established in the 1999 RHR that all states either have Class I areas within their borders or “contain sources whose emissions are reasonably anticipated to contribute to regional haze in a Class I area.”¹⁴⁵

Fifth, IDNR’s explanation that it “appreciate[d] the NPS’s facility-specific control-cost analyses and related information, but that information does not substitute for the DNR’s results nor does it alter the DNR’s conclusions that additional NO_x controls are unnecessary for LGS and WSEC-3 at this time.”¹⁴⁶ The FLM consultation process is not a mere box checking exercise. Instead, it is a mandatory, iterative process, requiring the state to meaningfully consider and incorporate into the SIP the concerns of the agencies responsible for managing the Class I resources impacted by pollution from the state. While IDNR summarized and provided this response to the FLM’s comments, its responses demonstrate that it did not *meaningfully* consider them, rather it summarily rejected the comments and did not explain why it chose not to include the FLM’s information. An assertion that the FLM information “does not substitute for DNR’s” does not fully respond to the FLM’s comment.

Sixth, IDNR’s assertion that “[r]equiring SNCR or SCR on either LGS or WSEC-3 fails to provide reasonably cost-effective or *meaningful reductions* for purposes of regional haze and thus neither is currently appropriate.”¹⁴⁷ IDNR’s use of “meaningful reductions” to reject reasonable progress controls is inconsistent with the applicable legal requirements. In enumerating the factors that must be considered for BART, Congress included visibility improvement, whereas Congress omitted visibility improvement from the factors that must be considered in determining reasonable progress.¹⁴⁸ “[W]here Congress includes particular language in one section of a statute but omits it in another section of the same Act, it is generally

¹⁴¹ 89 Fed. Reg. at 63,272.

¹⁴² *Motor Vehicle Mfrs. Ass’n of the U.S. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) [hereinafter “*State Farm*”].

¹⁴³ SIP Revision at 64.

¹⁴⁴ SIP Revision at 64.

¹⁴⁵ 64 Fed. Reg. 35,714, 35,721 (July 1, 1999).

¹⁴⁶ SIP Revision, Response to FLM Consultation Comments at 64-65.

¹⁴⁷ SIP Revision, Response to Comments at 67. (emphasis added).

¹⁴⁸ Compare 42 U.S.C. § 7491(g)(2) (definition of BART), with *id.* § 7491(g)(1) (definition of reasonable progress).

presumed that Congress acts intentionally and purposely in the disparate inclusion or exclusion.”¹⁴⁹ The statute and regulation do not allow a state to use a non-statutory factor to reject control measures that satisfy the four statutory factors for reasonable progress. “Normally, an agency rule would be arbitrary and capricious if the agency has relied on factors which Congress has not intended it to consider,”¹⁵⁰ as IDNR did here. Additionally, it was unreasonable for IDNR to suggest that the visibility benefits are too small as an excuse to avoid controlling its sources. Regional haze is “visibility impairment that is caused by the emission of air pollutants from numerous sources located over a wide geographic area.”¹⁵¹ At any given Class I area, hundreds or even thousands of individual sources may contribute to regional haze. Thus, it is not appropriate to reject a control measure for a single emission unit, a single source, or even a group of sources on the basis of the associated visibility benefits not providing meaningful reductions. For these reasons, EPA must conclude that IDNR’s consideration of visibility improvement in Four-Factor Analyses was unlawful and unreasonable.

Seventh, IDNR’s response that “With respect to the commenter’s claim that new wet FGD should be considered cost effective, this option is clearly unreasonable when considered in the context of its incremental costs, which are approximately \$50,090/ton for LGS and \$44,250/ton for WSEC-3 (2019\$), as shown in Table 5-5.”¹⁵² IDNR misconstrues the comments, as discussed in the Stamper Report and elsewhere in these comments, IDNR’s cost-effectiveness values for new wet FGD at LGS and WSEG Unit 3 were unreasonable in that they failed to evaluate the top level SO₂ removal efficiency that is achievable because they merely looked at the EPA RACT/BACT/LAER Clearinghouse (“RBLC”) instead of reviewing the lowest emitting coal-fired power plant units with wet scrubbers.¹⁵³ While EPA created the RBLC to be used as a database of air pollution technology information it is not a comprehensive compilation.¹⁵⁴ Once corrected, the cost-effectiveness values of LGS and WSEC Unit 3 were \$8,920 and \$6,160 \$/ton,¹⁵⁵ should be even more cost-effective. Regardless, even the values presented in the SIP are in the range of what other states have found cost effective, as discussed elsewhere in these comments. Finally, while EPA presents IDNR’s analysis in its proposal,¹⁵⁶ nowhere does EPA identify and evaluate the errors in its Four-Factor Analyses. Instead EPA rubber stamps IDNR’s analysis and conclusions.

In sum, EPA’s FIP must evaluate FGD upgrades to meet a 90% reduction level or an annual average emission rate of 0.05 lb/MMBtu at LGS and at WSEC Unit 3, including an SO₂ emission limit of 0.06 lb/MMBtu on a 30-day rolling average basis or conduct a Four-Factor Analysis that includes corrections and is consistent with prior EPA determinations.

¹⁴⁹ *Rodriguez v. United States*, 480 U.S. 522, 525 (1987).

¹⁵⁰ *State Farm* 43.

¹⁵¹ 40 C.F.R. § 51.301.

¹⁵² SIP Revision, Response to Comments at 69.

¹⁵³ Stamper Report at 14-15.

¹⁵⁴ Notably, there have been additional emission control projects in the U.S. that have not been subject to the PSD regulations so are not documented in the RCLC, which also provide insight into demonstrated emission control methods.

¹⁵⁵ SIP Revision at 33.

¹⁵⁶ 89 Fed. Reg. at 63,270-71

2. IDNR Must Adopt a Reasonable Progress SO₂ Emissions Limit for LGS and WSEC 3 in Units that Will Ensure Reductions in SO₂ Emissions Over All Levels of Operation.

EPA proposes to approve provisions from the LGS and WSEC Unit 3 permits in the long-term strategy¹⁵⁷ and provides the following explanation:

The permits for LGS and WSEC-3 include limits in lb/hour, with compliance determined on thirty-day rolling averages through the use of Continuous Emission Monitors (CEMs) to the EPA standards, necessary recordkeeping and reporting requirements, and cover all times of operation.¹⁵⁸

Notably, EPA's proposal for Missouri's RH SIP analyzed the source-specific provisions and found that they do not contain explicit enforceable emission limits, in addition to other problematic provisions, and therefore EPA's proposal determined they are unenforceable and not permanent.¹⁵⁹ Similarly, as discussed in these comments, a detailed review of IDNR's SIP identified numerous similar issues regarding the enforceability of the emission limits. First, EPA must disapprove IDNR's 30-day rolling average SO₂ limit for LGS of 800 lb/hr and for WSEC Unit 3 of 770 lb/hr and require in the FIP that they be revised to be in units of lb/MMBtu, which would be much more effective at ensuring SO₂ emission reductions across all levels of operation and would result in greater SO₂ emission reductions per year.

By imposing a lb/hour SO₂ limit rather than a lb/MMBtu SO₂ limit, the emission limits fail to require the same level of control over all levels of operation and do not achieve the emissions rate IDNR said they are intended to achieve. As the Stamper Report explained, IDNR's lb/hour limits only reflect the assumed level of control when the units are operating at or near maximum hourly heat input capacity. Moreover, the proposed limits are not sufficiently clear, lack enforceability, and do not mandate the same reduction in SO₂ emission rates at all boiler loads.¹⁶⁰ As discussed in detail below, the emission limits and provisions IDNR requests that EPA approve into the SIP from the respective permits are not sufficiently enforceable as required by 40 C.F.R. § 51.308(f)(2) and other legal requirements.

Ms. Stamper's analysis illustrates the difference in SO₂ emission reductions between IDNR's proposed pound per hour 30-day average SO₂ limits and a 0.10 lb/MMBtu SO₂ limit, which would ensure the same level of reductions in SO₂ across all loads. This analysis demonstrates that a 0.10 lb/MMBtu limit would result in greater SO₂ emission reductions than IDNR's pound per hour limits for LGS and WSEC Unit 3 (which were intended to reflect a 0.10 lb/MMBtu SO₂ rate).¹⁶¹

IDNR's response to comments on this issue asserted that the "pound per hour limit with additional control equipment operating requirements will provide stringency comparable to a

¹⁵⁷ 89 Fed. Reg. at 63,273.

¹⁵⁸ 89 Fed. Reg. at 63,273.

¹⁵⁹ 89 Fed. Reg. at 51,154.

¹⁶⁰ Stamper Report at 21-23.

¹⁶¹ *Id.* at 23-24.

pound per MMBtu limit while also providing operational flexibility to the source.”¹⁶² IDNR ignored and failed to respond to the Stamper analysis that clearly demonstrated the difference in the level of reductions in a lb/hr SO₂ limit rather than the lb/MMBtu SO₂ limit. As discussed above, IDNR must respond to significant comments, which it did not do in this instance.

Moreover, EPA’s proposal is internally inconsistent on this point. IDNR’s SIP Revision and EPA’s proposed approval use different emission limits for WSEC Unit 4. The WSEC Unit 4 SO₂ and NO_x emission limits are based on lb/MMBtu.¹⁶³ EPA’s FIP emission limits must be set consistently and not arbitrarily use one method for LGS and WSEC Unit 3, and impose another method of compliance for WSEC Unit 4. EPA must act consistently across a SIP/FIP.¹⁶⁴

EPA must thus disapprove IDNR’s lb/hr SO₂ limits for LGS and WSEC Unit 3, and require limits in its FIP in terms of lb/MMBtu, which will ensure that SO₂ emissions are reduced over all levels of operation of these units.¹⁶⁵

3. The SO₂ Permit Conditions for LGS and WSEC-3 are not Practically Enforceable.

IDNR’s response on the issues of practical enforceability also explained that it “include[d] enforceable conditions in the air construction permits for LGS and WSEC Unit 3 that require MidAmerican to study, develop, and comply with reagent injection rates to maintain SO₂ emission reductions across varying boiler operating loads.”¹⁶⁶ IDNR explained that:

To maintain SO₂ reductions during varying boiler operating loads, the new permit conditions provide a limited degree of flexibility to enable data collection efforts to evaluate the reagent injection rates. This study is necessary because the injection rates cannot be determined prior to implementation of the scrubber improvements. The DNR requires MidAmerican to conduct the study expeditiously, within 60 days of scrubber improvement implementation. The DNR will evaluate and approve the study only if the actual SO₂ emissions reductions are maintained pursuant to permit conditions 1c and 5.Q (see permits 05-A-031-P6 and 75-A-357-P9 for LGS and WSEC 3, respectively). The DNR has established federally enforceable limits that apply at all times to satisfy regional haze requirements and has determined that additional permit conditions are unnecessary at this time.¹⁶⁷

EPA’s proposed notice does *not* review and consider the regional haze permit conditions in detail, instead summarizes the lb/hr limits noting that compliance is determined “through the use

¹⁶² SIP REvision at 69.

¹⁶³ 89 Fed. Reg. at 63,273.

¹⁶⁴ *National Parks Conservation Ass’n v. EPA*, 788 F.3d 1134, 1145 (9th Cir. 2015) (citing “*Sierra Club v. EPA*, 719 F.2d 436, 459 (D.C.Cir.1983); *see also Gen. Chem. Corp. v. United States*, 817 F.2d 844, 846 (D.C.Cir.1987) (per curiam) (finding analysis arbitrary and capricious because it was ‘internally inconsistent and inadequately explained.’”).

¹⁶⁵ *See* 2021 Clarification Memo at 11-12.

¹⁶⁶ SIP Revision at 69, citing Conditions 5.Q and 5.R in permit 05-A-031-P6 for LGS or permit 75-A-357-P9 for WSEC-3; SIP Revision at 40, citing Conditions 5.Q. and 5.R.

¹⁶⁷ SIP Revision at 69-70.

of Continuous Emission Monitors (CEMs).¹⁶⁸ The relevant Permit Conditions 5.P., 5.Q, and 5.R in the LGS permit read as follows:

1c. Regional Haze Limit

Pollutant	lb/hr	tons/yr	Other Limits	Reference/Basis
Sulfur Dioxide (SO ₂)	800 ^{1,2}	NA	NA	567 IAC 22.9(6)

¹Limit based on 65.6 percent reduction of SO₂ emissions from the baseline years of 2017 to 2019. Compliance with the limit is based on continuous emissions monitoring as specified in permit condition 6.

²Limit based on 30-day rolling average. Limit is applicable at all times including periods of Boiler startup, shutdown, and malfunction.

P. The owner or operator shall complete Lime Spray Dryer FGD (CE1B) enhancements to achieve the SO₂ emission limit specified in condition 1c by December 31, 2023.

i. The owner or operator shall maintain record of the completion date of Lime Spray Dryer FGD (CE1B) enhancements to achieve SO₂ emission limit as specified in condition 1c.

Q. Within 60 operating days after completion of Lime Spray Dryer FGD (CE1B) enhancements, the owner or operator shall conduct an SO₂ emissions study to determine the minimum additive injection rate to achieve SO₂ reduction of 65.6 percent below the average of 2017-2019 baseline emissions. The minimum additive injection rate shall be determined during varying boiler operating loads. The study shall also include development and identification of an averaging period for the minimum additive injection rate, if applicable.

i. The owner or operator shall submit the SO₂ study results to the Department for review and approval.

ii. The owner or operator shall maintain the SO₂ study results onsite and make the results available for inspection.

