January 21, 2022

Joseph M. Goffman
Principal Deputy Assistant Administrator
Office of Air and Radiation
Environmental Protection Agency
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Dear Principal Deputy Assistant Administrator Goffman:

National Parks Conservation Association, Sierra Club and Earthjustice write regarding several issues in need of EPA's immediate attention and direction to states for the second regional haze planning period. While implementation of the regional haze program has resulted in significant progress to date, our nation's treasured Class I areas from Great Smoky Mountains to Yosemite National Park continue to be marred by air pollution. Indeed, **not a single Class I area has achieved the Clean Air Act's goal of natural visibility conditions**. And the same sources of pollution that harm our public lands are the very sources responsible for tragic health impacts and the climate crisis; therefore, we see timely emissions reductions through state regional haze implementation plans as being of paramount importance.

This letter highlights instances where numerous state air quality agencies have failed to abide by federal requirements to reduce haze causing emissions in their regional haze plans. Consequently, the haze SIPs submitted to EPA to date widely miss the mark of satisfying the obligation to make reasonable progress towards restoring natural conditions. Accountability to cut continued, avoidable emissions from hundreds of fossil fuel-fired power plants, oil refineries, cement kilns, and other sources is on the line. Also at risk are fenceline communities downwind of pollution, along with the vistas and ecosystems of our public lands set aside for posterity. Our organizations demand that EPA prioritize acting on state

haze plans immediately to deliver on this 45 year-old Congressional mandate without delay.[1]

Collectively, our organizations and others ("Conservation Organizations") have reviewed and commented on nearly every regional haze state implementation plan ("RH SIPs," "SIPs") proposed thus far—covering 38% of the states—including the following:[2]

Colorado[i]	Louisiana[ii]	New York[iii]	Tennessee[iv]
Connecticut[v]	Massachusetts[vi]	North Carolina[vii]	Texas[viii]
Delaware[ix]	Michigan[x]	Ohio[xi]	Washington[xii]
Florida[xiii]	New Hampshire[xiv]	Oregon[xv]	West Virginia[xvi]
Indiana[xvii]	New Jersey[xviii]	South Carolina[xix]	

In addition to commenting in formal public comment periods, Conservation Organizations also provided early analyses to states, identifying sources of visibility impairing pollution, articulating problems with state reliance on regional organizations' work products,[3, xx] requesting states to factor in environmental justice;[4] and putting forth expert analysis regarding control technologies and related developments applicable to many regional haze SIPs.[5] We have identified

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[1] EPA's immediate attention is also required to ensure SIP consistency across states. 40 C.F.R. part 56.

[2] The links provided here and below are to the comment letters sent to each states. In some instances several comment letters have been submitted to a state. For the complete citations for the Conservation Organizations' comment letters and expert reports submitted to the states identified here and below please see the Endnotes starting on page 63.

[3] *See e.g.*, Letter from Stephanie Kodish, NPCA, Leslie Griffith, SELC, and David Rogers, Sierra Club to VISTAS State Air Directors, "Significant Flaws in VISTAS Regional Haze CAMx Modeling and Methods; Recommendations to Develop Compliant State Implementation Plans" (May 12, 2021), https://drive.google.com/file/d/1e0KAljsvNm3Wmj3HRVeyKvafaI-dza0c/view?usp=sharing; *see also* D. Howard Gebhart, "Technical Review of VISTAS Visibility Modeling for the Second Round of Regional Haze State Implementation Plans" (May 2021) ("Gebhart VISTAS Review Report"), including Attachment "Gebhart Resume Final 2020," https://drive.google.com/file/d/1aMKbgtFxJqvrEVxeSOy96CNvoQ0xhUUv/view?usp=sharing; *see also* D. Howard Gebhart, "Technical Review of North Carolina Regional Haze State Implementation Plan Second Round of Regional Haze State Implementation Plans Supplemental Report" (Oct. 2021), https://drive.google.com/file/d/1UYHgQQAx5xKhItnEuQ3fkFpOk4EtMZ_E/view?usp=sharing.

[4] *See infra* Section 5.a.

[5] Vicki Stamper, Megan Williams, " OIL AND GAS SECTOR REASONABLE PROGRESS FOUR-FACTOR ANALYSIS OF CONTROLS FOR FIVE SOURCE CATEGORIES: NATURAL GAS-FIRED ENGINES, NATURAL GAS-FIRED TURBINES, DIESEL-FIRED ENGINES, NATURAL GAS-FIRED HEATERS AND BOILERS, FLARING AND INCINERATION, (March 6, 2020), https://drive.google.com/file/d/1RGWYqXKcfyWzBgxuRXzSiSaCZ9PWDH3y/view?usp=sharing; *see*

numerous common "approvability" issues based on our reviews and detailed in our comment letters, which for most SIPs were supported by reports prepared by expert engineers and modelers.

The seven states where we provided preliminary comments include:

Arizona[xxi]	New Mexico[xxii]	Utah[xxiii]	Pennsylvania[xxiv]
Nebraska[xxv]	North Dakota[xxvi]	Virginia[xxvii]	

We support a continuation of the Obama Administration's successful efforts to implement the haze program, which has thus far resulted in: emission reductions from over 150 coal plants units, including more than 58 retirements; elimination of more than 132 million metric tons of climate pollution; and a reduction of 303,950 tons reduced NOx and SO_2 combined. In order to continue on this path, EPA must direct states to issue SIPs that are compliant with legal requirements and match the agency's expectations as specified in its "Clarifications Regarding Regional Haze State Implementation Plans for the Second Implementation Period"[6] ("July 2021 Clarification Memo"). EPA must ensure consistency across SIPs. Where states fail to fulfill such obligations, EPA must be at the ready to issue Regional Haze Federal Implementation Plans ("FIPs") for much of the country.

As discussed in this letter, nearly all the SIPs reviewed thus far ignore EPA's July 2021 Clarification Memo while either cherry-picking from off-ramps in "Guidance on Regional Haze State Implementation Plans for the Second

also Klafka, Steven, P.E. BCEE, Environmental Engineer, Wingra Engineering, S.C., "The Four-Factor Reasonable Progress Analysis for Ardagh Glass," (Jan. 27, 2021), https://drive.google.com/file/d/1xXsx07y4z4K6BIgeJH0rLP7L0Ha_Iuwn/view?usp=sharing; *see also* Klafka, Steve, Wingra Engineering, Holcim – Florence Cement Plant Florence, Colorado Four-Factor Reasonable Progress Analysis (Sept. 30, 2021), https://drive.google.com/file/d/1C0DHVM84YoM-a-xn3LILDB5nK8J4rKDq/view?usp=sharing; *see also* Klafka, Steve, Wingra Engineering, GCC Rio Grande – Pueblo Cement Plant, Four-Factor Reasonable Progress Analysis (Sept. 23, 2021), https://drive.google.com/file/d/1W-EAjYr_zL9Ucj6t2PAtCEuqAVP7flc9/view?usp=sharing.

[6] Memorandum from Peter Tsirigotis, Director, Office of Air Quality Planning and Standards, to Regional Air Division Directors Regions 1-10, "Clarifications Regarding Regional Haze State Implementation Plans for the Second Implementation Period," (July 9, 2019), https://www.epa.gov/visibility/clarifications-regarding-regional-haze-state-implementation-plans-second-implementation. ("July 2021 Clarification Memo").

Implementation Period"[7] ("2019 Guidance") or lack a reasoned basis and support for SIP determinations.

The five major areas where issues arise in the RH SIPs are as follows:

Five Major Areas Where Issues Arise in State RH SIPs

1. Source selection precludes significant emissions and sources from consideration in a Four Factor Analysis .
2. Unjustifiable dismissal of emission reduction measures that satisfy the Four-Factor Analyses.
3. Reasonable progress determinations do not comport with the legal requirements.
4. Application of *unique* approaches not provided for under the Act and RHR.
5. Failure to take into consideration the Administration's priorities.

We strongly support the direction articulated in the July 2021 Clarification Memo and are committed to ensuring it results in state plans that deliver meaningful reductions. The following discussion highlights the myriad of issues we've identified in these five major areas – and commented on – in the state RH SIPs reviewed to date.

Note: This letter cites numerous examples from our comment letters where these issues arise. The examples cited are from representative SIPs and are not intended to provide a comprehensive list of the issues raised in all our comment letters. The first time a referenced document is mentioned we provide a link to download the document. Additionally, referenced documents are available to download here: https://drive.google.com/drive/folders/1aE2Yz7-Tl6M1ZNasaYKsBDgsJa22de3S?usp=sharing.

[7] Memorandum from Peter Tsirigotis, Director at EPA Office of Air Quality Planning and Standards, to EPA Air Division Directors Regions 1-10, "Guidance on Regional Haze State Implementation Plans for the Second Implementation Period," EPA-457/B-19-003 (Aug. 2019), https://www.epa.gov/sites/production/files/2019-08/documents/8-20-2019_-_regional_haze_guidance_final_guidance.pdf. ("2019 Guidance").

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The Five Major Areas in Need of EPA's Immediate Attention

1. Source screening excludes significant emissions from sources of visibility impairing pollution.

States must identify sources for the Four-Factor Analysis and the screening threshold a state applies must ensure that the threshold is low enough to bring in most sources harming a Class I area; a state must not simply eliminate evaluations of all or most sources for measures to reduce visibility impairing pollution. EPA's July 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.[8]

Contrary to the requirement to meaningfully reduce, which requires that states *comprehensively* identify sources of human-caused visibility-impairing emissions across source categories, as discussed below, the proposed SIPs use various methods to circumvent this requirement.

a. ***Source retirements must be enforceable in the SIP.***

The Act, the RHR, and EPA guidance and memorandum all make clear that if a state opts to exempt sources from further control analysis based on a planned retirement schedule, the source must "have an enforceable commitment to be retired or replaced by 2028."[9] The Act requires that "[e]ach state implementation plan . . . shall" include "enforceable limitations and other control measures" as

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[8] July 2021 Clarification Memo at 3.

[9] 2019 Guidance at 22; The Clean Air Act does not define the phrase "remaining useful life." However, EPA, in regulations and guidance, has clarified the meaning of the phrase. EPA has consistently stated that the potential retirement of a facility can be used to shorten a source's remaining useful life only if the retirement is federally enforceable. Thus, in order to affect the remaining useful life, a retirement commitment must be included in a pre-existing document that can be enforced in federal court, such as a consent decree entered by a federal court, or a state must incorporate the retirement date into its SIP. If a potential retirement is not federally enforceable, it cannot be relied upon to shorten the remaining useful life of a source; *see e.g.*, 83 Fed. Reg. 62,204, 62,232 (Nov. 30, 2018) ("We are proposing to agree with Arkansas' cost analysis for dry scrubbers and switching to low sulfur coal for Independence Units 1 and 2, and with the state's decision to assume a 30-year capital cost recovery period in the cost analysis. It is appropriate to assume a 30-year capital cost recovery period in the cost analysis since Entergy's plans to cease coal combustion at the Independence facility are not state or federally-enforceable."); *see also* 83 Fed. Reg. 43,586, 43,604 (Aug. 27, 2018) (Considering the retirement of certain units where there was evidence that the units had actually been retired at the time of the rulemaking and that the plant had requested cancellation of its air permit).

necessary to "meet the applicable requirements" of the Act.[10] The RHR similarly requires each state to include "enforceable emission limitations" as necessary to ensure reasonable progress toward the national visibility goal.[11] Indeed, remaining useful life is only one of the four statutory factors that a state must consider when selecting the sources for which it will determine what control measures are necessary to make reasonable progress.[12] Allowing states to avoid a four-factor analysis based on alleged intent to retire would render the other statutory factors meaningless and violate the requirements of the Regional Haze Rule.[13] Therefore, where the state relies on a source's 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 unnecessary to ensure reasonable progress, then the state "must" make those parameters or assumptions into enforceable limitations.[14]

Despite these requirements, states exempt electric generating units ("EGUs") and other sources from Four-Factor Analyses based on *any* announcement of retirement. For the EGUs in Indiana, North Carolina and Michigan, the SIPs exempt EGUs and other sources from Four-Factor Analyses based on any announcement of retirement.[15] Additionally, in Tennessee, the State revised its 2028 projected SO2 emissions for Kingston from 1,886 to 424 tons and its 2028 projected NOx emissions from 1,687 to 380 tons based solely on TVA's Strategic Power Supply Plan projections, without including enforceable emission limitations in the SIP.[16] Furthermore, the Centralia power plant, which was required to cease coal-firing for BART and for which no emissions were assumed in the 2028 RPGs,

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[10] 42 U.S.C. § 7410(a)(2)(A).
[11] *See* 40 C.F.R. § 51.308(f)(2) ("The long-term strategy must include the enforceable emissions limitations, compliance schedules, and other measures that are necessary to make reasonable progress, as determined pursuant to (f)(2)(i) through (iv).").
[12] *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) ("[A]n agency rule would be arbitrary and capricious if the agency has . . . entirely failed to consider an important aspect of the problem."); *Pub. Citizen v. Fed. Motor Carrier Safety Admin.*, 374 F.3d 1209, 1216 (D.C. Cir. 2004) ("A statutorily mandated factor, by definition, is an important aspect of any issue before an administrative agency, as it is for Congress in the first instance to define the appropriate scope of an agency's mission.").
[13] The United States Court of Appeals for the Fifth Circuit found that EPA must consider statutory factors listed in a similar provision of the Clean Water Act when revising best available technology ("BAT") limits. *See Southwestern Elec. Power Co. v. EPA*, 920 F.3d 999, 1026-27 (5th Cir. 2019).
[14] 40 C.F.R. § 51.308(f)(2); *see also* 2019 Guidance at 34.
[15] *See e.g.,* Comment Letter to Indiana at 11, 14-17; Comment Letter to North Carolina at 14-26 (*i.e.*, Duke Energy Carolinas, LLC, Marshall Steam Station; Duke Energy Carolinas, LLC, Belews Creek Steam Station; Duke Energy Progress, Roxboro Steam Electric Plant; Duke Energy Carolinas, LLC, Cliffside Steam Station Facility); Comment Letter to Michigan at 9-10 (EGLE Erroneously Relied on Remaining Useful Life Without Enforceable Retirement Dates for the following facilities: St. Clair; Belle River; Trenton Channel; Erickson; JH Campbell; and Karn Units 3 & 4).
[16] Comment Letter to Tennessee at 21-22.

recently got a BART order amendment that provides the ability to repower to gas,[17] again without including enforceable emission limitations in the SIP.

EPA must ensure enforceable retirements are locked into the haze SIP for any EGU or other source where a state relies on reductions for reasonable progress or its Long-Term Strategy. Only enforceable retirements may alter the remaining useful life. EPA must require that states subject sources that intend to retire to a Four-Factor Analysis if a state selects the source for analysis of emission control measures.

b. ***A prior BART determination (or its equivalent) must not excuse a source from reasonable progress analysis.***

As EPA's 2019 Guidance explains, the RHR "anticipates the re-assessment of BART-eligible sources under the reasonable progress Rule provisions,"[18] and further instructs state SIP development by explaining that:

> [S]tates may not categorically exclude all BART-eligible sources, or all sources that installed BART controls, as candidates for selection for analysis of control measures.[19]

In SIPs, several states assert that where EGUs (and primary copper smelters in Arizona)[20] are BART sources they need *not* be reviewed for reasonable progress. For example, the following states have exempted BART sources: Indiana; South Carolina; Michigan; West Virginia, Texas.[21] Similarly, sources subject to the Clean Air Interstate Rule (CAIR) and its successor, the Cross-State Air Pollution Rule

[17] Comment Letter to Washington - November 2021 at 25-26.
[18] 2019 Guidance at 25, citing 40 C.F.R. § 51.308(e)(5) ("After a State has met the requirements for BART or implemented an emissions trading program or other alternative measure that achieves more reasonable progress than … BART, BART-eligible sources will be subject to the requirements of paragraphs (d) and (f) of this section.").
[19] 2019 Guidance at 25.
[20] Preliminary Comment Letter to Arizona at 6-7 (*i.e.*, ASARCO LLC - Hayden Smelter and the Freeport Mcmoran Miami Smelter).
[21] *See e.g.*, Comment Letter to Indiana 16-19 (R.S. Nelson); *see also* Comment Letter to South Carolina at 30-32 (It appears the State may have exempted a sources from RP that completed BART demonstrations despite the fact that the State did not require any BART controls: Dominion Energy Wateree Generating Station); *see also* Comment Letter to Michigan at 15 (Tilden Mine), 16 (St. Mary's Cement Kiln); *see also* West Virginia Comment Letter at 87, FN 386 (commenting on Proposed SIP at 114).

(CSAPR) are not exempt from reasonable progress review.[22] EPA must reemphasize that BART does not excuse source from a reasonable progress evaluation. [23]

c. ***States must not ignore pollutants by focusing on only the dominant pollutant.***

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 (SO_2) and nitrogen oxide (NOx) in selecting sources and determining control measures."[24] Moreover, "[a] state that chooses not to consider at least these two pollutants in the second planning period should show why such consideration would be unreasonable, especially if the state considered both these pollutants in the first planning period."[25]

Examples of states that are focusing on the dominant pollutant and ignoring the others include VISTAS states (*e.g.*, Tennessee,[26] West Virginia,[27] North Carolina,[28] Florida,[29] South Carolina[30]), which disregarded NOx emissions because they asserted SO_2 is the dominant visibility impairing pollutant. As a consequence, VISTAS states routinely ignored cost-effective opportunities for reducing NOx from EGUs with underperforming SCR and SNCR systems, including from EGUs like Marshall Steam Stations units 1, 2 and 4[31] and pulp and paper plants like Blue

[22] Comment Letter to Indiana at 39 (Gibson and Indiana Michigan Power); Comment Letter to West Virginia at 34-35 (Participation in CSAPR, MATS, and/or installation of BART is not a shield against reasonable progress or Four-Factor Analyses for the following EGU sources: Harrison, Fort Martin, Mitchell, and Amos.); *id.* at 39 (Grant Town Power Plant); *id.* at 87 FN386 (commenting that reasonable progress requirements apply to all sources, despite the State SIP that allow an unnamed BART-eligible source that received a permit during the first RH planning period, to also avoid an RP analysis).

[23] 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. 82 Fed. Reg. at 3,083; *see also id.* at 3,096 ("states must evaluate and reassess all elements required by 40 CFR 51.308(d)").

[24] July 2021 Clarification Memo at 4, citing 2019 Guidance at 12.

[25] July 2021 Clarification Memo at 4-5.

[26] Comment Letter to Tennessee at 19-20, 28 (TDEC Impermissibly Exempts Eastman's NOx Emissions from the Required Four-Factor Analysis), 62 (TDEC Ignores and the SIP Lacks Controls for Nitrate Contributions from Point Sources at Class I Areas).

[27] Comment Letter to West Virginia at 19, 22-23, 25, 29-30, 42, 84-85.

[28] Comment Letter to North Carolina at 38.

[29] Comment Letter to Florida at 31.

[30] Comment Letter to South Carolina at 22, 24, 35-36 (DHEC Must Subject South Carolina EGUs to NOx Four-Factor Analyses), 74-75.

[31] Comment Letter to North Carolina at 14-15.

Ridge.[32] States also attempt to disregard pollutants, sources and other requirements based on a purported lack of resources.[33]

EPA must ensure that regional haze plans include an analysis of both SO_2 and NOx emissions.

d. ***States must analyze area and mobile sources, and not solely focus on major sources.***

The RHR requires that states consider "major and minor stationary sources or groups of sources, mobile sources, and area sources."[34] Indeed, "regional haze" is defined in the RHR to explicitly include these sources:

> Visibility impairment that is caused by the emission of air pollutants from numerous anthropogenic sources located over a wide geographic area. Such sources include, but are not limited to, major and *minor stationary sources, mobile sources, and area sources*.[35]

Several states consider only major point sources and ignore area and mobile sources. This approach is particularly problematic where the area and mobile source categories make up most if not all the visibility impairment. For example, in many states, emissions from oil and gas development are a significant threat to visibility

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[32] Comment Letter to North Carolina at 24-25.

[33] Comment Letter to South Carolina at 75 (DHEC's apparent assertion that it lacks the time, personnel, and funding resources to develop a complete regional haze SIP does not excuse it from the Act's requirements. The Act and implementing regulations require that states have adequate resources and authority, indeed states are required to certify to EPA in each SIP submission and periodically for infrastructure SIPs that they have such resources and authorities. 42 U.S.C. §§ 7410(a)(2)(J), 7410(a)(2)(D)(i), 7410(a)(2)(D)(ii), 7410(a)(2)(E)(i); 40 C.F.R. part 51, Appendix V; *see also,* EPA's application of Act's requirements when Wyoming asserted it lacked of authority to impose RP requirements, 79 Fed. Reg. 5032 (Jan. 30, 2014). Alternatively, if DHEC finalizes its proposed determination that it lacks the resources necessary to develop a complete [and potentially approvable] SIP, then it must follow in the footsteps of Montana and notify EPA that South Carolina will defer to EPA's development and implementation a regional haze FIP on their behalf. 77 Fed. Reg. 23,988 (Apr. 20, 2012) (EPA's proposed FIP, explained that "[o]n June 19, 2006, Montana submitted a letter to us signifying that the State would be discontinuing its efforts to revise the visibility control plan that would have incorporated provisions of the Regional Haze Rule. The State acknowledged with this letter that EPA would make a finding of failure to submit and thus promulgate additional federal rules to address the requirements of the Regional Haze Rule, including BART. In response to the State's decision EPA made a finding of SIP inadequacy on January 15, 2009 (74 FR 2392), determining that Montana failed to submit a SIP that addressed any of the required regional haze SIP elements of 40 CFR 51.308."); 77 Fed. Reg. 57,864 (Sept. 18, 2012) (EPA's final FIP).); *see also* Comment Letter to Tennessee at 63; *see also* Comment Letter to West Virginia at 86.