R. The owner or operator shall maintain the Lime Spray Dryer FGD (CE1B) minimum additive injection rate at the rates determined during the SO₂ emissions study at corresponding boiler loads. The minimum additive injection rate shall be maintained at all times while Louisa Boiler is in operation except during periods of boiler start-up.

i. The owner or operator shall properly operate and maintain equipment to monitor the additive injection rate to the Lime Spray Dryer FGD (CE1B). The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals or per written facility specific operation and maintenance plan.

¹⁶⁸ 89 Fed. Reg. at 63,273.

ii. The owner or operator shall continuously collect and record the additive injection rate to Lime Spray Dryer FGD (CE1B). The owner or operator shall calculate and record the additive injection rate based on the averaging period determined during the SO₂ study, if applicable. If the additive injection rate to Lime Spray Dryer FGD (CE1B) falls below the value determined during the SO₂ emissions study, the owner or operator shall investigate the Lime Spray Dryer FGD (CE1B) and make corrections to it. The owner or operator shall maintain a record of all corrective actions taken.¹⁶⁹

The relevant conditions in the WSEC-3 permit are as follows:¹⁷⁰

1c. Regional Haze Limit

Pollutant	lb/hr	tons/yr	Other Limits	Reference/Basis
Sulfur Dioxide (SO ₂)	770 ^{1,2}	NA	NA	567 IAC 22.9(6)

¹Limit based on 72 percent reduction of SO₂ emissions from the baseline years of 2017 to 2019. Compliance with the limit is based on continuous emissions monitoring as specified in permit condition 6.

²Limit based on 30-day rolling average. Limit is applicable at all times including periods of Boiler 3 startup, shutdown, and malfunction.

P. The owner or operator shall complete FGD Spray Scrubber (CE003B) enhancements to achieve the SO₂ emission limit specified in condition 1c by December 31, 2023.

i. The owner or operator shall maintain record of the completion date of FGD Spray Scrubber (CE003B) enhancements to achieve SO₂ emission limit as specified in condition 1c.

Q. Within 60 operating days after completion of FGD Spray Scrubber (CE003B) enhancements, the owner or operator shall conduct an SO₂ emissions study to determine the minimum additive injection rate to achieve SO₂ reduction of 72 percent below the average of 2017-2019 baseline emissions. The minimum additive injection rate shall be determined during varying boiler operating loads. The study shall also include development and identification of an averaging period for the minimum additive injection rate, if applicable.

i. The owner or operator shall submit the SO₂ study results to the Department for review and approval.

ii. The owner or operator shall maintain the SO₂ study results onsite and make the results available for inspection.

¹⁶⁹ State SIP, App'x E, Air Quality Construction Permits, Louisa Generating Station, DNR Permit No. 05-A-031-P6 at 4, 9 (Permit Issuance Date: July 20, 2023).

¹⁷⁰ State SIP, App'x E, Air Quality Construction Permits, Louisa Generating Station, DNR Permit No. 75-A-357-P9 at 4, 10 (Permit Issuance Date: July 20, 2023).

R. The owner or operator shall maintain the FGD Spray Scrubber (CE003B) minimum additive injection rate at the rates determined during the SO₂ emissions study at corresponding boiler loads. The minimum additive injection rate shall be maintained at all times while Boiler 3 is in operation except during periods of boiler start-up.

i. The owner or operator shall properly operate and maintain equipment to monitor the additive injection rate to the FGD Spray Scrubber (CE003B). The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals or per written facility specific operation and maintenance plan.

ii. The owner or operator shall continuously collect and record the additive injection rate to FGD Spray Scrubber (CE003B). The owner or operator shall calculate and record the additive injection rate based on the averaging period determined during the SO₂ study, if applicable. If the additive injection rate to FGD Spray Scrubber (CE003B) falls below the value determined during the SO₂ emissions study, the owner or operator shall investigate the FGD Spray Scrubber (CE003B) and make corrections to it. The owner or operator shall maintain a record of all corrective actions taken.

IDNR asserted that the “conditions ensure the new lb/hour SO₂ limits for LGS and WSEC Unit 3 achieve the actual emissions reductions determined in the four-factor analysis and also ensure the reductions will be maintained for the life of the equipment.”¹⁷¹ Contrary to IDNR¹⁷² the conditions are not sufficiently clear, are not practically enforceable, and do not mandate the same reduction at all boiler loads. EPA must revise its proposal to disapprove the permit conditions for the four reasons discussed below.

4. The Emission Limits do not Apply at all Times, the Permits Exempts Emissions During Startup.

EPA's proposal suggests that the emission limits in the permits for LGS and WSEC Unit 3 “cover all times of operation”¹⁷³ and IDNR's response to comments asserted that the emission limits for these two units apply at all times.¹⁷⁴ The permit conditions show otherwise. Permit Condition R for both facilities exempts the facilities from meeting the minimum additive injection during periods of boiler start-up. As EPA recently explained in its proposal on the Utah Regional Haze SIP:

When a state relies on an emission limitation as part of its SIP submission, the emission limitation must limit the quantity, rate, or concentration of emissions of air pollutants on a *continuous basis*, as required under CAA section 302(k). The goal that Congress

¹⁷¹ SIP Revision at 69.

¹⁷² IDNR asserted that it “disagrees that the conditions are not sufficiently clear, lack enforceability, and do not mandate the same reduction at all boiler loads.” SIP Revision at 69.

¹⁷³ 89 Fed. Reg. at 63,273.

¹⁷⁴ SIP Revision at 70.

established for the visibility protection program is to prevent future and remedy existing anthropogenic visibility impairment in Class I areas. When a state submits a SIP with an emission limitation to meet the CAA's visibility requirements, the emission limitation needs to be continuous to ensure that visibility conditions at Class I areas are improving uninterrupted.”¹⁷⁵

Iowa’s emission limitations for these two units that allow for uncontrolled excess emissions during startup events “could negatively impact a state's ability to make reasonable progress toward meeting the national goal.”¹⁷⁶

The permit exemptions “mean that emissions exceeding the normal operational limits under periods of” startup “would not be considered to violate the emission limitations.”¹⁷⁷ Moreover, the startup exemptions that are part of the permits have “no defined parameters for the excess emissions that will occur during periods of” startup making the “emission limitations less than continuous.”¹⁷⁸ Because IDNR determined that the emission limitations for these two units “are measures necessary for reasonable progress, the emission limitations must be continuous at all times. Therefore, the emission limitations are inconsistent with the CAA and are not approvable for inclusion into the” Iowa SIP.¹⁷⁹ Consistent with EPA’s long standing practice on this issue, EPA must disapprove the emission limitations because of the startup exemption provisions.

5. There are No SIP Requirements in the Regional Haze Condition of the Permit for Installation, Maintenance, Calibration and Operation of the CEMs.

CAA Section 302(k) requires emission limits such as those established for reasonable progress to be met on a continuous basis and the SIP must contain the monitoring methods. Notably, while the permits mention CEMs requirements in the regional haze sections, those sections cross-reference permit condition 6, which contains the CEMs requirements. EPA’s proposal indicates it intends to include the entire permits in the SIP, with the exception of condition 11, but IDNR’s SIP is unclear whether it proposed to include permit condition 6 regarding CEMs in the SIP.¹⁸⁰ Thus, EPA’s assertion in the proposal that permits submitted by Iowa serve as the enforceable mechanism is unclear,¹⁸¹ because Iowa’s intent regarding what provisions from the permits it sought included in the SIP was unclear.¹⁸² If permit condition 6.C

¹⁷⁵ 89 Fed. Reg. 67,208, 67,249 (Aug. 19, 2024). (emphasis added).

¹⁷⁶ 89 Fed. Reg. at 67,249.

¹⁷⁷ 89 Fed. Reg. at 67,248.

¹⁷⁸ 89 Fed. Reg. at 67,248.

¹⁷⁹ 89 Fed. Reg. at 67,248.

¹⁸⁰ Permit Condition 6.C., which applies to “all CEMS for the non-NSPS emission standards” in both the permits allows for use of methods that are not 40 C.F.R. part 75, which EPA has generally required in the regional haze program. *See e.g.*, 79 Fed. Reg. 5032, 5221 (Jan. 20, 2014) (EPA required that the CEMS for the Wyoming power plants meet the 40 C.F.R. part 75 requirements, with certain adjustments.). Notably, IDNR’s approach allows for just two data points for each 1-hour average, allows for data substitution, and does not require use of a diluent, in contrast to the 40 C.F.R. part 75 requirements.

¹⁸¹ 89 Fed. Reg. at 67,248.

¹⁸² Moreover, there are numerous provisions that do not pertain to the regional haze SIP (e.g., NSPS limit provisions, compliance demonstrations for other pollutants). Additionally, the permit is not a permanent document, as condition 13 allows for appeal rights.

is included as part of the SIP, that provision does not serve as the enforceable mechanism for CEMs because it fails to include requirements that the monitors accurately measure the pollutants and stack gas volumetric flow rate for each unit.

6. The Permit Allows for Director’s Discretion and Approval of Alternate Testing and Monitoring Methods.

Permit Condition C.(3)(iii) in the LGS and WSEC Unit 3 permits provides that “[i]f the monitor data availability is less than 90.0%, the owner or operator shall obtain actual emission data by an *alternate testing or monitoring method approved by the Department.*”¹⁸³ As discussed elsewhere in these comments, requirements that apply to the sources covered by the SIP must be included in the SIP, the SIP must *not* contain methods for approving alternative means of compliance outside the notice and comment SIP process. EPA is without authority to approve the provision that allows for alternative testing.

7. The Provisions for the Additive Injection Monitoring Devices are not Enforceable.

The permit conditions for monitoring the additive injections rate fail to specify the type of equipment required, leaving it up to the sources’ discretion.¹⁸⁴ The permits also give the sources’ discretion on whether to include recorders with the monitoring devices associated with the additive injection. EPA must require that IDNR’s permits and the SIP include specific information regarding the monitoring equipment and that the monitoring equipment include recording functions. The injection rates are key to enforceability and must be recorded and the permits and SIP must require that the rate information is reported to IDNR. Furthermore, the permit conditions allow for the facilities to install, calibrate, operate, and maintain the monitoring devices either following the “manufacturer’s recommendations, instructions, and operating manuals” or a “facility specific operation and maintenance plan.”¹⁸⁵ Information regarding the additive injection monitoring devices is essential for enforceability and EPA’s FIP must include provisions for the sources to report the manufacturer’s recommendations, instructions, and operating manuals or a facility specific operation and maintenance plan., along with the facilities’ compliance with the manuals or plans. Finally, the permits leave it up to the sources’ discretion whether to include an averaging period for the additive injection rate, EPA must require that the FIP include criteria to apply in approving the averaging period.

8. IDNR’s SIP Revision Fails to Provide for Public Notice and Comment on the Permit Revisions.

The permit requires that the facilities submit the studies to IDNR for review and approval. Key to those studies and necessary for practical enforceability is the information contained in those studies. For example, whether the facilities are able to vary the injection rate to meet the SIP emission limits, what rate and averaging period the facilities propose injection. EPA cannot approve a SIP that allows a state to revise the SIP without public notice and

¹⁸³ SIP Revision, App’x E, LGS Permit Condition 6, WSEC-3 Permit Condition 6.

¹⁸⁴ LGS Permit Condition R.i., WSEC-3 Permit Condition R.i.

¹⁸⁵ LGS Permit Condition R.i., WSEC-3 Permit Condition R.i.

comment and submitting the revisions to EPA for review and action. EPA must disapprove the permit conditions because they allow IDNR to revise the SIP without following the legal requirements for any SIP revision under the Clean Air Act.¹⁸⁶

9. The Permit Conditions Fail to Require Reporting.

SIPs must contain adequate periodic reporting and other requirements as required under the CAA and EPA regulations. For example, Section 110 of the CAA includes several subsections requiring that a state's SIP provisions be enforceable, and that states require reporting from sources. Under section 110(a)(2)(A), state SIPs must “include enforceable emission limitations and other control measures, means, or techniques . . . as may be necessary or appropriate to meet the applicable requirements of this chapter.” Further, section 110(a)(2)(C) requires SIPs to “include a program to provide for the enforcement of the measures described in subparagraph (A).”¹⁸⁷

To ensure its implementation of SIP provisions are legally and practicably enforceable, a state must impose sufficient monitoring, recordkeeping, and reporting (MRR) requirements on sources. Section 110(a)(2)(F)(ii) explicitly requires that SIPs include source reporting to “require periodic reports on the nature and amounts of emissions and emissions-related data,” as may be prescribed by EPA. EPA promulgated regulations implementing section 110(a)(2)(F) requirements at 40 C.F.R. § 51.211(a), which requires state SIPs to provide for periodic reports to the state on the nature and amount of emissions from stationary sources. EPA has noted “that reporting requirements serve multiple purposes, including promoting transparency, providing deterrence against violations, and supporting effective enforcement of SIP requirements.”¹⁸⁸ Furthermore, EPA has explained that “[a] lack of adequate reporting requirements can undermine citizens' ability to participate in the enforcement of the SIP as authorized and provided for in CAA section 304.”¹⁸⁹

IDNR’s regional haze permit provisions in conditions P, Q and R, fail to contain adequate reporting. As discussed above, it is unclear whether IDNR requested that EPA approve the entire permits or conditions P, Q, and R, into the SIP. There are no requirements in the permit conditions P, Q, and R that the facilities report the following:

- **LGS and WSEC Unit 3:** there are no provisions for the facilities to record, maintain and report the SO₂ CEMs monitoring data.
- **LGS:** completion date of the Lime Spray Dryer enhancements,¹⁹⁰ records of enhancements,¹⁹¹ information regarding the additive injection rate to the LGS Lime Spray Dryer,¹⁹² information regarding the averaging period for the

¹⁸⁶ See, e.g., 42 U.S.C. § 7410(l).

¹⁸⁷ 89 Fed. Reg. 63,852, 63,854 (Aug. 6, 2024).

¹⁸⁸ 89 Fed. Reg. 63852, 63,854 (Aug. 6, 2024).

¹⁸⁹ 89 Fed. Reg. at 63,854.

¹⁹⁰ LGS Permit Condition P.i.

¹⁹¹ LGS Permit Condition P.

¹⁹² LGS Permit Condition R.ii.

addition injection (if applicable),¹⁹³ and corrective actions taken regarding the additive injection.¹⁹⁴

- **WSEC Unit 3:** completion date of the FGD Spray Dryer enhancements,¹⁹⁵ records of enhancements,¹⁹⁶ information regarding the additive injection rate to the LGS Lime Spray Dryer,¹⁹⁷ information regarding the averaging period for the addition injection (if applicable),¹⁹⁸ and corrective actions taken regarding the additive injection.¹⁹⁹

EPA must disapprove the regional haze emission limitations because they fail to contain reporting provisions necessary for enforcement and include those provisions in its FIP.

10. The Requirements and Studies Were Due in 2023, and Yet IDNR Failed to Revise the SIP to Reflect the Results.

Notably, the enhancements for both facilities were due by December 31, 2023, and the studies due to IDNR 60 days after the enhancements. Therefore, both the enhancements and studies should be complete. Yet, there is no information in the docket regarding the study results. EPA must disapprove the conditions in the LGS and WSEC Unit 3 construction permits because they fail to include the provisions required for practical enforceability, and insure that its FIP provisions contain all the elements necessary for practical enforceability.

11. Analysis of NOx Control Options for LGS and WSEC Unit 3.

IDNR relied on MidAmerican Energy's Four-Factor Analysis of NOx control options for LGS and WSEC Unit 3. MidAmerican evaluated two NOx control options for LGS and WSEC Unit 3: 1) selective catalytic reduction ("SCR") to achieve a NOx emission rate of 0.05 lb/MMBtu, and 2) selective noncatalytic reduction ("SNCR") to achieve 15% reduction and a NOx emission rate of 0.157 lb/MMBtu at LGS and a NOx emission rate of 0.181 lb/MMBtu at WSEC Unit 3. However, MidAmerican once again used flawed assumptions for the level of control that could be achieved, and therefore its cost effectiveness analysis requires correction. As a result, IDNR inappropriately found that neither SCR nor SNCR are cost effective control options at LGS and WSEC 3. EPA must evaluate SNCR and SCR at NOx removal efficiencies the control is capable of achieving at LGS and at WSEC Unit 3.

IDNR and MidAmerican Energy evaluated SCR to achieve a NOx rate of 0.05 lb/MMBtu. This reflects only 73% control across the SCR system for the LGS facility and 77.6% across the SCR system for WSEC Unit 3. Yet, SCR systems are routinely designed to achieve 90% or greater NOx control efficiency. Annual average NOx emission rates with SCR, along with existing low NOx burners and overfire air, can be as low as 0.04 lb/MMBtu or even lower.

¹⁹³ LGS Permit Condition R.ii.

¹⁹⁴ LGS Permit Condition R.ii.

¹⁹⁵ WSEC-3 Permit Condition P.i.

¹⁹⁶ WSEC-3 Permit Condition P.

¹⁹⁷ WSEC-3 Permit Condition R.ii.

¹⁹⁸ WSEC-3 Permit Condition R.ii.

¹⁹⁹ WSEC-3 Permit Condition R.ii.

For the reasons supplied in Ms. Stamper's report, "it is more than reasonable to evaluate the cost effectiveness of SCR at the LGS facility and WSEC Unit 3 to meet a NOx emission rate of 0.04 lb/MMBtu on an annual basis."²⁰⁰

MidAmerican also understated the NOx removal efficiency of SNCR at LGS and WSEC 3. MidAmerican Energy assumed only a 15% reduction would be achievable at LGS and WSEC Unit 3 with SNCR.²⁰¹ Using EPA's equation for estimating NOx removal efficiency achievable with SNCR, Ms. Stamper determined that SNCR at LGS should have an achievable NOx removal efficiency of 20.9% and a controlled annual NOx rate with SNCR of 0.15 lb/MMBtu. At WSEC Unit 3, she determined SNCR should have an achievable NOx removal efficiency of 21.7% and a controlled annual NOx rate of 0.17 lb/MMBtu.²⁰² She also found that MidAmerican's claims that SNCR cannot achieve more than 15% NOx reduction at large boilers is unfounded, noting that higher removal efficiencies have been achieved at large EGUs.²⁰³

Even when understating the NOx removal capabilities of SNCR, IDNR's and MidAmerican Energy's cost-effectiveness analyses still show that both SNCR and SCR must be considered as cost effective controls for LGS and WSEC Unit 3. These cost effectiveness analyses are reflected in Stamper Table 9, with costs ranging between \$5,616/ton (SNCR at WSEC 3) to \$8,862/ton (SCR at Louisa).²⁰⁴ These costs are within the range of the cost effectiveness thresholds used by Colorado, Nevada, Minnesota, New Mexico, Arizona, and Washington.²⁰⁵ Thus, at the minimum, the cost effectiveness of SNCR at LGS and of SCR at WSEC Unit 3 must be considered to be reasonable in EPA's FIP.²⁰⁶

Moreover, when Ms. Stamper corrected MidAmerican's errors in removal efficiencies and expected life of controls, she found that, with the exception of SCR at LGS, the revised cost effectiveness of SNCR and SCR show that the costs of these controls are more cost effective than shown in the IDNR and MidAmerican Energy costs.²⁰⁷ In particular, SCR at WSEC Unit 3 is cost effective at \$6,377/ton and that at least SNCR is cost effective at LGS at a cost of \$4,598/ton. SCR at LGS would be considered cost effective under several states' cost effectiveness thresholds for their regional haze plans.²⁰⁸ SCR installation at WSEC Unit 3 required to meet an annual NOx rate of 0.04 lb/MMBtu would reduce NOx by over 4,100 tons per year of NOx on average. SNCR installation at LGS required to meet an annual NOx emission rate of 0.15 lb/MMBtu would reduce NOx emissions from the facility by 778 tons per year on average.

²⁰⁰ Stamper Report at 27.

²⁰¹ *Id.* at 28

²⁰² *Id.*

²⁰³ *Id.*

²⁰⁴ *Id.* at 30.

²⁰⁵ *Id.* at 30-31.

²⁰⁶ *Id.* at 30.

²⁰⁷ Stamper Report, Table 10.

²⁰⁸ *Id.* at 33-34.

For these reasons, EPA must require that the emission reductions and emission rate is based on SCR installation at WSEC Unit 3 and at least require SNCR installation, if not SCR installation, at the LGS facility as cost-effective NO_x controls.

D. EPA Must Disapprove IDNR's Failure to Conduct a Four-Factor Analysis for Walter Scott Jr. Unit 4.

Walter Scott Jr. Unit 4 ("WSEC Unit 4") is a 922.5 MW unit that burns subbituminous coal and is equipped with a dry FGD system, as well as LNB/OFA, SCR, and a baghouse. The record demonstrates that WSEC Unit 4 is capable of consistently achieving lower SO₂ and NO_x emission limits. EPA must disapprove the SIP Revision because IDNR refused to conduct a Four-Factor analysis evaluating potentially cost-effective emission reductions.

1. EPA Must Disapprove IDNR's Failure to Conduct an SO₂ Four-Factor Analysis for WSEC Unit 4.

As presented in the Stamper Report, WSEC Unit 4 achieved 0.067 lb/MMBtu SO₂ on an annual average basis over the 2017-2019 baseline period. As reflected in the Kordzi Report, WSEC Unit 4 has demonstrated an ability to achieve an SO₂ emission rate below 0.06 lbs/MMBtu for months at a time.²⁰⁹ Yet, IDNR arbitrarily declined to evaluate requiring the unit to meet a lower emission limit. Instead, WSEC Unit 4 is subject only to a much higher SO₂ limit of 0.1 lb/MMBtu as part of its operating permit.²¹⁰

EPA must disapprove IDNR's failure to evaluate potential emission reduction improvements or optimizing controls at WSEC Unit 4, for several reasons. First, annual average SO₂ rates over the most recent three years shows that annual average SO₂ emission rates have been increasing at WSEC Unit 4. The annual average SO₂ rates in 2021 and 2022 were 0.081 lb/MMBtu and 0.090 lb/MMBtu.²¹¹ Yet, a review of the coal data reported to the EIA's Coal Data Browser for WSEC does not show any increase in coal sulfur content to the WSEC plant.²¹² As the Kordzi Report demonstrates, this indicates that MidAmerican is not operating the FGD system efficiently.²¹³

Second, contrary to MidAmerican's suggestion that the WSEC Unit 4 FGD system operates efficiently,²¹⁴ the FGD system was designed to achieve greater control efficiency than current operations. Indeed, dry FGD systems like the one in use at WSEC Unit 4 are routinely designed to achieve up to 95% control for a spray dryer absorber²¹⁵ and it appears that the dry

²⁰⁹ Kordzi Report at 12-13.

²¹⁰ See SIP Revision, Appendix E, at pdf 37, Permit 03-A-425-P4 WSEC 4 Boiler, at 5.

²¹¹ Stamper Report at 36, explaining this is based on data reported to EPA's Clean Air Markets Program Database.

²¹² See Ex. 3 to Stamper Report (coal heat value and sulfur content of coals used at Walter Scott Jr. Energy Center, from the Energy Information Administration's Coal Data Browser).

²¹³ Kordzi Report at 11-13.

²¹⁴ SIP Revision, Appendix D-1, at 6.

²¹⁵ EPA, Control Cost Manual, Section 5, Chapter 1, Wet and Dry Scrubbers for Acid Gas Control, April 2021, at 1-11, https://www.epa.gov/sites/default/files/2021-05/documents/wet_and_dry_scrubbers_section_5_chapter_1_control_cost_manual_7th_edition.pdf.

FGD scrubber that was installed at the WSEC Unit 4 was designed to achieve 92% SO₂ removal.²¹⁶ Despite the design of WSEC Unit 4 and greater control efficiency overall for these systems, “on an annual average basis, the SDA system at WSEC Unit 4 was achieving only 85.5% SO₂ removal during the 2017-2019 baseline period.”²¹⁷

Third, IDNR arbitrarily concludes that no further control analysis is necessary because WSEC Unit 4’s twenty-year-old Best Available Control Technology (“BACT”) determination is sufficient. But simply considering controls in the RACT/CACT/LAER Clearinghouse is inadequate because, as noted in the Stamper Report, it is out of date. In its response to comments, IDNR asserts, without any supporting analysis or evidence, that it “disagrees” that it relied on “out of date” information.²¹⁸ That conclusory assertion, however, is contrary to recent performance data in the record showing that WSEC 4 is, in fact, capable of regularly meeting a lower emission limit.²¹⁹ Moreover, the record demonstrates that such an emission rate would be highly cost effective.²²⁰ IDNR and EPA cannot simply ignore that data.²²¹

Finally, IDNR failed to provide a robust technical analysis of potential controls, as required by the Regional Haze Rule.²²² The SIP also fails to contain the underlying data necessary to support a reasonable progress determination.²²³ Moreover, IDNR fails to mention or comply with EPA’s 2019 Guidance, which requires:

A state that does not select a source or sources for the following or any similar reasons should explain why the decision is consistent with the requirement to make reasonable progress, i.e., why it is reasonable to assume for the purposes of efficiency and prioritization that a full four factor analysis would likely result in the conclusion that no further controls are necessary.²²⁴

As demonstrated in the Stamper Report, EPA cannot approve IDNR’s perfunctory analysis of emission reductions at WSEC Unit 4 because there are readily-available, cost-effective measures at WSEC Unit 4 that would achieve significant SO₂ reductions. Indeed, if MidAmerican simply optimized the WSEC Unit 4 scrubber to achieve the level of efficiency that it was designed to achieve, and the level of controls that dry FGDs routinely achieve across the industry, WSEC Unit 4 should be able to achieve an annual average SO₂ rate of 0.05 lb/MMBtu, which would, on average, remove 379 tons per year of SO₂.²²⁵ Such an upgrade would require *zero* capital costs

²¹⁶ See Weilert, Carl & Emily Meyer, Burns & McDonnell, Utility FGD Design Trends, at 25 (attached as Ex. 4 to Stamper Report).

²¹⁷ Stamper Report at 36.

²¹⁸ SIP Revision, Response to Comments at 71.

²¹⁹ Kordzi Report at 12-13.

²²⁰ Stamper Report at 38.

²²¹ *Ohio v. EPA*, 144 S. Ct. 2040, 1054 (2024) (agency action arbitrary where the agency “offered no reasoned response” to a problem that had been “posed” by “commenters . . . during the notice and comment period.”).

²²² 40 C.F.R. § 51.308(f)(2).

²²³ *Id.*

²²⁴ 2019 Guidance at 23.

²²⁵ Stamper Report at 38.

and would be extremely cost effective, at just \$281/ton.²²⁶ Because IDNR failed to evaluate or require pollution control upgrades at WSEC Unit 4 that could cost-effectively achieve substantial pollution reductions, EPA must disapprove the SIP, conduct its own Four-Factor Analysis, and implement a federal plan that requires WSEC Unit 4 to meet an enforceable annual emission rate of 0.05 lb/MMBtu SO₂.