[34] 40 C.F.R. § 51.308(f)(2)(i) ("The State should consider evaluating major and minor stationary sources or groups of sources, mobile sources, and area sources.").

[35] 40 C.F.R. § 51.301 (emphasis added).

and air quality in Class I areas.[36] Such development often occurs on federal lands that are near to or abut Class I areas. For example, oil and gas development contributes to visibility impairment in public lands in Utah and Colorado where the NPS found that oil and gas development and leasing in the two states would "cause visibility impairment" at Dinosaur National Monument.[37] Additionally, NPS recently found impacts from oil and gas emissions at Carlsbad Caverns and San Pedro Parks Wilderness Class I areas, among others, based on 2008 emissions inventories—which do not capture more recent growth—and include only a portion of emissions from the production process.[38] States that have ignored these important source categories include: Texas, which outright ignored oil and gas sources;[39] Utah, which is also ignoring oil and gas sources suggesting it will address emissions later via an ozone SIP;[40] and Florida, which despite high cost-effective green harvesting techniques that could reduce emissions on environmental justice communities and Class I areas, did not evaluate emissions from burning sugar cane fields.[41] On a positive note, California is the one state that is assessing emissions from heavy duty trucks through a Four-Factor Analysis.

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[36] Examples of Class I areas currently or potentially impacted by oil and gas emissions include: Theodore Roosevelt and Lostwoods (Bakken Shale in eastern Montana and North Dakota); Wind Cave and Badlands (Powder River Basin in northeast Wyoming); Bridger and Fitzpatrick Wilderness Areas (Pinedale Anticline and Jonah Fields in western Wyoming); Mesa Verde (North and South San Juan Basin); Carlsbad Caverns and Guadalupe Mountains (Permian Basin in southeastern New Mexico and western Texas); and Canyonlands and Arches (Uintah, Paradox, and Piceance Basins in Utah and Colorado).

[37] *See* e.g., Memorandum from Mark A. Foust, Superintendent, Dinosaur National Monument, National Park Service, to Ester McCullough, Field Office Manager, BLM Vernal Field Office, "NPS Comments on the Environmental Assessment for the December 2017 Oil and Gas Sale (DOI-BLM-UT-GO10-2017-0028-EA)," at 2-3 (Aug. 22, 2017), https://eplanning.blm.gov/public_projects/nepa/80165/119058/145306/Dinosaur_National_Monument_Comment_Letter.pdf (last visited Jan. 21, 2022); Krish Vijayaraghavan *et al.*, Ramboll Environ US Corporation, "Colorado Air Resources Management Modeling Study (CARMMS): 2025 CAMx Modeling Results for the High, Low and Medium Oil and Gas Development Scenarios," 05-35899 (Aug. 2017) (prepared for BLM), https://www.blm.gov/documents/colorado/public-room/data (last visited Jan. 21, 2022).

[38] Thompson *et al.*, Modeling to Evaluate Contribution of Oil and Gas Emissions to Air Pollution, 67 Journal of the Air & Waste Management Association Vol. 4, at 455 (March 10, 2017. 2016), https://doi.org/10.1080/10962247.2016.1251508 (last visited Jan. 21, 2022); *see also id.* Figures and data, https://www.tandfonline.com/doi/suppl/10.1080/10962247.2016.1251508?scroll=top .

[39] Comment Letter to Texas at 24-29 ("Texas Ignores All Area Sources in its Four-Factor Analyses," the emissions from the oil and gas sector not considered by Texas include 17,293 of NOx and 8,322 SO_2.).

[40] NPCA raised its concern regarding the need for Four-Factor Analyses and control of emissions from oil and gas to Utah and EPA on several occasions, nevertheless, Utah Division of Air Quality (DAQ) indicates that it does not plan to address emissions from the oil and gas sector in its Regional Haze SIP, instead deferring to a future ozone SIP. NPCA and Utah DAQ Meetings (February 18, 2020 and May 28, 2020); NPCA and EPA Region 8 Meeting (July 7, 2021).

[41] Comment Letter to Florida at 23, 24, 25.

In states where area and mobile source sectors contribute to much of the visibility impairing pollutions, we urge EPA to direct that those states ensure emissions from those source sectors are included in the Four-Factor Analyses and that the SIP contain enforceable emission limitations.

e. ***Sources with permits are not exempt from the Act's reasonable progress requirements.***

The reasonable progress requirements apply to all sources and a permit to construct does not exempt a source from the regional haze program. If a source is found subject to the required reasonable progress Four-Factor Analysis as a result of a state's reasonable progress screening process, the state must ensure the Analysis is conducted. Neither the Act nor EPA's rules provide an "off-ramp" for a source in this situation. Several states have exempted sources because of recently issued permits.[42]

f. ***States must not set thresholds that do not capture sufficient sources and emissions.***

The RHR requires each state to submit a long-term strategy that addresses the regional haze visibility impairment resulting from emissions from within that state and for each mandatory Class I Federal area located outside the State that may be affected by emissions from the State.[43] Regarding a state's source selection methodology EPA's Guidance explained:

> Whatever threshold is used, the state must justify why the use of that threshold is a reasonable approach, *i.e.*, why it captures a reasonable set of sources of emissions to assess for determining what measures are necessary to make reasonable progress.[44]

As EPA has further explained:

- [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;[45]

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[42] *See e.g.*, Comment Letter to Washington - November 2021 at 14 (exempting Cardinal FG Winlock Glass Plant from Four-Factor Analysis).
[43] 40 C.F.R. § 51.308(f)(2).
[44] 2019 Guidance at 19, citing 40 C.F.R. § 51.308(f)(2)(i)("The 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.").
[45] 2019 Guidance at 19.

- [A] threshold that captures only a small portion of a state's contribution to visibility impairment in Class I areas is more likely to be unreasonable;[46] and
- [A] threshold that excludes a state's largest visibility impairing sources from selection is more likely to be unreasonable.[47]

There are a variety of ways states use high thresholds to screen out sources and emissions. First are the VISTAS states, which used an overly restrictive Area of Influence (AOI) analysis to identify which sources should be Particulate Matter Source Apportionment Technology ("PSAT") tagged, which failed to properly identify all sources contributing to adverse visibility conditions at VISTAS Class I areas.[48] "Most VISTAS states selected an AOI threshold in the range of 2-5% of the overall sulfate and/or nitrate impacts to identify emission sources contributing to visibility impairment. As a result, most states identified six or fewer contributing emission sources through the AOI analysis."[49]

Second, the VISTAS II CAMx modeling relied on a flawed PSAT modeling analysis that applied an outdated 2028 emissions inventory, provided incomplete information on source-specific contributions to visibility impairment, and carried forward known deficiencies in the modeled sulfate projections.[50] VISTAS coupled the flawed PSAT modeling analysis with a recommendation that only those sources which contribute 1% or greater to either the modeled sulfate or nitrate concentrations would be recommended for the Four-Factor Analysis.[51] As a result, VISTAS concluded that only a relatively small group of emission sources would be considered for the Four-Factor Analysis.[52]

Both screening methods used arbitrary, high thresholds that substantially restricted the total number of sources analyzed. NPCA's independent analysis identified 342 sources and NPS identified 256 sources – but VISTAS identified only 33 sources for all 14 states.[53] Many VISTAS states used a 3% AOI threshold for PSAT tagging and a 3% PSAT impact threshold[54] (some like North Carolina used 3% sulfate-only)[55] for the Four-Factor Analyses. These thresholds are arbitrary and unsupported in the SIPs. Lower thresholds would have resulted in many more AOI

[46] July 2021 Clarification Memo at 3.
[47] July 2021 Clarification Memo at 3.
[48] Gebhart VISTAS Review Report at 2; *see also id.* at 9-14.
[49] Gebhart VISTAS Review Report at 2.
[50] Gebhart VISTAS Review Report at 2; *see also id.* at 9-14.
[51] Gebhart VISTAS Review Report at 2.
[52] Gebhart VISTAS Review Report at 2.
[53] Letter from Stephanie Kodish, NPCA, Leslie Griffith, SELC, and David Rogers, Sierra Club to VISTAS State Air Directors, "Significant Flaws in VISTAS Regional Haze CAMx Modeling and Methods; Recommendations to Develop Compliant State Implementation Plans" (May 12, 2021), at
[54] *See e.g.*, Comment Letter to Tennessee at 8; *see also* Comment Letter to Florida at 12; *see also* Comment Letter to North Carolina at 14; *see also* West Virginia at 23, 25.
[55] Comment Letter to North Carolina at 6.

sources being PSAT tagged and many more PSAT-tagged sources being selected for Four-Factor Analyses.

Another example is MANE-VU, which used a 3.0 Mm^{-1} (inverse megameters) single source impact threshold for defining sources to evaluate with a Four-Factor Analysis, which results in an extremely high threshold that omits most sources from evaluation. Many states in the region have relied on this threshold.[56] Connecticut's reliance on the MANE-VU threshold resulted in a threshold that excluded every source in the State from the Four-Factor Analysis requirement,[57] demonstrating the need for states to evaluate and adjust the RPO-created thresholds for each Class I area. Similarly, Massachusetts, relying on MANE-VU's threshold, selected only two sources for Four-Factor Analyses, one of which ceased operation in the first planning period, 2017.[58]

EPA must ensure that screening thresholds are set to capture a significant degree of visibility impairing emissions. The 2016 Proposed Guidance set 80% of

[56] *See e.g.*, Comment Letter to New Hampshire at ; *see also* Comment Letter to Connecticut at 7, 8; *see also* Comment Letter to Massachusetts at 7, 8; *see also* Comment Letter to New Jersey at 10, 11, 12, 13 (MANE-VU identified only one source in New Jersey state that exceeded its recommended 3.0 Mm-1 extinction threshold: the BL England coal and oil-fired power plant and NJDEP did not conduct a four-factor control analysis for the units at BL England because the units have essentially shut down.); *see also* Comment Letter to New York at 11, 12, 13, 14 (MANE-VU identified two sources in New York state that exceeded its recommended 3.0 Mm-1 extinction threshold: LaFarge Building Materials and Finch Paper. However, NYSDEC did not conduct a four-factor analysis of controls for these sources. Instead, NYSDEC seemed to rely on other programs and/or decisions made to reduce emissions and "their potential max extinction to below the 3.0 Mm-1 threshold." NYSDEC provided no details on these programs or whether such requirements were enforceable, did not quantify emissions reductions, and did not provide any new modeling to verify visibility impacts of these two sources with the reduced emissions.)