2. EPA Must Disapprove IDNR's Failure to Conduct a NO_x Four-Factor Analysis for WSEC Unit 4.

EPA must similarly disapprove IDNR's failure to evaluate potential improvements in NO_x emissions at WSEC Unit 4. Specifically, IDNR's refusal to evaluate any potential upgrades to the WSEC Unit 4 SCR system was arbitrary. As reflected in the Kordzi Report, WSEC Unit 4 has demonstrated the ability to control NO_x to 0.04 lbs/MMBtu or lower, for months at a time.²²⁷ Yet, IDNR arbitrarily refused to evaluate locking in the unit's proven performance potential, and instead simply rubberstamped WSEC Unit 4's permitted NO_x limit of 0.07 lbs/MMBtu as sufficient, without any evaluation of potential improvements.²²⁸

WSEC Unit 4 itself is not only capable of consistently achieving a lower emission rate, but as reflected in the Kordzi Report, coal-fired EGUs with SCR systems across the country are routinely capable of achieving annual NO_x averages below 0.05 lbs/MMBtu.²²⁹ Moreover, it is highly likely that simply using more reagent and perhaps better catalyst management would result in significant annual average NO_x emissions, and would likely be very cost-effective.²³⁰ Nevertheless, IDNR refused to even evaluate those cost-effective improvements. EPA must disapprove IDNR's facially deficient analysis of potential NO_x improvements at WSEC Unit 4 and include such an analysis in its FIP.

E. IDNR Must Evaluate Regional Haze Control Measures for George Neal South and George Neal North Power Plants.

The George Neal South power plant is a single EGU facility with a nameplate generating capacity of 659.9 MW, and the unit burns refined coal and subbituminous coal. The George Neal North power plant also is a single EGU facility, with a nameplate generating capacity of 584.1 MW. The units are each equipped with a dry FGD system, a baghouse, an electrostatic precipitator ("ESP"), low NO_x burners, overfire air, and SNCR.²³¹ George Neal South's baseline emissions rate for SO₂ is 0.353 lb/mmbtu (annual) and 0.182 for NO_x.²³² George Neal North's baseline emissions rate for SO₂ is 0.343 lb/mmbtu (annual) and 0.202 for NO_x.²³³

²²⁶ Stamper Report at 38.

²²⁷ Kordzi Report at 13.

²²⁸ SIP Revision at 32.

²²⁹ Kordzi Report at 13-14.

²³⁰ *Id.*

²³¹ Stamper Report at 40.

²³² *Id.* at 41.

²³³ *Id.*

1. IDNR Arbitrarily Excludes George Neal South and George Neal North from a Four-Factor Analysis of Controls.

States must identify sources for the Four-Factor Analysis and the screening methodology and threshold a state applies must ensure that the threshold is low enough to bring in most sources harming Class I areas. A state must not simply eliminate evaluations of all or most sources for measures to reduce visibility impairing pollution. EPA's 2021 Clarification Memo emphasizes this requirement, explaining that:

[W]hile states have discretion to reasonably select sources, this analysis should be designed and conducted to ensure that source selection results in a set of pollutants and sources the evaluation of which has the potential to *meaningfully reduce* their contributions to visibility impairment.²³⁴ (emphasis added)

IDNR's SIP follows a highly convoluted process to identify sources for review, which involved the following steps:

- An analysis of each source's "Extinction Weighted Residence Time" or EWRT for sulfates (SO₄) and nitrates (NO₃) combined with distance-weighted emissions (Q/d) that was done by the Central States Air Resource Agencies (CenSARA) regional planning organization.²³⁵
- As described by IDNR, "[t]he CenSARA [Area of Influence (AOI)] study combined a residence time analysis using back-trajectory modeling with IMPROVE data to produce sulfate and nitrate extinction weighted residence times (EWRT). The EWRT data were augmented with SO₂ and NO_x emissions (Q) and inverse distance weighting (1/d) to produce EWRT*Q/d metrics for sulfates and nitrates. These metrics were used to identify emission sources with a higher probability of contributing to anthropogenically impaired visibility in Class I areas."²³⁶
- Next, IDNR evaluated the combined EWERT*Q/d metric for each source by adding these values for sulfates and nitrates together to arrive at a combined EWERT*Q/d.²³⁷
- IDNR then divided each source's combined EWRT*Q/d value by the sum of the combined EWRT*Q/d values for each specific Class I area across all grid cells in the continental US (CONUS) domain.²³⁸ According to IDNR, "[t]his

²³⁴ 2021 Clarification Memo at 3.

²³⁵ SIP Revision, Appendix B, Determining Areas of Influence – CenSARA Round Two Regional Haze, Final Report, (Nov. 2018).

²³⁶ SIP Revision at 21.

²³⁷ *Id.* at 25.

²³⁸ *Id.*

normalization simply converts each facility's EWRT*Q/d value into a percentage contribution to the total EWRT*Q/d for a given Class I area."²³⁹

- As presented in the Stamper Report, it appears that the next step taken by IDNR was to rank the percent combined total EWRT*Q/d for each source in descending order, and then IDNR selected the first Iowa source that contributed to a cumulative percentage reflecting 50% or more of the cumulative EWRT*Q/d for each Class I area.²⁴⁰

In total, IDNR evaluated the EWRT*Q/d data for twelve Class I areas. Based on this multi-step analysis, IDNR selected only two Iowa sources to evaluate for regional haze controls: MidAmerican Energy Co – Louisa Generating Station and Walter Scott Jr. Energy Center.²⁴¹ IDNR's selection of only two sources does not consist of a set of sources and pollutants, which has the potential to "meaningfully reduce" their contributions to visibility impairment, as EPA has instructed.²⁴² Indeed, as detailed in the Stamper Report and NPS consultation comments, IDNR's selection methodology results in ignoring two key sources.

The fatal flaw in IDNR's multi-step analysis to identify sources for regional haze controls was the last step, which only looked at the first Iowa source that contributed to a cumulative percentage reflecting 50% or more of the cumulative EWRT*Q/d at each of the 12 Class I areas. IDNR provided no rationale for selecting 50% as the threshold in its original SIP or in its response to comments. IDNR merely argues that its approach "fulfills the[] criteria" of being scientific, equitable, and manageable.²⁴³ IDNR provided no evidence that the 50% threshold was anything but arbitrary. In its proposed approval of the SIP, EPA similarly provided no justification for approving IDNR's use of the 50% threshold. It merely noted that "may not need to analyze control measures for all its sources in a given SIP revision."²⁴⁴ But as noted in the Kordzi Report, "EPA does not discuss why in this case, a state only selecting its two largest sources is adequate, when other states have selected many more sources for evaluation."²⁴⁵ Because the method lacks any justification, it does not comply with section 51.308(f)(2)(iii).

As the Stamper Report identifies, this methodology results in IDNR ignoring two sources that actually contributed a higher SWRT*Q/d value at Class I areas than the Louisa Generating Station and the Walter Scott Jr. Energy Center each contributed.²⁴⁶ Those two sources are MidAmerican Energy's George Neal South and George Neal North Generating Stations.

The Stamper Report explains that the George Neal South and George Neal North power plants each contributed between 1-2% of the EWRT*Q/d for two Class I areas: Badlands

²³⁹ *Id.*

²⁴⁰ *Id.*

²⁴¹ *Id.*

²⁴² 2021 Clarification Memo at 3.

²⁴³ IDNR, "Iowa State Implementation Plan Regional Haze Second Implementation Period," Aug. 2023, at 72.

²⁴⁴ 89 Fed. Reg. 63,272 (Aug. 2, 2024).

²⁴⁵ Kordzi Report at 3-4.

²⁴⁶ Stamper Report at 39.

National Park and Wind Cave National Park.²⁴⁷ In fact, both of these units contributed more to regional haze in these two Class I areas based on the EWRT*Q/d metric than the Louisa Station contributed to Isle Royale National Park or that the Walter Scott Jr. Energy Center contributed to Voyageurs National Park (the parks with highest impacts from each plant, respectively). This is additional evidence that IDNR’s methodology is arbitrary because it fails to produce a reasoned outcome.²⁴⁸ Moreover, IDNR arbitrarily failed to consider impacts of its sources on Badlands and failed to consult with South Dakota.²⁴⁹

IDNR claims that earlier comments by the Conservation Organizations misinterpreted the results by confusing absolute and relative values.²⁵⁰ IDNR instead misinterpreted the Conservation Organizations’ comments as a claim to absolute values. The George Neal North and George Neal South Generating Stations do contribute more to the most-affected Class 1 areas on a relative basis, and thus should have been included in IDNR’s analysis. IDNR’s methodology relying on the 50% contribution threshold is arbitrary – the results do not produce a reasoned outcome, as summarized in the table below.

Table: Percent Combined Contribution by Iowa Facility.

Facility	Most Affected Class 1 Area	Percent Combined Total EWRT*Q/d	Evaluated by IDNR
Neal South	Badlands	1.97%	No
Neal North	Badlands	1.38%	No
Louisa	Isle Royale	0.86%	Yes
Walter Scott	Voyageurs	0.68%	Yes

²⁴⁷ SIP Revision, Appendix C-2, at tabs for BADL and WICA.

²⁴⁸ *National Parks Conservation Ass’n v. EPA*, 788 F.3d 1134, 1145 (9th Cir. 2015) (citing “*Sierra Club v. EPA*, 719 F.2d 436, 459 (D.C.Cir.1983); *see also Gen. Chem. Corp. v. United States*, 817 F.2d 844, 846 (D.C.Cir.1987) (per curiam) (finding analysis arbitrary and capricious because it was ‘internally inconsistent and inadequately explained.’”).

²⁴⁹ *National Parks Conservation Ass’n v. EPA*, 788 F.3d at 1145; *see also* 40 C.F.R. § 51.308(f)(2) (emphasis added); *see also*, 64 Fed. Reg. 35,714, 35,732, 35735 (July 1, 1999) (In conducting the four-factor analysis, EPA explained that “...the State must consult with other States which are anticipated to contribute to visibility impairment in the Class I area under consideration ... any such State must consult with other States before submitting its long-term strategy to EPA.”).

²⁵⁰ IDNR, “Iowa State Implementation Plan Regional Haze Second Implementation Period,” Aug. 2023, at 72.

IDNR claims that the contributions from the Neal sources “are likely overstated by the AOI data,”²⁵¹ but does not provide alternative analysis showing what it believes the contributions to be. Because there is no other evidence in the record showing what the contributions are from the Neal sources, IDNR’s approach remains flawed.

IDNR appears to interpret the Conservation Organizations’ criticism of the 50% contribution threshold as a criticism of thresholds themselves. The criticism is instead that IDNR has provided no basis for the selected threshold. The National Park Service, the Federal Land Manager for Badlands and Wind Cave National Parks, recommended that IDNR use a higher threshold of 80% of the cumulative EWRT*Q/d impacts to each Class I area for selecting Iowa sources to evaluate for controls, and stated that George Neal South and George Neal North, along with LSG and WSEC, are ranked “the top four most-impacting Iowa facilities and are on the 80% of the impact list for two or more NPS Class I areas.”²⁵²

IDNR’s response to the National Park Service’s comments was that the visibility impacts at Badlands and Wind Cave National Parks are dominated by “a small number of facilities, and none are in Iowa.”²⁵³ Specifically, IDNR relied on the CenSARA EWRT*Q/d analysis to claim that only eight to nine facilities contribute a cumulative of 50% of the visibility impacts at Badlands and Wind Cave National Parks.²⁵⁴ IDNR cites to EPA’s 2019 regional haze guidance which states that a state can consider the number of emission sources affecting the Class I areas at issue in setting a visibility threshold level for selecting sources.²⁵⁵ However, EPA’s 2021 Clarification Memo explains that “[i]n applying a source selection methodology, states should focus on the in-state contribution to visibility impairment and not decline to select sources based on the fact that there are larger out-of-state contributors.”²⁵⁶ EPA further states that a threshold that “excludes a state’s largest visibility impairing sources from selection is more likely to be unreasonable.”²⁵⁷

There are eighteen sources that contribute 1% or more to the cumulative EWRT*Q/d total at Wind Cave National Park and nineteen sources that contribute 1% or more to the cumulative EWRT*Q/d total at Badlands National Park.²⁵⁸ Both George Neal South and George Neal North are among that list of sources contributing at least 1% to the cumulative EWRT*Q/d.²⁵⁹

²⁵¹ IDNR, “Iowa State Implementation Plan Regional Haze Second Implementation Period,” Aug. 2023, at 72.

²⁵² SIP Revision, Appendix F (Federal Land Manager Comments) at pdf page 10 (December 8, 2022 letter from the National Park Service to IDNR at 3).

²⁵³ SIP Revision at 64.

²⁵⁴ *Id.*

²⁵⁵ *Id.*

²⁵⁶ 2021 Clarification Memo at 3.

²⁵⁷ *Id.*

²⁵⁸ Based on the EWRT*Q/d analyses provided in Appendix C-2 of the SIP Revision,

²⁵⁹ SIP Revision, Appendix C-2, at tabs for BADL and WICA.

As the National Park Service pointed out, the George Neal units both have dry FGD systems with relatively high SO₂ emissions, given the SO₂ controls.²⁶⁰ Thus, at the minimum, these units must be evaluated in EPA's FIP for FGD upgrades such as those evaluated for the LGS and WSEC Unit 3 to improve SO₂ removal efficiency. Otherwise, EPA's approval of IDNR's exclusion of the George Neal units is arbitrary.

2. Regional Haze Control Evaluation for George Neal South and George Neal North Power Plants

The George Neal North and South plants are equipped with dry FGD systems that are not achieving the level of control that such systems are routinely designed to achieve, similar to the dry DFG systems at LGS and WSEC Unit 3. The Neal South FGD system is operating at an efficiency of only 23.3% SO₂ removal, while the Neal North FGD system is operating at an only slightly higher efficiency of 28.5%.²⁶¹ These removal rates are very low.²⁶² The Kordzi Report summarizes the similarities with LGS and WSEC Unit 3, which DNR did evaluate: "they are of comparable size, burn essentially the same coals, have the same type of SDA scrubber systems, and operate under similarly lax permitting restrictions."²⁶³ Scrubber efficiency, however, appears to be a problem.

Given that these dry FGDs were installed within the last five to ten years, the dry FGDs at George Neal South and George Neal North are presumed to be capable of achieving at least ninety percent SO₂ removal. The efficiency rates in the last one to two years is, instead, "erratic."²⁶⁴ George Neal Unit 3 scrubber efficiency rose in 2023-2024 to levels not seen in years, and the Kordzi Report concluded they are "very low in relation to well performing SDA systems."²⁶⁵ Thus, IDNR should have evaluated the cost effectiveness of improving the SO₂ removal across these two units' FGD systems to achieve ninety percent SO₂ removal.

Ms. Stamper conducted a cost effectiveness analysis for dry FGD upgrades at George Neal South and at George Neal North based on this improved SO₂ removal efficiency.²⁶⁶ Her cost evaluation shows that dry FGD upgrades with the use of additional lime would reduce SO₂ emissions by 3,618 tons per year at George Neal South and by 3,318 tons per year at George Neal North below 2017-2019 emissions, at a cost effectiveness of \$278-\$280/ton (2021 \$).²⁶⁷ She concludes that "[n]ot only are these costs well within the range of cost thresholds that other states have used in their regional haze plans, but these costs are in the range of costs that IDNR has proposed to find as reasonable for the same type of SO₂ upgrades at Louisa Generating Station and Walter Scott Jr. Energy Center Unit 3."²⁶⁸ As a result, EPA's FIP must act consistency across all sources and ensure Four-Factor Analyses are conducted and adopt

²⁶⁰ SIP Revision, Appendix F (Federal Land Manager Comments) at pdf page 11 (December 8, 2022 letter from the National Park Service to IDNR at 4).

²⁶¹ Stamper Report at 41-42

²⁶² *Id.* at 41.

²⁶³ Kordzi Report at 14-15.

²⁶⁴ Kordzi Report at 17.

²⁶⁵ Kordzi Report at 17.

²⁶⁶ Stamper Report at 42-45.

²⁶⁷ *Id.* at 45.

²⁶⁸ *Id.*; *Nat'l Parks Conservation Ass'n v. EPA*, 788 F.3d 1134, 1145 (9th Cir. 2015).

reasonable progress measures for the George Neal South and George Neal North power plants to reduce SO₂ emissions based on the additional use of lime in the units' dry FGD systems to achieve annual SO₂ rates at or below 0.05 lb/MMBtu while achieving 30-day average SO₂ emission rates of 0.06 lb/MMBtu.

The Neal facilities also have operational issues for NO_x. The systems, which have been in place for ten years, have not had significant decreases in NO_x emission rates per MMBtu. At George Neal North, in particular, there has been a recent *increase* in emission rates, as shown in the Kordzi Report,²⁶⁹ to the point that 2022 and 2023 emission rates exceeded rates from 2010-2013, before the SNCR was installed. Despite operating below the standard efficiency rates for SNCR, IDNR has refused to require changes to upgrade the operations. EPA needs to reevaluate this and ensure that its FIP fully considers the facilities through Four-Factor Analysis, analyzes, and includes cost-effective upgrade options.

IV. EPA MUST DISAPPROVE IDNR'S LONG-TERM SIP STRATEGY.

A. EPA Must Disapprove the State's Consideration of Visibility Improvement, Which Was Unlawful and Unreasonable.

EPA's proposal explains that Iowa used a visibility benefits analysis that estimated sulfate impacts relative to nitrate impacts from LGS and WSEC on the 20% most impaired days at the five linked Class I areas.²⁷⁰ Iowa's convoluted multi-step analysis estimated that sulfate impacts to visibility in the five linked Class I areas are 4.4 times greater than nitrate impacts for both LGS and WSEC. EPA proposes to find that Iowa's consideration of visibility improvements to dismiss controls was reasonable and consistent with the requirements of the CAA.²⁷¹

A state's reasonable progress analyses (*i.e.*, Four-Factor Analyses) for selected sources, which form the basis for the state's long-term strategy, must address the four factors identified in the Clean Air Act and RHR: (1) the cost of compliance, (2) the time necessary for compliance, (3) the energy and non-air quality environmental impacts of compliance, and (4) the remaining useful life of the source.²⁷² Notably, neither the statute nor the RHR lists visibility improvement as a fifth factor in the Four-Factor Analysis. EPA has made clear for round two that, "a state should not use visibility to summarily dismiss cost-effective potential controls."²⁷³ EPA must expressly disapprove the state's Four-Factor Analysis for sources where the state unreasonably rejected otherwise available and cost-effective controls to reduce emissions.

There are three primary flaws with IDNR's visibility benefit analysis. First, EPA's expectation regarding the pollutants considered for source selection and control strategy analysis for the second planning period is that "each state will analyze sulfur dioxide (SO₂) and nitrogen oxide (NO_x) in selecting sources and determining control measures."²⁷⁴ Moreover, "[a] state that chooses not to consider at least these two pollutants in the second planning period should show

²⁶⁹ Kordzi Report at 18-19.

²⁷⁰ 89 Fed. Reg. at 63,272.

²⁷¹ 89 Fed. Reg. at 63,272.

²⁷² 42 U.S.C. § 7491(g)(1); 40 C.F.R. § 51.308(f)(2)(i).

²⁷³ 2021 Clarification Memo at 13.

²⁷⁴ 2021 Clarification Memo at 4, citing 2019 Guidance at 12.

why such consideration would be unreasonable, especially if the state considered both these pollutants in the first planning period.”²⁷⁵ Instead of considering benefits from both SO₂ and NO_x emissions, Iowa’s analysis went through numerous steps to compare the relative sulfate impacts to the relative nitrate impacts. As a result of the comparison, Iowa elected to select the pollutant with the greater impacts, which was sulfate. Commenters raised this issue in the comments to the State and explained that “[a]ssertions that reductions from one pollutant are less effective than another are not a reasonable basis for rejecting controls.”²⁷⁶ IDNR’s response was that:

The DNR only considered visibility impacts as part of a weight of evidence analysis and concluded that Iowa’s obligations to satisfy reasonable progress requirements would be met by requiring the implementation of scrubber improvements at LGS and WSEC-3.²⁷⁷

The State further asserted in its response that “[t]he NO_x control costs far exceeded the cost-effectiveness of the SO₂ controls and were not considered reasonable for regional haze purposes at this time.”²⁷⁸ As discussed elsewhere in these comments, the State’s assessment of NO_x control costs was unreasonable. Moreover, IDNR provides no regulatory or statutory basis for applying the multi-step approach. Indeed, the impact of the approach is that it nullified the Four-Factor Analyses results for one of the pollutants and was thus not moored to the Act.

Second, IDNR selected only five Class I areas for its visibility benefit analysis. This was despite information provided from the NPS regarding the four sources of concern that contribute to 80% of visibility impact at the following Class I areas:²⁷⁹

Facility	Iowa Facility Rank for NPS C1As	Number of NPS C1As Impacted by the Facility (on 80% list)	Total Number of C1As Impacted by the Facility (on 80% list)
WALTER SCOTT JR ENERGY CTR	1	4	9
MIDAMERICAN ENERGY CO - GEORGE NEAL SOUTH	2	4	7
MIDAMERICAN ENERGY CO - LOUISA STATION	3	2	5
MIDAMERICAN ENERGY CO - GEORGE NEAL NORTH	4	4	6

²⁷⁵ 2021 Clarification Memo at 3-5.

²⁷⁶ Commenters’ 2023 Letter at 28.

²⁷⁷ SIP Revision at 73.

²⁷⁸ SIP Revision at 73.

²⁷⁹ National Park Service, Regional Haze SIP feedback for the Iowa, Department of Natural Resources at 4 (Dec. 8, 2022).

It was unreasonable for Iowa to rely on LADCO's 2028 CAMx PSAT modeling results, which only identified five Class I areas, when the State was clearly aware there were additional Class I areas of documented concern by the NPS.

Third, Iowa's complex approach was as follows:

- Quantified the State's predicted anthropogenic sulfate and nitrate contributions to the 20% most impaired days at each of the Class I areas based on LADCO's 2028 CAMx PSAT modeling results, presented as extinction values in Mm-1 and percent of total modeled visibility impairment in tables 5-7 and 5-8 of the State's submission.
- Selected that the maximum predicted sulfate and nitrate contributions attributed to the State's anthropogenic emissions among the five linked Class I areas (Isle Royale, Seney, Boundary Waters, Voyageurs, and Hercules-Glades).
- The maximum sulfate and nitrate extinction values were then apportioned to LGS and WSEC based on the 2028 projected anthropogenic emissions inventory for Iowa.
- Overall, EGUs are projected to emit 78.8% and 22.2% of Iowa's 2028 SO₂ and NO_x emissions, respectively.
- To calculate factors for apportioning sulfate and nitrate contributions to LGS and WSEC, Iowa assumed that LGS and WSEC emit the entirety of the State's projected 2028 EGU SO₂ and NO_x emissions totals.
- For each pollutant, the percentage of statewide EGU emissions was multiplied by the ratio of each facility's emissions to the sum of LGS and WSEC emissions.
- The resulting factors were then multiplied by the statewide maximum sulfate and nitrate impact values.
- For both LGS and WSEC, Iowa's analysis indicates that sulfate impacts are estimated to be 4.4 times the nitrate impacts.

IDNR failed to provide reasoning for following the multitude of steps in its analysis. IDNR did not explain "how its analysis comports with the regional haze regulations."²⁸⁰ IDNR's application of its visibility benefits analysis to compare the impacts of one pollutant with another is not persuasive and "undermine[s] and nullif[ies] the role of the four statutory factors in determining what controls are necessary to make reasonable progress."²⁸¹

Fourth, "due to variability in daily transport patterns, the EPA's guidance recommends that for individual sources, the maximum daily visibility impact on all days may be a more meaningful metric" than "consider[ing] impacts on the most impaired days,"²⁸² which is the metric IDNR applied.

²⁸⁰ 89 Fed. Reg. 47,398, 47,430.

²⁸¹ 2021 Clarification Memo at 13, citing Response to Comments on Protection of Visibility: Amendments to Requirements for State Plans; Proposed Rule at 186.

²⁸² 89 Fed. Reg. at 47,430, n.206; 2019 Guidance at 15-16.

Fifth, IDNR’s approach does not fall under the categories of examples provided in EPA’s 2021 Clarifications Memo. For example, IDNR did not apply its visibility benefits analysis for “a source with multiple cost-effective controls” and then “balance visibility with cost effectiveness and other statutory factors in selecting a reasonable control.”²⁸³ IDNR did not “identif[y] cost-effective new controls at a multitude of sources to choose to require controls at only a subset of those sources that constitute the vast majority of the visibility benefit” and [i]n this case, the state could rely on visibility benefits to prioritize which sources would receive new controls.”²⁸⁴ Instead, the results of IDNR’s application of its visibility benefits analysis is that it rejected all NO_x cost-effective controls at the sources based on the analysis. As EPA has explained, a state that rejects cost-effective controls in this manner “is likely to be improperly using visibility as an additional factor.”²⁸⁵

EPA’s proposal entirely ignores these significant flaws in IDNR’s analysis. Indeed, EPA’s proposal summarily explains that:

While visibility is not an explicitly listed factor to consider when determining whether additional controls are reasonable, the purpose of the four-factor analysis is to determine what degree of progress toward natural visibility conditions is reasonable. Therefore, the EPA has interpreted the CAA and the RHR as allowing states to consider visibility alongside the four statutory factors when comparing multiple emission reduction control options that may be necessary to make reasonable progress. See 2021 Clarifications Memo at 12. We find that Iowa’s consideration of visibility improvements was reasonable and consistent with the requirements of the CAA.²⁸⁶

EPA provides no discussion and analysis for why and how IDNR’s visibility benefits analysis is reasonable and inconsistent with the CAA. In short, EPA does not engage with an analysis of the contents of Iowa’s SIP. Notably, IDNR’s approach does not fall under the types of examples provided in EPA’s Clarifications Memo that could be reasonable uses of visibility considerations. First, IDNR did not consider a source with multiple cost-effective controls, and then balance visibility with cost effectiveness and other statutory factors in selecting a reasonable control.²⁸⁷ IDNR also did not use its visibility benefits analysis to evaluate the identified cost-effective new controls at a multitude of sources to choose to require controls at only a subset of those sources that constitute the vast majority of the visibility benefit.²⁸⁸ Indeed, Iowa’s SIP failed to cover a vast majority of the potential reductions. In this case, although Iowa’s SIP, Commenters’ detailed comment letter and technical report, and the NPS consultation comments, identified cost-effective controls for the sources, IDNR rejected nearly all cost-effective controls across those sources based on visibility benefits. In this instance it is clear IDNR is “improperly using visibility as an additional factor.”²⁸⁹ EPA’s proposal to approve IDNR’s visibility benefits

²⁸³ 2021 Clarification Memo at 13.