[57] Comment Letter to Connecticut at 8-9; *see also id.* at 9 (Based on the Q/d values, it's clear that Connecticut needs to conduct a Four-Factor Analysis for four municipal waste combustion sources to inform its reasonable progress determination, specifically: Wheelabrator Bridgeport LP; CRRA/Mid-Connecticut; Covanta Southeastern CT; and Wheelabrator Lisbon LP.

[58] Comment Letter to Massachusetts at 6 (By relying on the emission sources modeled by MANE-VU, MassDEP identified and selected only two point sources (EGUs) affecting Class I sites (Brayton Point unit 4 and Canal Station unit 1) out of which, Brayton Point, already ceased operations in 2017.); *see also id.* at FN28 ("The Federal Land Managers explained during their consultation with the State that this closure was during the first planning period and not the planning period for the SIP proposed for the second planning period – thus emissions cannot be used to offset emission for the second planning period. Email from Don Shepard, NPS, to Mark Wert (Nov. 23, 2020) ("Since Brayton Point was retired in 2017, i [sic] do not think its closure can be used to offset other emissions during this planning period.").

emissions,[59] and the FLMs rely on this figure,[60] as have some states (*e.g.,* Oregon[61]*).* Our organizations submit that 80% is an appropriate metric. EPA should apply the 80% threshold, including in future guidance.

2. States must not unjustifiably dismiss emission reduction measures that, if appropriately assessed, would satisfy the Four-Factor Analysis.

a. States must not assert visibility benefits are too small.

While visibility is the goal of the regional haze program,[62] the reasonable progress Four-Factor Analysis evaluation does not itself incorporate visibility.[63] Because visibility is not one of the four statutory factors, a state cannot rely on visibility impacts to exclude emission reducing measures from sources that otherwise satisfy the four statutory factors. The plain language of the Act clearly bounds the information for each of the factors. Therefore, it is inconsistent with the Act's Four-Factor analysis for a state's existing and future RP analyses to consider information outside the bounds of these factors (*e.g.*, air quality impacts, modeling results, and emission inventories).[64] Additionally, where a state includes visibility as additional weight-of-evidence in its decision-making to reject controls, this too is inconsistent with the Act.

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[59] EPA, "Draft Guidance on Progress Tracking Metrics, Long-term Strategies, Reasonable Progress Goals and Other Requirements for Regional Haze State Implementation Plans for the Second Implementation Period," EPA-457/P-16-001 (July 2016), at 72 ("The EPA considers 80 percent to be a reasonably large fraction for this purpose in the second planning period. If an approach does not reach this 80 percent inclusion level, the threshold for major stationary sources, minor stationary sources and/or categories of area stationary sources should be reassessed for reasonableness.[103]"); *see also id.* FN103 ("This recommendation based on 80 percent of the aggregate light extinction impacts may not be fully applicable when Q/d is used as a surrogate for visibility impacts. Mechanically, it is possible to compare the sum of the individual Q/d values for the "above threshold sources" to the sum of the Q/d values for all in-state sources, but this may not give a good indicator of what fraction of in-state light extinction impacts are attributable to the first set of sources. A state planning on relying on Q/d, or another surrogate, for screening purposes should consult with its EPA regional office about the specifics of its planned screening approach."), https://www.epa.gov/sites/default/files/2016-07/documents/draft_regional_haze_guidance_july_2016.pdf.

[60] *See, e.g.*, South Carolina Regional Haze Plan, App'x H-1 at pdf page 7.

[61] *See e.g.*, Oregon Department of Environmental Quality, "Regional Haze: 2018-2028 State Implementation Plan, Public Notice Draft" (Aug. 27, 2021), https://www.oregon.gov/deq/Regulations/rulemaking/RuleDocuments/RHSIP2021plan.pdf (last visited Jan. 21, 2022).

[62] 42 U.S.C. § 7491(a)(1).

[63] The Act provides that "in determining reasonable progress there shall be taken into consideration the costs of compliance, the time necessary for compliance, and the energy and nonair quality environmental impacts of compliance, and the remaining useful life of any existing source subject to such requirements." 42 U.S.C. § 7491(g)(1).

[64] The regional haze program takes air quality impacts into consideration in selecting which sources are evaluated for the RP Four-Factor Analysis, and to apply that same metric twice is not consistent with how Congress designed the program.

Many states assert that visibility benefits are too small as an excuse to avoid controlling sources, including when cost-effective controls are identified via a Four-Factor Analysis. Visibility is not a fifth factor RP consideration under the Act.[65] For example, Texas identified at least 18 facilities for which there were cost-effective controls available, but the State refused to impose control measures at any of those sources because the visibility benefits would purportedly be too small and the annualized, aggregate cost of controls would be too large.[66] Other states that required no controls based on small visibility benefits, despite Four-Factor Analyses with cost-effective controls include: Tennessee;[67] Nebraska;[68] North Carolina;[69] and Washington.[70]

This approach is inconsistent with the Act, and EPA must ensure that states remove consideration of visibility (or the purported lack of perceptible visibility improvements) in selecting emission controls. While visibility is the goal of the regional haze program, *id*. at 7491(a)(1), the four-factor reasonable progress evaluation does not itself incorporate visibility, and states may not give it the same weight as the four statutory factors. Regional haze is "visibility impairment that is caused by the emission of air pollutants from numerous sources located over a wide geographic area."[71] 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 being imperceptible to the human eye.

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[65] *See e.g.*, Comment Letter to South Carolina at 68-69 ("Because DHEC has used visibility impacts (or supposedly minimal or insufficient visibility improvements) to reject emission controls at a number of large air pollution sources, the Proposed SIP is at odds with the plain language of the CAA. South Carolina cannot rely on visibility impacts to exclude emission reducing measures from sources that otherwise satisfy the four statutory factors.").

[66] Comment Letter to Texas at 20-22 ("Texas' Approach to Weighing Cost-Effectiveness to Visibility Impact is Flawed"); *see also* Texas Commission on Environmental Quality, 2021 Regional Haze State Implementation Plan at 7-14 to 7-15 (June 20, 2021).

[67] Comment Letter to Tennessee at 57.

[68] Comment Letter to Nebraska at 2.

[69] Comment Letter to North Carolina at 3.

[70] Comment Letter to Washington - November 2021 at 16, 44 (deferring all sources in the pulp and paper mill sector from conducting the required Four-Factor Analyses, despite the McKinley Paper Company having the second highest Q/d value (83.1) of any facility for which Ecology requested four-factor analyses; and the three other pulp and paper mills being in the top ten highest Q/d values as calculated by Ecology – the WestRock Tacoma facility, the Nippon Dynawave Packaging Company in Longview, and the Pt Townshend Paper Corporation); *see also* Comment Letter to Indiana at 13, citing 40 C.F.R. § 51.308(f)(2)(i); *see also id.* (explaining that "the state has an obligation to explain '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'" citing at FN53 *Motor Vehicle Mfrs. Assn. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) ("[T]he agency must examine the relevant data and articulate a satisfactory explanation for its action including a 'rational connection between the facts found and the choice made.'").

[71] 40 C.F.R. § 51.301.

As a fundamental matter, EPA must affirm the fundamental principle that the degree of visibility improvement may not be used as screening metric to avoid a four-factor control analysis. Nor may states use the lack of visibility improvement as a factor that overrides controls that otherwise satisfy a four factor reasonable progress analysis. In other words, at the control analysis stage, states should consider *only* the four statutory factors to determine whether control measures are necessary to achieve reasonable progress. The Regional Haze Rule and EPA's 2019 Guidance make clear that states cannot weigh the visibility benefit of controls against the four statutory factors to identify appropriate control measures. Rather, for each source or source category that is selected for further analysis during the screening process, states would require whatever control measures are determined upon considering the four statutory factors alone.

b. States must independently review industry Four-Factor Analysis instead of assuming their correctness and adopting them without question.

The duty to ensure reasonable progress requirements are met for purposes of submitting a SIP to EPA rests with the state, not the source. Therefore, if a source is unwilling to prepare the analysis, the state must conduct the analyses to inform its reasonable progress determination. As discussed below in section 2.b, we ask that EPA support states' use of EPA's tools (*e.g.*, Control Cost Manual) to create their own Four-Factor Analyses). Moreover, it is the state's responsibility to independently review, evaluate and verify a draft Four-Factor Analysis submitted by a source and submit a SIP that complies with the Act.[72] A state must not "rubber stamp" a source's analysis. Despite the requirement for states to conduct an independent emission control analyses for any sources many states did not,

[72] 40 C.F.R. § 51.308(f)(2)(i)(" *The State* must evaluate and determine the emission reduction measures that are necessary to make reasonable progress by considering 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. The State should consider evaluating major and minor stationary sources or groups of sources, mobile sources, and area sources. *The 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. In considering the time necessary for compliance, if the State concludes that a control measure cannot reasonably be installed and become operational until after the end of the implementation period, the State may not consider this fact in determining whether the measure is necessary to make reasonable progress." (emphasis added); *see also* 42 U.S.C. § 7491(g)(1); *see also* 40 C.F.R. §§ 51.308(d)(3), (f)(2)(i); *see also* 42 U.S.C. §§ 7410(a)(2)(A); 7491(b)(2) (SIP must include among other things, requiring enforceable emission limitations necessary to ensure reasonable progress).

including, Indiana,[73] Florida,[74] Louisiana,[75] Ohio,[76] South Carolina,[77] Tennessee,[78] Texas.[79] The lack of independent review by states arose in other areas as well, for example, states: relied on flawed RPO source screening analyses and did not evaluate an adequate number of sources and emissions;[80] neglected to consider and respond to FLM comments;[81] and did not review information provided during interstate consultation.[82] Indeed, as the Regional Haze Rule makes clear, the *state* has a duty to conduct a "robust" analysis of potential reasonable progress controls, and must "document the technical basis, including modeling, monitoring, cost, engineering, and emissions information, on which the State is relying to determine the emission reduction measures that are necessary to make reasonable progress in each mandatory Class I Federal area it affects."[83] If a source prepares a flawed, incomplete or undocumented Four-Factor Analysis, the state must either require the source to make the necessary corrections or make the corrections itself and ensure that the Four-Factor Analyses is accurately and completely documented *before* the start of the public notice and comment period.[84] This lack of basic documentation not only precludes the state and any independent reviewer from