²⁸⁴ 2021 Clarification Memo at 13.

²⁸⁵ 2021 Clarification Memo at 13; 89 Fed. Reg. at 47,439.

²⁸⁶ 89 Fed. Reg. at 63,272.

²⁸⁷ 2021 Clarification Memo at 13.

²⁸⁸ 2021 Clarification Memo at 13.

²⁸⁹ 2021 Clarification Memo at 13.

analysis is unreasonable, arbitrary, and capricious. EPA’s final action must expressly disapprove IDNR’s consideration of visibility because it did not reasonably consider the four statutory factors.

B. EPA Cannot Approve the SIP Because IDNR Improperly Relied on the Uniform Rate of Progress to Avoid Controls.

A state cannot exclude sources from a reasonable progress analysis or reject controls identified in an analysis because Class I Areas impacted by in-state sources are projected to be at or below their respective uniform rate of progress (“URP”), sometimes referred to as the “glidepath.” EPA has made clear that the URP is not a “safe harbor”²⁹⁰ and “achieving the URP does not mean that a Class I area is making “reasonable progress” and does not relieve a state from using the four statutory factors to determine what level of control is needed to achieve such progress.”²⁹¹ Rather, the rate of progress that is achieved by the implementation of all reasonable controls as determined by a review of the four statutory factors “is, by definition, a reasonable rate of progress.”²⁹² Reasonable progress goals must provide for progress on the most impaired days and no degradation on the clearest days by the end of the planning period.²⁹³ EPA has also explained that visibility is not included as one of the four statutory factors and states may not rely on purportedly insufficient air quality benefits as a justification for refusing to require cost-effective emission reductions.²⁹⁴ EPA’s 2021 Clarification Memo makes clear that a state should not reject cost-effective and otherwise reasonable controls merely because there have been emission reductions since the first planning period due to other ongoing air pollution control programs or merely because visibility is otherwise projected to improve at Class I areas.²⁹⁵ The 2021 Clarification Memo also explains that a state should not reject cost-effective and otherwise reasonable controls merely because there have been emission reductions since the first planning period due to other ongoing air pollution control programs or merely because visibility is otherwise projected to improve at Class I areas.²⁹⁶

Commenters’ letter to IDNR identified the flaws with IDNR’s approach and explained that it was inappropriate for the State to rely on the URP modeling results to avoid scrubber improvements at LGS and WSEC Unit 3 and urged the State to “modify the Draft SIP by requiring measures of pollution reduction to satisfy the requirements to make reasonable progress, and not lean improperly on the URPs in other states to justify doing nothing.”²⁹⁷ The State’s response acknowledged that it indeed “based its control decisions [in part on] ... “the

²⁹⁰ 82 Fed. Reg. at 3093.

²⁹¹ 89 Fed. Reg. at 63,263, citing 82 Fed. Reg. 3078, 3093 (Jan. 10, 2017)

²⁹² *Id.*

²⁹³ 40 C.F.R. § 51.308(f)(3)(i).

²⁹⁴ 2021 Clarification Memo at 14-15.

²⁹⁵ 2021 Clarification Memo at 13.

²⁹⁶ 2021 Clarification Memo at 13.

²⁹⁷ Comment Letter at 29 (indeed Iowa’s final SIP continues to make these arguments, *see e.g.*, Iowa SIP at 2 “The scrubber improvements at LGS and WSEC-3, in combination with existing state and federal programs, are sufficiently robust for downwind Class I areas to make reasonable progress. LADCO’s regional modeling results predict that the average visibility conditions on the 20% most impaired days in 2028 will be better than the uniform rate of progress (URP) in each of the five downwind Class I areas linked to Iowa;” *id.* at 51, 57).

weight of evidence information provided by the visibility assessment.”²⁹⁸ The State further explained that it used the visibility impact assessment information “[i]n accordance with EPA guidance” and “evaluated the URP planning metric of the Class I areas linked to Iowa [and the five Class I areas are better than the URP].” IDNR also noted that this evaluation was done “after the control decisions were made.”²⁹⁹ Notably, IDNR’s response did not identify what EPA guidance it relied on. Moreover, IDNR’s application of the URP as a consideration *after* its control decisions were made is not a relevant consideration, it considered visibility in making its decision, which it must not do. The State’s consideration of the URP in making its decisions was unreasonable and failed to follow the legal requirements

Despite EPA’s presentation of the legal requirements regarding a state’s use of the URP to avoid otherwise cost-effective controls, EPA’s proposal fails to evaluate the URP assertions in the Iowa SIP. As discussed above in Section II. G., EPA must act consistently on SIP actions. Relevant and applicable here is EPA Region 7’s recent notice for another state in its region, the State of Missouri, where, like Iowa, Missouri argued in the Four-Factor Analyses that additional controls are not needed. Missouri, similar to Iowa, used the URP argument to avoid controls and explained that “[a]ll Class I areas impacted by the sources in Missouri have made steady and significant improvements in visibility, and modeling shows they are projected to be below, or well below, their ... [URP].”³⁰⁰ EPA Region 7’s notice for Missouri acknowledged that while Missouri’s assertions were not the explicit reason for rejecting additional controls, EPA “has reiterated through regulation and guidance that the URP is not a safe harbor and an area’s position with respect to the URP should not be a factor in determining whether a control measure is reasonable.”³⁰¹ EPA’s Missouri notice further explained the following key points:

The national goal set by Congress outlines both the remedying of any existing visibility impairment, and also preventing any future visibility impairment. CAA Section 169A(a). Further the EPA has stated that in order to accomplish the national goal set by Congress, cumulative progress must be made including relatively small reductions and visibility benefits from many sources over a wide area over time. To that end, visibility should not be used as the sole factor in rejecting an otherwise reasonable control measure.³⁰²

Indeed, EPA disapproved SIPs during the first planning period where states claimed they were not required to select sources or conduct Four-Factor Analyses because visibility was projected to be at or below the glidepath even without additional measures.³⁰³ Consequently, even if the Class I areas impacted by Iowa’s sources already meet and exceed the glidepath, the Clean Air Act and RHR still require that the State engage in rigorous source selection and conduct Four-

²⁹⁸ SIP Revision, Response to Comment at 73 (CO Comment 10).

²⁹⁹ SIP Revision, Response to Comment at 73 (CO Comment 10).

³⁰⁰ 89 Fed. Reg. 55,140, 55,156 (July 3, 2024).

³⁰¹ 89 Fed. Reg. at 55,156, citing 2019 Guidance at 22, 49 and 50 and 2021 Clarification Memo at 2, 12, 13 and 15.

³⁰² 89 Fed. Reg. at 55,156.

³⁰³ 82 Fed. Reg. at 3084; *see also id.* at 3084 n.30 (providing an example of a SIP rejection for Arkansas’s regional haze SIP, citing 76 Fed. Reg. 64,186, 64,195 (Oct. 17, 2011) (proposed action on Arkansas’s RPGs), and 77 Fed. Reg. 14,604, 14,612 (Mar. 12, 2012) (final action on Arkansas’s RPGs)).

Factor Analyses to determine whether additional control measures are reasonable.³⁰⁴ The fact that visibility conditions are projected to improve at Class I areas impacted by Iowa’s sources and those areas are below their respective URPs is not a valid basis on which EPA can approve the State’s reliance on the URP to avoid controls.

EPA must revise its notice and find that IDNR unlawfully and unreasonably relied on the URP – a non-statutory factor – to reject controls at LGS and WSEC Unit 3. IDNR’s reliance on the URP was inconsistent with the Regional Haze Rule, EPA guidance and memoranda, both of which state that the URP is not safe harbor justifying the rejection of controls that satisfy the four statutory factors.³⁰⁵

C. IDNR’s Consultation Process was Fundamentally Inadequate.

1. EPA Cannot Approve Iowa’s Insufficient Responses to FLM Recommendations.

The CAA and the RHR require states to consult with the FLMs that oversee the Class I areas impacted by in-state sources.³⁰⁶ Specifically, the state “must provide the Federal Land Manager with an opportunity for consultation, in person at a point early enough in the State’s policy analyses of its long-term strategy emission reduction obligation so that information and recommendations provided by the Federal Land Manager can *meaningfully inform* the State’s decisions on the long-term strategy.”³⁰⁷ Indeed, the FLMs’ expertise regarding their resources and harms from air pollution are essential concerns to guide the state to ensure SIPs help restore natural skies.³⁰⁸ The “consultation must be early enough for state officials to meaningfully consider the views expressed by the FLMs.”³⁰⁹ The RHR further requires states to provide for “continuing consultation” between the state and FLMs, and to meaningfully address the FLMs’ comments in the SIP.³¹⁰ EPA’s Iowa’s notice explains that “[t]he SIP revision submitted to EPA must describe how the state addressed any comments provided by the FLMs.”³¹¹ Thus, the FLM consultation process is not a mere box checking exercise. Instead, it is a mandatory, iterative

³⁰⁴ *Id.* at 3099 (“Even if a state is currently on or below the URP, there may be sources contributing to visibility impairment for which it would be reasonable to apply additional control measures in light of the four factors.”); 2021 Clarification Memo at 15-16 (explaining that states cannot use the glidepath as a safe harbor and instead “must select a reasonable number [of] sources and evaluate and determine emission reduction measures that are necessary to make reasonable progress by considering the four statutory factors”).

³⁰⁵ 2019 Guidance at 50; 2021 Clarification Memo at 15-16.

³⁰⁶ 42 U.S.C. § 7491(d); 40 C.F.R. § 51.308(i)(2).

³⁰⁷ 40 C.F.R. § 51.308(i)(2) (emphasis added).

³⁰⁸ In addition to their Clean Air Act duties, the FLMs have affirmative duties under 42 U.S.C. §§ 7492(a), (d) as well as mandates to protect and manage public lands under the Wilderness Act (16 U.S.C. §§ 1131-1136) and the Organics Act (54 U.S.C. § 100101).

³⁰⁹ EPA, Responses to Comments at 445, Protection of Visibility: Amendments to Requirements for State Plans; Proposed Rule, 81 Fed. Reg. 26,942 (May 4, 2016), Docket No. EPA-HQ-OAR-2015-0531 (Dec. 2016) (“Regional Haze Rule Revision Response to Comment”).

³¹⁰ 40 C.F.R. § 51.308(i)(2), (4); Regional Haze Rule Revision Response to Comment at 445.

³¹¹ 89 Fed. Reg. at 63,267, citing 40 C.F.R. § 51.308(i)(3).

process, requiring the state to meaningfully consider and incorporate into the SIP the concerns of the agencies responsible for managing the Class I resources impacted by pollution from the state.

The FLM-State consultation is akin to the public's opportunity to comment on the State's proposed SIP. In both contexts "there must be an *exchange* of views, information, and criticism between interested persons and the agency."³¹² Moreover, the dialogue between the FLMs/public and Iowa is a "two-way street."³¹³ Thus, the consultation comments provided by the FLMs are meaningless unless Iowa responds to the significant points raised by the FLM.

While IDNR summarized and provided responses to the FLMs' comments in the SIP Revision, IDNR failed to meaningfully consider or incorporate any of the FLMs' suggestions in the SIP.³¹⁴ Contrary to the statute and RHR, IDNR treated the consultation as a box-checking exercise. As we detailed in our state-level comments to IDNR,³¹⁵ IDNR did not incorporate any of the FLMs' consultation suggestions, the following highlights the problems identified by the FLMs:

- U.S. Forest Service ("FS") identified that IDNR should have conducted a Four-Factor Analysis for George Neal North and George Neal South³¹⁶ and given the units at these sources are similar to LGS and WSEC Unit 3, the proposed SO₂ controls at the later could be applied at the same extremely low cost documented in Iowa's plan.³¹⁷ Notably, as the FS explained, the two George Neal units are in the range of sources selected by the State of Minnesota.³¹⁸ The FS explained that Minnesota's failure to identify George Neal North and George Neal South to IDNR as sources of concern was arbitrary and capricious.
- Similarly, the NPS recommended that IDNR conduct Four-Factor Analyses for George Neal North NN and George Neal South³¹⁹ and estimated that the cost effectiveness for improving the efficiency of the SO₂ scrubbers at both George Neal units at \$280/ton SO₂, with emissions reductions estimated at 2,639 tons/year at George Neal North and 3,271 tons/year at George Neal South.³²⁰ The NPS further explained that the estimated cost effectiveness for improving the efficiency of the SO₂ scrubbers at the George Neal units is very similar to the Four-Factor Analysis estimates for LGS and WSEC Unit 3.³²¹
- The NPS estimated the cost of reducing NO_x emissions at George Neal North by adding SNCR. SNCR would reduce NO_x emissions by an estimated 487

³¹² *Home Box Office, Inc. v. Federal Communications Comm'n*, 567 F.2d 9, 35 (D.C. Cir. 1977).

³¹³ *Id.* at 35-36.

³¹⁴ SIP Revision at 62-63

³¹⁵ Conservation Groups' State Comments at 31-34.

³¹⁶ SIP Revision App'x F at PDF 3.

³¹⁷ SIP Revision, App'x F at PDF 5.

³¹⁸ SIP Revision, App'x F at PDF 5.

³¹⁹ SIP Revision, App'x F at PDF 10-11.

³²⁰ SIP Revision, App'x F at PDF 16-17.