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[73] Comment Letter to Indiana at 4, 12-15.
[74] Comment Letter to Florida at 14, 15, 16, 18, 19, 20, 21, 22.
[75] Comment Letter to Louisiana at 2, 9-12.
[76] Comment Letter to Ohio at 13 (General James M. Gavin Power Plant, Kyger Creek Power Plant**).**
[77] Comment Letter to South Carolina at 18.
[78] Comment Letter to Tennessee at 21.
[79] Comment Letter to Texas at 11 ("This lack of documentation for the basic data that prevents an independent reviewer from replicating most of Texas' control cost analyses violates multiple portions of section 51.308…" *citing* 40 C.F.R. §§ 51.308(f), (f)(2)(iii), (f)(3)(ii)(B).).
[80] Similarly, where a Regional Planning Organization's reasonable progress analyses are flawed, the state must conduct must conduct independent analyses to inform its reasonable progress determination. *See e.g.*, Comment Letter to Connecticut at 5-12 (reliance on MANE-VU's assessments); *see also* Comment Letter to Florida at 10-13 (reliance on VISTAS flawed methodology for source selection); *see also* Comment Letter to Massachusetts at 5-12 (reliance on MANE-VU's assessments); *see also* Comment Letter to North Carolina at 11-14, (reliance on VISTAS flawed methodology for source selection); *see also* Comment Letter to South Carolina at 19-23 (reliance on VISTAS flawed methodology for source selection); *see also* Comment Letter to Tennessee at 17-21 (reliance on VISTAS flawed methodology for source selection).
[81] States also do not respond to the FLMs' comments on Four-Factor Analyses prepared by the sources, which indicates a state, fully supports the company's assertions. *See e.g.*, Comment Letter to Ohio at 20.
[82] *See e.g.*, Comment Letter to South Carolina at 52 ("… there is nothing in South Carolina's SIP that demonstrates DHEC conducted an independent evaluation of what it received from Pennsylvania and Ohio.); *see also* Comment Letter to Tennessee at 38 ("For the states TDEC did hear from and what information we found for the states that did not respond, there is nothing in the Draft SIP that demonstrates TDEC conducted an independent evaluation of what it received and found from the other states. Instead, TDEC sums up its state-to-state consultations by saying it "agrees with all of the decisions made by other state agencies concerning the emission sources …"*citing* Draft SIP at 218.); *see e.g.* Comment Letter to West Virginia at 64-65.
[83] 40 C.F.R. § 51.308(f)(2)(iii).
[84] *See e.g.*, Comment Letter to Indiana at 12-15 (IDEM Failed to Conduct Any Independent Emission Control Analyses for Any Sources).

verifying the respective utility modeling or control cost analyses, but it is contrary to the Act and the RHR.[85]

In nearly all SIPs reviewed, the states accept source claims regarding costs with little to no documentation (specifically capital costs). Additionally, despite EPA final actions during the first planning period disapproving the use of flawed information, the states continue to use: improper interest rates;[86] equipment life;[87] and disallowed costs such as escalation during construction;[88] Allowance for Funds Used During Construction ("AFUDC");[89] contingency factor;[90] and owners costs.[91, 92] Moreover, states routinely only consider controls if they are in the RACT, BACT, LAER Clearinghouse ("RBLC").[93] While EPA created the RBLC to be used as a data

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[85] 2019 Guidance at 22.

[86] *See e.g.*, Comment Letter to Florida at 21, 22, 34; *see also* Comment Letter to Indiana at 24, 27, 29, 32, 35, 41; *see also* Comment Letter to Louisiana at 15, 16, 26, 27; *see also* Comment Letter to North Carolina at 21; *see also* Comment Letter to Ohio at 12, 14, 20, 39-42, 44; *see also* Comment Letter to South Carolina at 44-48; *see also* Comment Letter to Tennessee at 21, 30-32; *see also* Comment Letter to Texas at 8, 9, 12, 13, 14, 16; *see also* Preliminary Comment Letter to Virginia at 5, 6; *see also* Letter to Washington at 33, 36, 38, 40-42, 45, 46-50.

[87] *See e.g.*, Comment Letter to Florida at 21, 33; *see also* Comment Letter to Indiana at 29, 32, 35, 41; *see also* Comment Letter to Louisiana at 15, 27; *see also* Comment Letter to North Carolina at 21; ; *see also* Comment Letter to Ohio at 12, 15, 20, 39, 41, 42, 47, 48; *see also* Comment Letter to Tennessee at 21, 30, 31, 32; *see also* Comment Letter to Texas at 8, 11 (FN 35), 12-14, 16; *see also* Preliminary Comment Letter to Virginia at 5; *see also* Comment Letter to Washington - November 2021 at 50.

[88] *See e.g.*, Comment Letter to Louisiana at 16; *see also* Comment Letter to Tennessee at 29, 30, 31, 32; *see also* Comment Letter to Washington - November 2021 at 34.

[89] *See e.g.*, Comment Letter to Florida at 22, 35; *see also* Comment Letter to Ohio at 14; Comment Letter to South Carolina at 44, 45; *see also* Comment Letter to Tennessee at 28; *see also* Comment Letter to Texas at 16.

[90] *See e.g.*, Comment Letter to Louisiana at 16; *see also* Kordzi Report for Tennessee at 29-30, 31, 32.

[91] *See e.g.*, Comment Letter to Florida at 35; *see also* Comment Letter to Louisiana at 16.

[92] *Oklahoma v. U.S. E.P.A.*, 723 F.3d 1201, 1212 (10th Cir. 2013) (holding EPA has a reasonable basis for rejecting cost estimates where the agency explained the estimates "contain[ed] ... fundamental methodological flaws, such as including escalation and Allowance for Funds Used During Construction (AFUDC)…" and that "[t]he cost of scrubbers would not be substantially higher than those reported for other similar projects if OG & E had used the costing method and basis, i.e., overnight costs in current dollars, prescribed by the Control Cost Manual…") (internal citations omitted).

[93] EPA, RBLC, https://www.epa.gov/catc/ractbactlaer-clearinghouse-rblc-basic-information#:~:text=EPA%20established%20the%20RACT%2FBACT%2FLAER%20Clearinghouse%2C%20or%20RBLC%2C%20to,agencies%20and%20to%20aid%20in%20future%20case-by-case%20determinations (The terms "RACT," "BACT," and "LAER" are acronyms for different program requirements under the NSR program. **RACT, or Reasonably Available Control Technology**, is required on existing sources in areas that are not meeting national ambient air quality standards (*i.e.*, non-attainment areas). **BACT, or Best Available Control Technology**, is required on major new or modified sources in clean areas (*i.e.*, attainment areas). **LAER, or Lowest Achievable Emission Rate**, is required on major new or modified sources in non-attainment areas.")

base of air pollution technology information it is not a comprehensive compilation.[94] There is also a general lack of documentation for all issues relating to the Four-Factor Analyses, including: capital, operational and maintenance costs;[95] unit-specific emissions;[96] retrofit factors;[97] and the other information necessary for an analysis.[98] In many instances, states use inaccurate information, which inflates the cost-effectiveness calculations. As discussed below, these errors appear despite early and detailed comments from the FLMs pointing out the need for corrections.

Additionally, most of the proposed SIPs do not include any information on unit-specific emissions, making it impossible for the public to review, comment and determine if correct units in a facility are being analyzed, and the historical emissions of the units being analyzed. The public cannot meaningfully comment on the proposed SIPs. Moreover, commenters are forced to submit state freedom of information requests for the unit-specific emission information, which are generally ignored, untimely and/or incomplete. In short, the states' reasonable progress analyses and long-term strategies that lack this information are arbitrary, unlawful, and unapprovable because the agencies fail to consider the relevant statutory and regulatory factors, and fail to articulate a rational connection between the facts in the record and the agencies' final decision.[99]

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[94] *See e.g.*, Comment Letter to Florida at 18, 19; *see also* Kordzi Report on Florida at 14, 15, 25; *see also* Comment Letter to Texas at 17, 18; *see also* Klafka Report on Ardagh Glass at 8 ("There have been additional emission control projects in the U.S. which have not been subject to the PSD regulations so are not documented in the BACT Clearinghouse. These also provide insight into demonstrated emission control methods.").

[95] *See e.g.*, Kordzi Report on Florida at 20, 21, 23, 25, 32, 34; *see also* Comment Letter to Indiana at 21, 26, 32, 33, 36, 37, 38, 40, 41, 53; *see also* Kordzi Report on North Carolina at 45; *see also* Comment Letter to Ohio at 14 FN 42; *see also* Comment Letter to South Carolina at 40, 43, 46; *see also* Comment Letter to Tennessee at 33.

[96] Comment Letter to Michigan at 16-17 ("…EGLE has not presented adequate emissions inventory information, it is not possible for an independent reviewer to validate EGLE's source selection methodology, nevertheless, a number of sources have been identified that were not covered by EGLE in its SIP, including LaFarge Midwest Inc., EES Coke Battery LLC, and U.S. Steel Great Lakes Works –these are sources of visibility impairing pollution identified through NPCA analysis of emissions and distance to Class I areas. EGLE should therefore either discuss why it has not considered the above listed facilities or conduct four-factor analysis on these facilities.").

[97] *See e.g.*, Comment Letter to Florida at 34; Comment Letter to Indiana at 31-32, 41; Kordzi Report on North Carolina at 43-46; Comment Letter to Ohio at 14, 15, 20 (Comment from the FLMs); Comment Letter to South Carolina at 44, 45; Kordzi Report on Tennessee at 34-35; Comment Letter to Washington - November 2021 at 33, 38, 41, 46, 48, 49.

[98] Specific details regarding the states' reliance on the industry-prepared flawed Four-Factor Analyses information is discussed in the expert reports included with the Conservation Organizations' comment letters.

[99] *State Farm*, 463 U.S. at 43; *see also North Dakota v. EPA*, 730 F.3d at 761 (A state's regional haze plan must be "reasonably moored to the Act's provisions" and based on "reasoned analysis" of the facts); *see also Motor Vehicle Mfrs. Assn. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) ("[T]he agency must examine the relevant data and articulate a satisfactory explanation for its action including a 'rational connection between the facts found and the choice made.'"); *see also State Farm*, 463 U.S. at 43 (agency action is arbitrary and capricious if, among other things, "the agency

In addition to ensuring that SIPs include complete and documented Four-Factor Analyses, we ask that EPA provide additional support for using its EGU cost calculation spreadsheets for other source types when there is a lack of documentation (*e.g.*, Washington used EPA's spreadsheets when companies submitted costs without documentation, but then said the State needed to conduct further analysis before a finding of cost effectiveness could be made).[100]

EPA must insist that SIPs provide for meaningful public review and comment, and that proposed SIPs be accurate, complete and fully documented *prior* to the start of public comment.

c. States must not rely on arguments that a source is "effectively controlled."[101]

States are misinterpreting EPA's 2019 Guidance on "effectively controlled" sources and/or failing to provide analysis to support their determinations.[102] EPA's 2019 Guidance states that it may be reasonable for a state not to select an

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has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise"); *see also North Dakota v. EPA*, 730 F.3d 750, 761 (8th Cir. 2013) (citing *Alaska Dep't of Envtl. Conservation v. EPA,* 540 U.S. 461, 485, 490 (2004) (EPA must ensure that the state's regional haze plan is "reasonably moored to the Act's provisions" and based on "reasoned analysis" of the facts)).