³²¹ SIP Revision, App'x F at PDF 17.

tons/year at a cost of \$5,546/ton.³²² The NPS explained that this would be found cost effective under thresholds established by other states.³²³ The NPS encouraged IDNR to establish a cost threshold in line with other states, and require installation of all technically feasible, cost-effective controls.³²⁴

- The NPS recommended use of a higher threshold (such as 80%) for the source selection criteria to ensure that the sources with the most significant impacts to NPS Class I areas are selected for analysis and that a reasonable number of sources are evaluated.³²⁵ The NPS specifically recommended that IDNR additionally select George Neal North and George Neal South for Four-Factor Analysis of SO₂ and NO_x.³²⁶ The NPS's review found that both facilities rank in the top 60% at Badlands National Park, 66% at Wind Cave and Isle Royale National Parks, and 75% at Voyageurs National Park.³²⁷
- The NPS specifically recommended that IDNR establish cost thresholds to aid in documenting the rationale behind final reasonable progress determinations and that IDNR establish a cost threshold in line with other states and require installation of all technically feasible, cost-effective controls.³²⁸ In support of its comment, the NPS produced its own SCR and SNCR control cost estimates for LGS and WSEC-3.³²⁹

IDNR did not incorporate any of the FLMs' suggestions into the SIP it placed on public comment.³³⁰ Thus, the NPS reiterated their concerns during the public notice and comment period on the SIP. The NPS comments explained that:

- The State could further reduce haze causing emissions from LGS and WSEC by requiring cost-effective NO_x emission controls, as the NPS previously described in its consultation feedback.³³¹
- IDNR should evaluate opportunities to reduce haze causing SO₂ and NO_x emissions from George Neal North NN and George Neal South. The NPS's preliminary assessment found that SO₂ improvements, similar to those identified for LGS and WSEC Unit 3, are likely feasible and extremely cost effective for these power plants. The NPS encouraged IDNR to take

³²² SIP Revision, App'x F at PDF 17-18.

³²³ SIP Revision, App'x F at PDF 18.

³²⁴ SIP Revision, App'x F at PDF 18.

³²⁵ SIP Revision, App'x F at PDF 10.

³²⁶ SIP Revision, App'x F at PDF 10-11.

³²⁷ SIP Revision, App'x F at PDF 11.

³²⁸ SIP Revision, App'x F at PDF 11-12.

³²⁹ SIP Revision, App'x F at PDF 13-16.

³³⁰ SIP Revision at 62-65.

³³¹ SIP Revision, App'x G at PDF 6.

advantage of the opportunity this SIP provides to obtain further emissions reductions.³³²

IDNR did not make any changes to the SIP in response to the NPS's comments.³³³ Indeed, the State's responses were unreasonable and inconsistent with the Clean Air Act and RHR. For example, IDNR's use of a 50% cumulative impact threshold to select sources, was a threshold set so high that two of the State's largest contributors – George Neal North NN and George Neal South to – anthropogenic light extinction at the Class I areas were excluded. The State's threshold was contrary to EPA's statement in its 2019 Guidance on this point.³³⁴ As discussed elsewhere in these comments, the State's response to the NPS's comments on the need to set a cost threshold was similarly unreasonable, where it indicated that “[r]ather than selecting an arbitrary dollar per ton cost threshold, the DNR's decisions balance the costs of controls with the other three required factors (time necessary for compliance, energy & non-air quality environmental impacts, and remaining useful life) and further incorporate visibility impacts information (the optional fifth factor).”³³⁵

EPA's proposal explains that it “proposes to find that Iowa has satisfied the requirements under 40 CFR 51.308(i) to consult with the FLMs on its regional haze SIP for the second implementation period.”³³⁶ Instead, EPA must disapprove of Iowa's SIP Revision, as the state failed to meet the Clean Air Act's and RHR's requirements to engage in meaningful FLM consultation. Moreover, because EPA must also disapprove of Iowa's source selection method and Four-Factor Analyses as discussed above, it must also disapprove of Iowa's FLM consultation because the State's “consultation was based on a SIP [R]evision that did not meet the required statutory and regulatory requirements” of the Clean Air Act and RHR.³³⁷

2. EPA's Proposal to Approve IDNR's State-to-State Consultations Violates the Clean Air Act and the RHR.

“Congress was clear that both downwind states (*i.e.*, ‘a State in which any [mandatory Class I Federal] area . . . is located[’]) and upwind states (*i.e.*, ‘a State the emissions from which may reasonably be anticipated to cause or contribute to any impairment of visibility in any such area’) must revise their SIPs to include measures that will make reasonable progress at all affected Class I areas.”³³⁸ “This consultation obligation is a key element of the regional haze program. Congress, the states, the courts and the EPA have long recognized that regional haze is a regional problem that requires regional solutions.”³³⁹ Congress intended this provision of the Clean Air Act to “equalize the positions of the States with respect to interstate pollution,”³⁴⁰ and

³³² SIP Revision, App'x G at PDF 6.

³³³ SIP Revision at 66-67.

³³⁴ 2019 Guidance at 19 (“[I]t may be difficult to show reasonableness of a threshold set so high that an uncontrolled or lightly controlled source that is one of the largest contributors to anthropogenic light extinction at a Class I area is excluded.”).

³³⁵ SIP Revision at 64.

³³⁶ 89 Fed. Reg. at 63,276.

³³⁷ 89 Fed. Reg. at 47,436; 89 Fed. Reg. 56,713; 89 Fed. Reg. 67,208, 67,253 (Aug. 19, 2024).

³³⁸ 82 Fed. Reg. at 3094.

³³⁹ *Id.* at 3,085 n.31 (citing *Vermont v. Thomas*, 850 F.2d 99, 101 (2d Cir. 1988)).

³⁴⁰ S. Rep. No. 95-127, at 42 (1977).

EPA's interpretation of this requirement accomplishes this goal by ensuring that downwind states can seek recourse from EPA if an upwind state is not doing enough to address visibility transport.³⁴¹

In developing a long-term strategy for regional haze, 40 C.F.R. § 51.308(f)(2) requires that a state take three distinct steps: consultation; demonstration; and consideration. Specifically, the regulation requires:

(ii) The State must consult with those States that have emissions that are reasonably anticipated to contribute to visibility impairment in the mandatory Class I Federal area to develop coordinated emission management strategies containing the emission reductions necessary to make reasonable progress.

(A) The State must demonstrate that it has included in its implementation plan all measures agreed to during state-to-state consultations or a regional planning process, or measures that will provide equivalent visibility improvement.

(B) The State must consider the emission reduction measures identified by other States for their sources as being necessary to make reasonable progress in the mandatory Class I Federal area.³⁴²

In its 2017 amendments to the RHR, EPA explained that “states *must* exchange their four-factor analyses and the associated technical information that was developed in the course of devising their long-term strategies. This information includes modeling, monitoring and emissions data and cost and feasibility studies.”³⁴³ In the event of a recalcitrant state, “[t]o the extent that one state does not provide another other state with these analyses and information, or to the extent that the analyses or information are materially deficient, the latter state should document this fact so that the EPA can assess whether the former state has failed to meaningfully comply with the consultation requirements.”³⁴⁴

Additionally, “[i]f a State contains sources which are reasonably anticipated to contribute to visibility impairment in a mandatory Class I Federal area in another State” that has established reasonable progress goals that are slower than the Uniform Rate of Progress, “the State must demonstrate that there are no additional emission reduction measures for anthropogenic sources or groups of sources in the State.”³⁴⁵ To that end, the “State must provide a robust demonstration, including documenting the criteria used to determine which sources or groups of sources were evaluated and how the four factors required by paragraph (f)(2)(i) were taken into consideration

³⁴¹ *Id.*

³⁴² 40 C.F.R. § 51.308(f)(2) (emphasis added); *see also*, 64 Fed. Reg. 35,714, 35,732, 35735 (July 1, 1999) (In conducting the four-factor analysis, EPA explained that “...the State must consult with other States which are anticipated to contribute to visibility impairment in the Class I area under consideration ... any such State must consult with other States before submitting its long-term strategy to EPA.”).

³⁴³ 82 Fed. Reg. at 3088 (emphasis added).

³⁴⁴ *Id.*

³⁴⁵ 40 C.F.R. § 51.308(f)(3)(ii)(B).

in selecting the measures for inclusion in its long-term strategy.”³⁴⁶ In any event, “[a]ll substantive interstate consultations must be documented.”³⁴⁷

While EPA’s proposal describes how “Iowa did not receive any requests from other states nor did it encounter any disagreements,”³⁴⁸ as detailed in these comments, IDNR’s Four-Factor Analyses for its facilities suffer from many flaws and violate the requirements of the Clean Air Act and the RHR. Because EPA must disapprove of IDNR’s Four-Factor Analyses for these facilities (and the George Neal North and George Neal South facilities it failed to evaluate), it must also disapprove of IDNR’s state-to-state consultations on these facilities, as IDNR’s consulted on analyses that did not meet the requirements of the Act or the RHR. EPA’s FIP must also include consultation with South Dakota, given the NPS’s concerns about impacts from Iowa’s sources on the Class I areas in that State.³⁴⁹ EPA’s FIP must correct its numerous errors in the Four-Factor Analyses for the facilities discussed above and conduct new, compliant consultations with the states with Class I areas impacted by these facilities.

V. IOWA MUST ANALYZE ENVIRONMENTAL JUSTICE IMPACTS OF ITS REGIONAL HAZE SIP, AND MUST ENSURE ITS SIP WILL REDUCE EMISSIONS AND MINIMIZE HARMS TO DISPROPORTIONATELY IMPACTED COMMUNITIES.

Sources that harm the air in our treasured Class I areas are also located in environmental justice areas. By evaluating the vulnerable communities and counties impacted by these sources, we believe EPA will identify emission-reducing options that if required, will improve air quality and help achieve reasonable progress in this round of regional haze rulemaking.

A. IDNR Ignored the Environmental Justice Communities Impacted by Iowa’s Polluting Sources.

Historically, conservation and environmental work has concerned itself with protecting nature from people and has thus “siloeed” its work (*e.g.*, mainstream conservation vs. environmental justice.). While this siloeed approach has led to the protection of many vulnerable habitats, it ignores the reality that people live in concert with and are a part of nature; to protect one and not the other is a job half done. By considering viewshed protection and environmental justice at the same time, we can collectively begin to dismantle the silos that exist in conservation and environmental work and chart a new path forward.

³⁴⁶ *Id.*

³⁴⁷ *Id.* § 51.308(f)(2)(ii)(C).

³⁴⁸ 89 Fed. Reg. at 63,273 (“Iowa included documentation of its consultation with RPOs and individual states in its SIP submission. Specifically, Iowa consulted with three states containing the five Class I Areas that Iowa sources were expected to impact: Minnesota, Michigan, and Missouri. Documentation of consultation with each state is contained in appendix H to the State submittal. In addition, Iowa consulted with CenSARA and LADCO through its participation in regular planning calls each RPO. Iowa did not receive any requests from other states nor did it encounter any disagreements. We propose to determine that Iowa has satisfied the consultation requirements of § 51.308(f)(2)(ii).”)

³⁴⁹ SIP Revision at Appx. F, at 6 (email from NPS to IDNR referencing Badlands Wilderness Area and Wind Cave National Park), 11 (NPS Comments at 4, citing Badlands and Wind Cave).

An examination of the communities within a 20-mile radius of the sources covered in these comments identifies a disproportionate burden of environmental pollution on vulnerable environmental justice communities. EPA’s EJSCREEN and Mapping Tool shows the communities surrounding George Neal North, Louisa Generating Station, and Walter Scott Jr. Energy Center rank above the average in risk for respiratory health impacts (asthma) as compared to the other state census block groups.³⁵⁰ Similarly, the PM_{2.5} and ozone environmental justice indexes in the communities surrounding the Louisa Station are high, in the 77th and 86th percentile risk range respectively. For the communities around George Neal North, the ozone environmental justice index is of considerable concern at 84th percentile risk range. Particulate matter and ozone are above the state median percentile around the Walter Scott Energy Center. Additionally, the populations around the Walter Scott Jr. Energy Center, Louisa Generating Station, and George Neal North, have people of color percentiles ranging from the 73rd to 88th percentile. For all three sources, the socioeconomic indicator of low income is higher than 50 percent. EPA’s proposal failed to consider impacts from George Neal South and North³⁵¹ and we urge EPA to take the impacts from this facility into consideration in its final action.

Finally, the limited English-speaking households socioeconomic indicator for communities surrounding these sources range from 74 to 89 percent – yet there is no evidence in IDNR’s SIP package that IDNR ensured meaningful access to review and comment on the Draft SIP for persons with limited English proficiency. IDNR pointed to its Language Access Plan, which defines how IDNR will provide access to those with limited English proficiency.³⁵² But despite the high percentage of nearby residents who have limited English proficiency,³⁵³ IDNR did not, to Conservation Organizations’ knowledge, provide a public translation of the notice in any other language so that the public would understand the significance of the notice.

B. IDNR Can Facilitate EPA’s Consideration of Environmental Justice to Comply with Federal Executive Orders.

There are specific legal grounds for considering environmental justice when determining reasonable progress controls. Under the CAA, states are permitted to include in a SIP measures that are authorized by state law but go beyond the minimum requirements of federal law.³⁵⁴

³⁵⁰ See EJScreen Reports for these sources (attached as Ex. 8, 9, 10). The demographic statistics vary slightly from Conservation Organizations’ 2023 comments due to updates to EJSCREEN’s data.

³⁵¹ 89 Fed. Reg. at 63,277.

³⁵² “Iowa Department of Natural Resources Limited English Proficiency Plan” (undated), available at <https://www.iowadnr.gov/Portals/idnr/uploads/files/CR-EJ/language-access-plan-english.pdf> (last visited Aug. 27, 2024).