[100] Comment Letter to Washington - November 2021 at 30-31, 34, 37, 41; *see also* Kordzi Report on Ohio at 32 (explaining that the "Sargent and Lundy (S&L) wet and dry scrubber cost algorithms commissioned by EPA for use in its IPM modeling" are discussed in the Control Cost Manual and allows their use, but cautions that they must be modified to remove AFUDC and owner's' costs,[50]" FN50 citing Control Cost Manual, Chapter 1 Wet and Dry Scrubbers for Acid Gas Control, April 2021, page 1-49); *id.* (The Kordzi Report further explains that "[t]hese cost algorithms, along with the described adjustments have been made and utilized by EPA in the past, including its Texas BART FIP,[51]" (citation omitted)).

[101] July 2021 Clarification Memo at 5. Our comment letters also present this issue as a state relying on what it asserts are the "best performing controls" without providing a technical justification and analyses.

[102] *See e.g.*, Comment Letter to Florida at 13, 14, 17, 18, 19, 20; *see also* Comment Letter to North Carolina at 24 FN128, 41; *see also* Comment Letter to New Jersey at 16-17; *see also* Comment Letter to New York at 23-24, 26; *see also* Comment Letter to Ohio at 12, 13, 20 FN69; *see also* Comment Letter to South Carolina at 3, 25-26, 34, 44, 52 (regarding Pennsylvania's assertions that Units 1 and 3 at Genon NE Mgmt Co /Keystone Generating Station), 53-54 (regarding Ohio's assertions that Boilers B003 and B004 at the Gavin Power Plant), 58 (NPS consultation comments); *see also* Comment Letter to South Carolina at 29; *see also* Comment Letter to Tennessee at 43 (FLMs consultation comments); *see also* Kordzi Report on Tennessee at 19-20; *see also* Comment Letter to West Virginia at 26, 34, 35, 59, 61 (NPS consultation comment), 67 (regarding Kentucky's assertions for Units 1 and 4 at the Tennessee Valley Authority - Shawnee Fossil Plant), at 67-69 (regarding Ohio's assertions at Cardinal Operating Company - Cardinal Power Plant, Lightstone Generation LLC - General James M. Gavin Power Plant, Ohio Valley Electric Corp. - Kyger Creek Generating Station).

"effectively controlled source" for controls in its regional haze plan, but EPA was referring to sources which had pollution controls installed recently to meet a Clean Air Act requirement for which there is a low likelihood of technological advancement in controls that could provide further reasonable progress.[103] Even for sources with recent pollution controls installed or that are otherwise effectively controlled, EPA's 2019 Guidance still requires that a state that does not select such a source for evaluation of controls to meet reasonable progress to "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."[104] Moreover, SIPs that rely on the "effectively controlled" argument, must show that a Four-Factor Analysis would likely result in the conclusion that no further controls are necessary.[105]

Indeed, EPA has previously indicated that scrubber and SCR systems should be assessed for upgrades and that these upgrades are likely very cost-effective.[106] EPA's July 2021 Clarification Memo underscores this point making clear that in evaluating reasonable progress for all sources, states should consider the "full range of potentially reasonable options for reducing emissions . . . [and] may be able to achieve greater control efficiencies, and, therefore, lower emission rates, using their

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[103] 2019 Guidance at 22.

[104] 2019 Guidance at 22.

[105] 2019 Guidance at 19; *see also* July 2021 Clarification Memo at 5.

[106] *See, e.g.*, 40 C.F.R. § 51.308(f)(2)(i) (The State must evaluate and determine the emission reduction measures that are necessary to make reasonable progress by considering 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."); *see also* 82 Fed. Reg. at 3088 ("Consistent with CAA section 169A(g)(1) and our action on the Texas SIP, a state's reasonable progress analysis must consider a meaningful set of sources and controls that impact visibility. If a state's analysis fails to do so, for example, by . . . failing to include cost-effective controls at sources with significant visibility impacts, then the EPA has the authority to disapprove the state's unreasoned analysis and promulgate a FIP.").

Even if a source has a limited remaining useful life, EPA's Guidance contemplates that states consider cost-effective operational upgrades. Regional Haze Rule Guidance § II.B.3(f) ("If a control measure involves only operational changes, there typically will be only small capital costs, if any, and the useful life of the source or control equipment will not materially affect the annualized cost of the measure."); *see also* 70 Fed. Reg. 39,103, 39,171 (July 6, 2005) (where EPA has made it a point in past actions to ensure that existing controls are examined to determine if they can be cost-effectively upgraded. For instance, the 2005 BART revision to the Regional Haze Rule devotes several paragraphs to specific potential scrubber upgrades it recommends be examined.); *see also* 81 Fed. Reg. 295, 305 (Jan. 5, 2016) (EPA also demonstrated that scrubber upgrades to a number of coal-fired power plants utilizing outdated and inefficient scrubber systems were highly cost-effective, and could achieve removal efficiencies of ninety-five percent which is near the ninety-eight to ninety-nine percent removal efficiencies of newly-installed scrubber systems.); *see also* 82 Fed. Reg. 3078, 3088 (Jan. 10, 2017) (EPA noted in its 2017 Regional Haze Rule revision, EPA disapproved Texas' four-factor analysis in part because "it did not include scrubber upgrades that would achieve highly cost-effective emission reductions that would lead to significant visibility improvements.").

existing measures."[107] Therefore, a state must first subject a source to a Four-Factor Analysis under section 51.308(f)(2)(i) before it is able to determine whether there are no emission reducing options available (including upgrades to existing controls).

Contrary to these requirements, many states suggest that where a (non-regional haze) standard is good enough for another program it's good enough for reasonable progress (*e.g.,* RACT in Washington, MATS and other existing programs/requirements for the VISTAS states[108]). Nearly all states do not consider upgrades/optimizations to existing controls or operating SCRs[109] and requiring controls all year.[110]

Contrary to the state's determinations regarding "effectively controlled"—every state we assessed thus far has EGUs with scrubber and/or SCR systems that are easily determined by our experts to be underperforming (*e.g.*, Indiana,[111]

[107] July 2021 Clarification Memo at 7.

[108] *See e.g.*, Comment Letter to Florida at 13, 14, 15, 16, 21, 26, 27 FN129; see also Comment Letter to New York at 24 (NPS consultation comment); *see also* Comment Letter to South Carolina at 25-27, 34, 52-53 (Pennsylvania erroneously relied on the MATS rule for its analysis of the Genon NE Mgmt Co / Keystone Generating Station), 58 (NPS consultation comments), 66; *see also* Comment Letter to Michigan at 15-16; *see also* Comment Letter to Tennessee at 51; *see also* Comment Letter to West Virginia at 26-27, 34, 35, 67 (Kentucky's assertions regarding Units 1 and 2 at the Tennessee Valley Authority - Shawnee Fossil Plant), 71-72 (Pennsylvania erroneously relied on the MATS rule for its analysis of the Genon NE Mgmt Co / Keystone Generating Station), 75; additionally states also erroneously excuse sources from a Four-Factor Analyses if they are meeting NAAQS (current and future), NSPS, MACT, NESHAP, BACT, BART, CAIR, CSAPR, have a Title V permit, or LAER requirements).

[109] *See e.g.*, Comment Letter to Florida at 16, 17, 20, 21, 31, 32, 33, 34, 39; *see also* Comment Letter to Indiana at 15, 20, 21, 25, 26, 35, 42, 43, 44; *see also* Comment Letter to Louisiana at 13, 18; *see also* Comment Letter to North Carolina at 3, 8, 15, 23 (North Carolina did not consult with Ohio regarding the Cardinal Power Plant and Kyger Creek Power Plant, where upgrades must be considered), 23-24 (North Carolina did not consult with Pennsylvania regarding upgrades at the Seward Power Plant), 24-25; *see also* Comment Letter New Jersey at 17-19; *see also* Comment Letter to New York at 27, 29; *see also* Comment Letter to Ohio at 21, 22; *see also* Comment Letter to South Carolina at 27, 28, 29, 33, 34, 35, 36, 46, 48, 52-53, 58 (NPS consultation comment), 73, 74; *see also* Comment Letter to Michigan at 16; *see also* Comment Letter to Tennessee at 29, 40, 41, 61, 62; *see also* Comment Letter to Texas at 9, 10, 11, 12, 13, 18 FN51, 37.

[110] *See e.g.*, Comment Letter to Indiana at 24; *see also* Comment Letter to New Jersey at 15, 16, 17; *see also* Comment Letter to New York at 23, 24, 25, 26; *see also* Comment Letter to Ohio at 13, 21; *see also* Comment Letter to Washington - November 2021 at 29; *see also* Comment Letter to South Carolina at 36; *see also* Comment Letter to Tennessee at 44-45.

[111] Kordzi Report on Indiana at 11 (Duke Gibson Unit 1), 14 ("The [AEP] Rockport SCR systems have been underperforming since they came online."), 21 (Petersburg), 24 (Cayuga).

Ohio,[112] North Carolina,[113] Louisiana,[114] South Carolina,[115]). As explained in several of the Kordzi Reports, the fact that an EGU is equipped with the most effective control *technology* (e.g., scrubbers and/or Selective Catalytic Reduction ("SCRs")) does not mean those controls are operating at their most effective levels.[116] "In Ohio, the State did not consider its EGUs because they have scrubbers installed—notably, the scrubbers were installed in the mid-1990s and have poor emission control rates.[117] Furthermore, emissions from units with SIP enforceable retirements dates five or more years away could still be reduced by using low sulfur coal, upgrading existing controls, or installing cost effective controls such as Dry Sorbent Injection ("DSI"), Selective Non-Catalytic Reduction ("SNCR"), and other controls.

EPA must give effect to its July 2021 Clarification Memo, and not approve SIPs that that erroneously rely on the "effectively controlled" argument to avoid the Four-Factor Analyses.

d. States must establish cost-effectiveness thresholds that are higher than the first round.

Cost-effectiveness thresholds for the second planning period should be higher than the first round, which at a minimum supports requirements that result in controls already required at similar sources. As we've expressed in our comments, we are concerned with some states using the same $5,000 per ton threshold as last round for cost analysis[118] or dismissing any cost of control. For example, Ohio,

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[112] *See generally* Kordzi Report on Ohio at 5-7; *id.* at 10 (Cardinal); *id.* at 13 (Bayshore); *id.* at 14 (Gavin); *id.* at 21 (Kyger Creek only utilizes its SCR systems at their full capabilities during ozone season); *id.* at 23-25 (W H Sammis).

[113] Kordzi Report on North Carolina at 15-18 (Marshall Power Plant); *id.* at 18-21 (Duke Energy Belews Creek Power Plant); *id.* at 21-24 (Duke Energy Roxboro Power Plant); *id.* at 24-26 (Duke Energy Cliffside Power Plant).

[114] Stamper Report on Louisiana at 35 (R.S. Nelson); *id*. at 46 Big Cajun II; *id*. at 58 (Brame Energy Center); *id*. at 66 (Ninemile).

[115] *See generally* Kordzi Report on South Carolina at 16 ("As is demonstrated elsewhere in this report, there are a number of sources with likely cost-effective NOx controls that SC DHEC should have required to be assessed for four-factor analyses. For instance, examples are cited of EGUs that already have installed the best NOx control available—SCR systems. In every case, these EGU SCR systems have demonstrated an ability to control NOx to a much higher level than they are currently achieving. The only apparent reason for this lax performance is that SC DHEC's permits do not require them to perform better. Thus, the "control" that would be evaluated would likely involve little to no capital expense, since the infrastructure is already present. Instead, the costs that would be evaluated may well be confined to additional reagent and perhaps better catalyst management.")

[116] *See e.g.*, Kordzi Report on Ohio at 13.

[117] Comment Letter to Ohio at 12-16.

[118] This is despite First Round SIPs that resulted in a wide range of cost-effectiveness values that states and EPA found acceptable, including values over $5,000/ton. *See, e.g.*, Comment Letter to Texas at 19 ("On page 7-12, and in on page B-14 of Appendix B, Texas discusses its rationale for establishing a cost-effectiveness threshold of $5,000, over which it does not consider any control,

North Carolina and Michigan are examples of states that did not identify a cost-effectiveness control threshold and instead created their own concoction of why they need not consider or require emission reduction measures. In contrast, several states are using a cost-effectiveness threshold of $10,000 per ton (*e.g.*, Oregon[119] and Colorado),[120] which demonstrates the reasonable approach of ratcheting up of costs from one planning period to the next. In its Regional Haze Guidance and consistent with its regulations, EPA advises states to exercise caution in establishing the cost-effectiveness threshold:

> As the Ninth Circuit explained in *NPCA v. EPA*, 788 F.3d at 1142, the Regional Haze Rule does not prevent states from implementing "bright line" rules, such as thresholds, when considering costs and visibility benefits. However, the state must explain the basis for any thresholds or other rules (see 40 CFR 51.308(f)(2)). If a state applies a threshold for any particular metric to remove control measures from further consideration before all other relevant factors are considered, it should explain why its selected threshold is appropriate for that purpose, i.e., why its application is consistent with the requirement to make reasonable progress.[121]

We request that EPA presume a control is cost-effective if it is operating or required at similar sources (including voluntary installations used to avoid PSD or

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regardless of visibility impact. Texas describes how it considered $2,700/ton and $10,000/ton thresholds, but concluded that $5,000 represented a "reasonable mid-point." This choice by Texas is completely arbitrary. No information was presented that would discriminate $5,000/ton from $7,500/ton or some other value.").; *see also*, Comment Letter to Indiana at 17-18 (Texas is using $5,000/ton as a cost effectiveness threshold. *see* https://www.tceq.texas.gov/assets/public/implementation/air/sip/haze/2021RHSIP_pro.pdf (last visited Jan. 21, 2022); Arizona is using $4,000 to $6,500/ton. *see*, e.g., Arizona Department of Environmental Quality, 2021 Regional Haze Four-Factor Initial Control Determination, Tucson Electric Power Springerville Generating Station, at 15, https://www.azdeq.gov/2021-regional-haze-sip-planning (last visited Jan. 21, 2022); New Mexico is using a floor of $7,000 per ton. *see* NMED and City of Albuquerque, Regional Haze Stakeholder Outreach Webinar #2, at 12, https://www.env.nm.gov/air-quality/wpcontent/uploads/sites/2/2017/01/NMED_EHD-RH2_8_25_2020.pdf.

[119] Oregon is using $10,000/ton or possibly even higher. *See*, *e.g.*, September 9, 2020 letter from Oregon Department of Environmental Quality to Collins Forest Products, at 1-2, https://www.oregon.gov/deq/aq/Documents/18-0013CollinsDEQletter.pdf (last visited Jan. 21, 2022).

[120] "Prehearing Statement of the Colorado Department of Public Health and Environmental, Air Pollution Control Division," *In the Matter of Proposed Revisions to Regulation No 23* (Oct. 7, 2021) at 7, (further explaining that "[t]his threshold is applied to the individual pollutants in the control strategy analyses, specifically NOx, PM, and SO_2. This 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. Colorado has maintained this threshold throughout the planning process despite the fact that each of the Class I areas in Colorado is below the URP for 2028."), https://drive.google.com/file/d/1e0Qy1qFQERRcGcvHUHihLZGOzjRvqUW4/view?usp=sharing (last visited Jan. 21, 2022).

[121] 2019 Guidance at 38.

other requirements). Generally, controls should be considered cost effective for the source in question unless there are documented unique circumstances. Further, the cost threshold should not be maintained at last round levels, but each round should come with the presumption that cost thresholds must be higher. Moreover, as the Clean Air Act is a technology-forcing statute, it is fitting for states to consider newer applications of control technologies or practices used at an industry or that could be applied across industries to limit emissions to the extent practicable.

3. Reasonable progress determinations must comport with the legal requirements.

Many of the issues discussed above are incorporated into the reasonable progress determination, including costs too high and/or visibility benefits too small to justify controls, and reliance on announced retirements to justify a "no control" decision. Other approvability issues include the following.

a. The Uniform Rate of Progress glidepath is not a safe harbor.

As EPA's 2021 July 2021 Clarification Memo reiterated, SIPs "that conclude that additional controls, including potentially cost-effective and otherwise reasonable controls, are not needed because all of the Class I areas in the state (and those out-of-state areas affected by emissions from the state) are below their uniform rates of progress (URPs)" have not "answer[ed] the question of whether the amount of progress made in any particular implementation period is 'reasonable progress.'"[122] EPA explained that its "2017 RHR preamble and the August 2019 Guidance clearly state that it is not appropriate to use the URP in this way, *i.e.,* as a 'safe harbor.'"[123] In a similar vein, many states assert that control analyses were not necessary considering the significant progress already made towards achieving the national visibility goal.[124] Yet other states asserted that additional controls for

[122] July 2021 Clarification Memo at 15.
[123] July 2021 Clarification Memo at 15-16; *see also* EPA Guidance at 25; *see also* 82 Fed. Reg. 3078, 3093, 3099-3100 (Jan. 10, 2017); *see also* 81 Fed. Reg. 66,331, 66,631 (Sept. 27, 2016); *see also* 81 Fed. Reg. 296, 326 (Jan. 5, 2016) (determining, as part of the reasonable progress federal implementation plan for Texas, "the uniform rate of progress is not a 'safe harbor' under the Regional Haze Rule."); *see also* EPA, Responses to Comments at 120, Promulgation of Air Quality Implementation Plans; State of Texas; Regional Haze and Interstate Visibility Transport Federal Implementation Plan: Best Available Retrofit Technology and Interstate Transport Provisions, EPA Docket No. EPA-R06-OAR-2016-6011 (June 2020) ("EPA has repeatedly and consistently taken the position that meeting a specific reasonable progress goal is not, itself, a "safe harbor," and does not relieve the state of the obligation to consider additional measures for reasonable progress. If it is reasonable to make more progress than the URP, a state must do so, as EPA explained in the 1999 regional haze rule) (citing 64 Fed. Reg. at 35732); *see also* 81 Fed. Reg. at 66,370 ("EPA's longstanding interpretation of the regional haze rule is that 'the URP does not establish a 'safe harbor' for the state in setting its progress goals.") (quoting 79 Fed. Reg. 74818, 74834)).
[124] *See e.g.*, Comment Letter to Indiana at 52.

the EGUs are not necessary to ensure reasonable progress toward natural visibility in Class I areas because visibility *monitoring* indicates that visibility is improving.[125]

North Carolina,[126] Ohio,[127] Tennessee,[128] West Virginia,[129] Indiana,[130] Louisiana,[131] Michigan,[132] South Carolina,[133] Washington,[134] and many other states are making these arguments. We ask that EPA confirm in its communications with all states that the URP is not a safe harbor.

b. States cannot satisfy interstate consultations where they are flawed, incomplete and have no effect.[135]

EPA's regulations require that each applicable implementation plan for a State in which any mandatory Class I Federal area is located contain such emission limits, schedules of compliance and other measures as may be necessary to make reasonable progress toward meeting the national goal.[136] The Clean Air Act further requires states to determine the measures necessary to make reasonable progress towards preventing future, and remedying existing, anthropogenic visibility impairment in all Class I areas.[137] Thus, "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."[138]

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[125] *See e.g.*, Comment Letter to Indiana at 11.
[126] Comment Letter to North Carolina at 17 ("DAQ attempts to justify deferring any further emission reductions for every major source in the state by pointing out that Class I areas appear to be trending below these area's glide path or URP, which DAQ suggests is sufficient to achieve reasonable progress.).
[127] Comment Letter to Ohio at 18 FN65, 20.
[128] Comment Letter to Tennessee at 58-59.
[129] Comment Letter to West Virginia at 33, 80-84, .
[130] Comment Letter to Indiana at 17-19, 48 ("IDEM Impermissibly Exempts EGUs From a Four-Factor Analysis Based on the State's Purported Compliance with the Uniform Rate of Progress.").
[131] Comment Letter to Louisiana at 10-11 ("…LDEQ attempts to justify 'deferring any further' emission reductions for every major source in the state by pointing out that Louisiana's Breton Wilderness Class I area appears to be trending below these area's glide path or URP, which LDEQ suggests is 'sufficient to achieve reasonable progress.'").
[132] Comment Letter to Michigan at 7-8.
[133] Comment Letter to South Carolina at 39 (argument made by Alumax - Century Aluminum of South Carolina, which the State did not correct.); *id.* at 70 ("DHEC also claims that '[f}or Cape Romain, visibility improvements are ahead of the timeline noted on the URP.'").
[134] Comment Letter to Washington - November 2021 at 58-59.
[135] July 2021 Clarification Memo at 16-17.
[136] 42 U.S.C. § 7491(b)(2).
[137] 42 U.S.C. § 7491(a)(1).
[138] 82 Fed. Reg. at 3,094.

According to EPA, "[t]his 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."[139] Congress intended this provision of the Clean Air Act to "equalize the positions of the States with respect to interstate pollution,"[140] and 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.[141]

In developing a long-term strategy for regional haze, EPA's regulation 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.[142]

Under the Regional Haze Rule, "[w]here the State has emissions that are reasonably anticipated to contribute to visibility impairment in any mandatory Class I Federal area located in another State or States, the State must consult with the other State(s) in order to develop coordinated emission management strategies."[143] Moreover, plan revisions:

> [M]ust provide procedures for continuing consultation between the State … on the implementation of the visibility protection program required by this subpart, including development and review of implementation plan revisions

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[139] 82 Fed. Reg. at 3,085, citing *Vermont v. Thomas*, 850 F.2d 99, 101 (2d Cir. 1988)).
[140] S. Rep. No. 95-127, at 41 (1977).
[141] S. Rep. No. 95-127, at 41 (1977).
[142] 40 C.F.R. § 51.308(f)(2) (emphasis added); *see also*, 64 Fed. Reg. 35,765, 35,735 (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.").
[143] 40 C.F.R. § 51.308(f)(3)(i).