³⁵³ The IDNR’s Language Access Plan specifically notes that in determining what language assistance to provide, DNR should consider “The number or proportion of LEP individuals involved with or impacted by the program, service, or activity.” *Id.* at 2.

³⁵⁴ See *Union Elec. Co v. EPA*, 427 U.S. 246, 265 (1976) (“States may submit implementation plans more stringent than federal law requires and . . . the Administrator must approve such plans if they meet the minimum requirements of § 110(a)(2).”); *Ariz. Pub. Serv. Co. v. EPA*, 562 F.3d 1116, 1126 (10th Cir. 2009) (citing *Union Elec. Co.*, 427 U.S. at 265) (“In sum, the key criterion in determining the adequacy of any plan is attainment and maintenance of the national air standards . . . ‘States may submit

IDNR claims that it need not take action related to environmental justice in this process: “Federal law, including the CAA, does not require any specific actions or mitigation measures in addressing environmental justice concerns in this SIP revision.”³⁵⁵ While federal law does not dictate a “specific” action, we strongly urge EPA to ensure that its action on IDNR’s SIP addresses any disproportionate environmental impacts of the pollution that contributes to haze. Executive Orders in place since 1994, require federal executive agencies such as EPA to:

[M]ake achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.³⁵⁶

On January 27, 2021, the President signed “Executive Order on Tackling the Climate Crisis at Home and Abroad.”³⁵⁷ The Executive Order on climate change and environmental justice amended the 1994 Order and provides that:

It is the policy of [this] Administration to organize and deploy the full capacity of its agencies to combat the climate crisis to implement a Government-wide approach that reduces climate pollution in every sector of the economy; ... protects public health ... delivers environmental justice ... [and that] ... [s]uccessfully meeting these challenges will require the Federal Government to pursue such a coordinated approach from planning to implementation, coupled with substantive engagement by stakeholders, including State, local, and Tribal governments.³⁵⁸

C. IDNR Ignored EPA’s 2019 Guidance and Clarification Memo, Which Directs States to Take Environmental Justice Concerns and Impacts Into Consideration.

EPA’s Clarification Memo directs the states to take into consideration environmental justice concerns and impacts in issuing any SIP revision for the second planning period.³⁵⁹ EPA’s 2019 Guidance for the Second Planning Period specifies, “States may also consider any beneficial non-air quality environmental impacts.”³⁶⁰ This includes consideration of environmental justice in keeping with other agency policies. For example, EPA also pointed to another agency program that states could rely upon for guidance in interpreting how to apply the non-air quality environmental impacts standard.³⁶¹

implementation plans more stringent than federal law requires and [] the [EPA] must approve such plans if they meet the minimum [CAA] requirements of § 110(a)(2).”)

³⁵⁵ SIP Revision at 75.

³⁵⁶ Exec. Order No. 12898, § 1-101, 59 Fed. Reg. 7629 (Feb. 16, 1994), as amended by Exec. Order No. 12948, 60 Fed. Reg. 6381 (Feb. 1, 1995).

³⁵⁷ Exec. Order No. 14008, 86 Fed. Reg. 7619 (Jan. 27, 2021).

³⁵⁸ Exec. Order No. 14008 at § 201.

³⁵⁹ 2021 Clarification Memo at 16.

³⁶⁰ 2019 Guidance at 49.

³⁶¹ EPA policies, guidance and directives related to the National Environmental Policy Act (“NEPA”) is available at <https://www.epa.gov/nepa/nationalenvironmental->

When there are significant potential non-air environmental impacts, characterizing those impacts will usually be very source- and place-specific. Other EPA guidance intended for use in environmental impact assessments under the National Environmental Policy Act may be informative, but not obligatory to follow, in this task.³⁶²

Additionally, one of the National Environmental Policy Act (“NEPA”) policies concerns environmental justice.³⁶³ EPA should consider these sources of information in conducting a meaningful environmental justice analysis before its decision on the SIP.

In addition to the NEPA guidance directives, EPA provides a wealth of additional material.³⁶⁴ The most important aspect of assessing environmental justice is to identify the areas where people are most vulnerable or likely to be exposed to different types of pollution. We encourage EPA to apply the information obtained from the EJSCREEN tool to assist in that task. It uses standard and nationally consistent data—and for Iowa—the reports highlight places that have higher environmental burdens and vulnerable populations.³⁶⁵

D. We Urge EPA to Consider Environmental Justice When it Reviews and Takes Final Action on IDNR’s SIP.

As occurred in the first planning period, if a state fails to submit its SIP on time, or if EPA finds that all or part of a state’s SIP does not satisfy the Regional Haze regulations, then EPA must promulgate its own Federal Implementation Plan (“FIP”) to cover the SIP’s inadequacy. When EPA promulgates a FIP for Iowa, it is completely free to reconsider any aspect of the State’s analysis. The two Presidential Executive Orders referenced above require that federal agencies integrate environmental justice principles into their decision-making. EPA has a lead role in coordinating these efforts, and EPA Administrator Regan directed all EPA offices to clearly integrate environmental justice considerations into their plans and actions.³⁶⁶ Consequently, when EPA promulgates a FIP for Iowa sources, it has an obligation to integrate environmental justice principles into its decision-making.

policy-act-policies-and-guidance.

³⁶² *Id.* at 33.

³⁶³ See EPA, “EPA Environmental Justice Guidance for National Environmental Policy Act Reviews,” <https://www.epa.gov/nepa/environmental-justice-guidance-national-environmental-policy-act-review>.

³⁶⁴ See EPA, “Learn About Environmental Justice,” <https://www.epa.gov/environmentaljustice/learn-aboutenvironmental-justice>.

³⁶⁵ See EPA, “EPA EJSCREEN: Environmental Justice Screening and Mapping Tool, Additional Resources and Tools Related to EJSCREEN,” <https://www.epa.gov/ejscreen/additional-resources-and-tools-related-ejscreen>.

³⁶⁶ See EPA News Release, “EPA Administrator Announces Agency Actions to Advance Environmental Justice, Administrator Regan Directs Agency to Take Steps to Better Serve Historically Marginalized Communities,” (Apr. 7, 2021), <https://www.epa.gov/newsreleases/epa-administrator-announces-agency-actions-advance-environmental-justice>.

E. Lack of any Effort on Environmental Justice is Wholly Inadequate to Protect People Living in Environmental Justice Communities in Iowa Affected by Iowa’s Sources.

IDNR’s SIP lacks any consideration of environmental justice. IDNR failed to consider how any sources impact environmental justice communities. Moreover, IDNR’s SIP failed to include enforceable emission limitations for the polluting sources that impact the environmental justice communities. Consistent with the legal requirements, government efficiency, and the years of injustice these communities may have been subjected to emissions from Iowa’s sources, we urge EPA to fully and meaningfully consider all sources that impact the environmental communities. In establishing emission limitations in EPA’s action, the action must reduce impacts at *both* the Class I areas and environmental justice communities.

VI. EPA MUST PROMPTLY ISSUE A REGIONAL HAZE FIP FOR IOWA.

For the reasons discussed above, we urge EPA to disapprove the Iowa Regional Haze SIP, and begin the process of issuing a FIP as soon as possible. First, as discussed, IDNR’s SIP is flawed in multiple ways, and EPA should disapprove it and immediately begin the process of issuing a FIP.

Second, Iowa’s Round 2 Regional Haze Plan is already years behind schedule because the state and EPA missed their respective deadlines for submitting and acting on the SIP. Under the Regional Haze Rule, states were required to submit their Round 2 SIPs to EPA by July 31, 2021. IDNR failed to submit a final plan until August 2023, more than two years after the regulatory deadline and after EPA issued a finding that the state failed to submit a plan.³⁶⁷ EPA, in turn, failed to take final action to approve, disapprove, or conditionally approve Iowa’s SIP within 18 months, as required under 42 U.S.C. § 7410(k)(2). EPA’s timing for taking final action is unclear, but it is unlikely that Iowa will have a lawful, federally enforceable haze plan in place until 2025, at the earliest, undermining the Regional Haze Rule’s goal of ensuring a enforceable emission reductions during the second implementation period—i.e., 2021 through 2028.³⁶⁸ Because it could take between two to four years for Iowa sources to fully install or implement pollution controls, depending on the type of technology adopted, it is critical for EPA to disapprove IDNR’s plan and promulgate a FIP as soon as possible.³⁶⁹

³⁶⁷ 40 C.F.R. § 51.308(f); 87 Fed. Reg. 52,856 (Aug. 30, 2022).

³⁶⁸ 40 C.F.R. § 51.308(f) (A state must “establish RPGs for each Class I area within its borders by modeling the visibility impacts of all reasonable progress controls at the end of the second implementation period, *i.e.*, in 2028.”).

³⁶⁹ We do not suggest that Iowa or EPA lose the authority to require emissions limits or other measures that are necessary to make reasonable progress if those emission reductions cannot be fully implemented by the end of the implementation period. Indeed, in response to the Fifth Circuit’s stay of the Texas reasonable progress FIP, *Texas v. United States Env’t Prot. Agency*, 829 F.3d 405, 429 (5th Cir. 2016), EPA revised the Regional Haze Rule revisions to make clear that neither the state nor EPA may reject a control measure because it cannot be installed and become operational until after the end of the implementation period. 82 Fed. Reg. at 3809. Instead, we urge EPA to issue a FIP as expeditiously as practicable because the overarching purpose of the rule is to establish permanent emission reductions that ensure reasonable progress toward the national visibility goal during and after the second planning period.

Third, separate from its discretionary authority under 42 U.S.C. § 7410(c)(1)(B) to simultaneously disapprove the Iowa SIP and issue a FIP, EPA has an independent statutory duty to issue a FIP for Iowa by September 29, 2024—two years after EPA found that the state failed to timely submit its haze SIP for the second planning period.³⁷⁰

Fourth, EPA should promptly issue a FIP because there is an opportunity to secure significant emission reductions and air quality benefits. As discussed in detail above, numerous cost-effective measures are available to reduce visibility-impairing pollution at several Iowa sources. EPA should include these measures in a FIP, which would result in tens of thousands of reductions in harmful SO₂ and NO_x pollution, thereby improving visibility at numerous Class I areas. In short, EPA has authority—in fact, it has an obligation—to issue a Regional Haze FIP by September 29, 2024, unless it first fully approves a lawful, late-submitted SIP. As discussed above, the Iowa SIP is unlawful, and cannot be approved. Thus, to provide transparency to all stakeholders and increase the efficiency of the remaining regulatory process, EPA should explicitly clarify in its final disapproval of the Iowa SIP that it intends to start the FIP process in parallel with the SIP disapproval process. Only by doing so can EPA ensure timely, and reasonable progress towards the Clean Air Act’s goal of eliminating human-caused haze pollution in the Class I areas adversely affected by Iowa pollution.

VII. CONCLUSION

IDNR’s SIP, which EPA has proposed to approve, will not result in reasonable progress towards improving visibility at the Class I areas its sources impact. Specifically, EPA must make the following revisions to the SIP before promulgating a FIP:

- Revise the cost-effectiveness analysis using the assumption of a 30-year useful life for the pollution control equipment.
- Adjust the interest rate used in the cost-effectiveness analysis to reflect the current prime bank rate.
- Find that FGD upgrades to meet a 90% reduction level or an annual average emission rate of 0.05 lb/MMBtu at LGS and at WSEC Unit 3 are cost effective, and impose an SO₂ emission limit of 0.06 lb/MMBtu on a 30-day rolling average basis at both units. A pound per hour SO₂ emissions limit will result in exceedances of a pound per MMBtu SO₂ rate and so cannot be used.
- Find that SCR is cost effective at WSEC Unit 3 and at least SNCR is cost effective at LGS. Require WSEC Unit 3 to meet an annual NO_x rate of 0.04 lb/MMBtu, which would reduce NO_x by over 4,100 tons per year on average, and require LGS to meet an annual NO_x emission rate of 0.15 lb/MMBtu, which would reduce NO_x emissions from the facility by 778 tons per year on average.

³⁷⁰ 87 Fed. Reg. 52,856 (Aug. 30, 2022); 42 U.S.C. § 7410(c)(1)(B).

- Require WSEC 4 to upgrade its dry FGD system and impose an annual average SO₂ limit of 0.05 lb/MMBtu, and an SO₂ emission limit of 0.06 lb/MMBtu on a 30-day rolling average.
- Find that IDNR arbitrarily excluded George Neal South and George Neal North from Four-Factor Analysis, and that upgrades to those plants' dry FGD systems would be highly cost effective. EPA should adopt reasonable progress measures for the George Neal South and George Neal North power plants to reduce SO₂ emissions based on the additional use of lime in the units' dry FGD systems to achieve annual SO₂ rates at or below 0.05 lb/MMBtu while achieving 30-day average SO₂ emission rates of 0.06 lb/MMBtu.
- Remove the inappropriate reference to the URP as a "safe harbor" because Class 1 areas in other states that are on the so-called glidepath is not an excuse for avoiding emission reductions at Iowa sources.
- In evaluating the four factors, eliminate consideration of visibility as a fifth factor; and consider controls on all pollutants.
- Meaningfully consider and in promulgating the FIP, adapt the SIP to reflect comments from the FLMs.
- Analyze the environmental justice impacts of its Regional Haze FIP, and ensure its FIP will reduce emissions and minimize harms to disproportionately impacted communities.

Thank you for the opportunity to review EPA's proposal. We look forward to seeing a FIP that takes our comments into consideration.

Sincerely,

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