> and progress reports, and on the implementation of other programs having the potential to contribute to impairment of visibility in mandatory Class I Federal areas.[144]

In its 2017 amendments to the Regional Haze Rule, 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."[145] In the event of a recalcitrant state, "[t]o the extent that one state does not provide another 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."[146]

Finally, "[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."[147] To that end, the "State must provide a robust demonstration, including documenting the criteria used to determine which sources or groups or sources were evaluated and how the four factors required by paragraph (f)(2)(i) were taken into consideration in selecting the measures for inclusion in its long-term strategy."[148] In any event, "[a]ll substantive interstate consultations must be documented."[149]

Nearly all states are ignoring these important and detailed interstate consultation requirements. In general, states don't ask other states to evaluate sources impacting their Class I areas. For example, North Carolina should have asked Ohio to do a four factor analysis for Cardinal and Kyger Creek coal-fired power plants in Ohio,[150] and also asked Pennsylvania to evaluate the Seward coal-fired power plant but did not.[151] Additionally, Louisiana did not ask Alabama for any evaluation of controls even though sources in Mobile, Alabama impact the Breton Wilderness Area;[152] those sources impact the adjacent environmental justice

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[144] 40 C.F.R. § 51.308(f)(4).
[145] 82 Fed. Reg. at 3,088 (emphasis added).
[146] 82 Fed. Reg. at 3,088.
[147] 40 C.F.R. § 51.308(f)(3)(ii)(B).
[148] 40 C.F.R. § 51.308(f)(3)(ii)(B).
[149] 40 C.F.R. § 51.308(f)(2)(ii)(C).
[150] Comment Letter to North Carolina at 23
[151] Comment Letter to North Carolina at 23-24.
[152] Comment Letter to Louisiana at 30-31.

communities.[153] Despite the request from MANE-VU that several states implement certain emission reduction measures under the RHR as MANE-VU's analysis found that the identified states were contributing to visibility impairment at the Acadia National Park Class I Area,[154] states either ignored or disagreed with the request.[155] Even states within MANE-VU did not respond to the MANE-VU Asks and ignored the requests to prepare the Four-Factor Analyses and SIP emission limitations in their SIPs, in some instances erroneously relying on Title V permits that are not in the SIP.[156] In those limited instances where a state asks another state to conduct Four-Factor Analyses, more often than not, the state asked does not respond.[157] Other states spend months arguing with each other—without elevating the disagreements and resolving their differences.

EPA must insist that states comply with the interstate consultation requirements. Indeed, the myriad of states uniformly ignoring these requirements is likely to result in the necessary step of EPA's issuance of regional FIPs that address the interstate regional haze impacts for the recalcitrant states.

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[153] Comment Letter to Louisiana at 31-37 (*i.e.*, four existing steel mills, more than 30 chemical companies, 15 aerospace companies, eight military bases, and more than 200 business supporting oil and gas development including three refineries and petroleum storage and transport facilities.)

[154] Comment Letter to Florida at 39, citing Letter from Jeffrey F. Koerner, Director, Division of Air Resource Management, FL DEP, to Mr. David Foerter, Executive Director Mid-Atlantic/Northeast Visibility Union/Ozone Transport Commission (Jan. 19. 2018).

[155] *See e.g.,* Comment Letter to Florida at 39; *see also* Comment Letter to Ohio at 21; *see also* Comment Letter to Tennessee at 44-45.

[156] *See e.g.,* Comment Letter to Connecticut at 10-11 (for the Ask that requires that "Electric Generating Units (EGUs) with a nameplate capacity larger than or equal to 25 MW with already installed NOX and/or SO2 controls - ensure the most effective use of control technologies on a year-round basis to consistently minimize emissions of haze precursors, or obtain equivalent alternative emission reductions" ("MANE-VU 25 MW Ask") Connecticut's SIP relied on Title V permits for the 13 sources without putting the permit requirements in the SIP); *id.* at 12 (for the Ask regarding fuel switching, Connecticut's SIP similarly relies on Title V permits); *see also* Comment Letter to Massachusetts at 10-11 (the SIP explains that it includes a list of 53 EGU sources that are subject to the MANE-VU 25 MW Ask, yet the SIP neither includes the list of 53 EGU sources nor does it contain SIP emission limitations, instead it lists one Title V permit); *see also* Comment Letter to New York at 10, 22-26.

[157] *See e.g.,* Comment Letter to Tennessee at 38-40 (neither Indiana nor Georgia responded to TDEC's request for Four-Factor Analyses).

c. States must not disregard FLM consultations.

The state must consult with the Federal Land Managers ("FLMs") and look to the FLMs' expertise regarding their resources and harms from air pollution to guide the state to ensure SIPs help restore natural skies.[158] The RHR 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.[159] These requirements are further clarified by EPA.[160]

While most states have engaged in some type of consultation process with FLMs, nearly all of them have disregarded the FLM consultation/asks where it really matters—in the emission reductions requirements or as manifested by the lack thereof at visibility impairing sources—and proceeded as they initially intended. To the extent that states have addressed FLM input and made changes from the prepublic version of the proposed SIP, it has largely been cosmetic. Several SIPs indicate only that they "considered" the FLM comments despite the detailed and lengthy formal FLM consultation comments. These states fail to engage with the FLM comments and fail to provide any explanation on why they ignore and/or disagree the FLM comments. Instead, the states reiterate what they have already been planning to do in the SIP. A mere indication that a state "considered" comments is not meaningful consideration of comments.[161]

[158] 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).
[159] 40 C.F.R. § 51.308(i)(3); 40 C.F.R. § 51.308(f)(4).
[160] July 2021 Clarification Memo at 16-17.
[161] *Home Box Office, Inc. v. Federal Communications Commission*, 567 F.2d 9, 35 (D.C. Cir. 1977).

Several FLM consultations are incomplete. For example, in Oregon the FLMs provided a critique and input on the state's Four-Factor Analyses in the FLM consult draft,[162] however rather than evaluate and consider FLM analysis, the proposed SIP replaced nearly all of the state's Four-Factor Analyses with industry agreements maintaining the status quo instead of reductions.[163] The FLMs had no opportunity to consult on these agreements and the public there is deprived of knowing whether and how those agreements satisfy regional haze requirements from the FLM perspective. Other FLM consultations are not documented and are therefore not available to the public (*e.g.*, South Carolina,[164] Louisiana,[165] Washington[166] (only partially documented)). West Virginia's so-called consultation with the FLM raises numerous process and transparency issues.[167] The FLMs (National Park Service, USDA Forest Service and U.S. Fish and Wildlife Service) take their consultation obligations seriously and identify sources to be evaluated under Four-Factor Analyses, identify issues with a state's screening methods, recommend measures for achieving or better achieving emission reductions, and identify concerns with an outcome of no or too few emission reduction measures. Unless the FLMs are requesting minor nonsubstantive corrections to Four-Factor Analyses, states have widely disregarded the consultation comments (*e.g.,* Indiana,[168] New Jersey,[169] New York,[170] Ohio,[171] Tennessee,[172] Texas,[173] North Carolina,[174]).

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[162] Letter from Cindy Orlando Acting Regional Director National Park Service, Interior Regions 8, 9, 10, and 12, to Oregon Department of Environmental Quality, Attention: Karen F. Williams, "NPS Review of the proposed Oregon Regional Haze State Implementation Plan (SIP) for the Second Implementation Period (2018-2028)," (Oct. 29, 2021), https://drive.google.com/file/d/10W2f0MFIIvBPeAvjzGk2eCZDhH8p9KlA/view?usp=sharing, with Enclosure 1, "National Park Service (NPS) Regional Haze SIP feedback for the Oregon Department of Environmental Quality," (Nov. 1, 2021), https://drive.google.com/file/d/1gfBlqxS6TWh_BJa6xO7NkaW_oS83rp5W/view?usp=sharing.

[163] Oregon Department of Environmental Quality, "Regional Haze: 2018-2028 State Implementation Plan, Public Notice Draft" (Aug. 27, 2021), https://www.oregon.gov/deq/Regulations/rulemaking/RuleDocuments/RHSIP2021plan.pdf (last visited Jan. 21, 2022).

[164] Comment Letter to South Carolina at 55-60 (South Carolina's SIP failed to include information on whether or how the State addressed the FLM comments).

[165] Comment Letter to Louisiana at 38 ("In its proposal, LDEQ indicates that the agency LDEQ is 'presenting this draft copy [to the FLMs] seeking their input.' In other words, LDEQ failed to consult with the Federal Land Mangers until *after* the state already developed and issued its proposed SIP, making it impossible for the Federal Land Managers' recommendations to "meaningfully inform the State's decisions on the long-term strategy," as required by 40 C.F.R. § 51.308(i)(2). The proposed SIP also fails to include any information on whether or how LDEQ has addressed any FLM comments or concerns to date, as required by 40 C.F.R. § 51.308(i)(2). In essence, the LDEQ SIP transforms the Regional Haze Rule's mandatory and iterative FLM consultation process into pro forma, after-the-fact box-checking exercise." (internal citations omitted)).

[166] Comment Letter to Washington - November 2021 at 67-68 (commenting that many of Ecology's responses were non-responsive and/or inconsistent with the CAA and RHR requirements, including: (i) Perceptibility should not be considered in screening source controls for reasonable progress; (ii) Visibility improvement is not a fifth-factor "off-ramp" for emission controls; (iii) If visibility benefit

EPA must provide firm direction to the states that they must meaningfully consider and address the insight and recommendations of federal agency counterparts, and that states must use the FLM consultation comments to inform or amend the pre-public version of the SIP in response to the FLM comments or provide a reasoned basis for disagreement. Given that FLM comments are based on well-documented facts and legal concerns from the Act, RHR, EPA's guidance and

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analyses are undertaken, they should reference a clean – not dirty – background; (iv) RACT, which Ecology describes as a "C-grade" control or emission limit, clearly is less stringent than emission limits developed from application of the four-factor reasonable progress analysis; (v) Use of an outdated emission inventory is not allowed under the RHR; (vi) The state must document support for its proposed SIP decisions; and (vii) Reliance on the lack of a federal action by Department of Interior in another program that does apply to existing sources is not a legitimate basis to justify no controls at those sources.).

[167] Comment Letter to West Virginia at 53-62.

[168] Comment Letter to Indiana at 27; *id.* at 28 ("…IDEM admitted it would put on a good show in "addressing the FLMs comments as thoroughly as possible" but only to "show that Indiana has seriously evaluated the selected sources in accordance with the RH Rule and section 169A(g)(1) of the CAA which lists four factors that must be taken into consideration in determining reasonable progress" not do actually require any controls," citing Draft SIP, Appendix P at 3; *see also id.* at 50-53.

[169] Comment Letter to New Jersey at 14 ("The FLMs requested that numerous facilities be evaluated for air pollution controls/reductions based on emissions and Q/d analyses and the state has failed to provide an ample analysis or explanation for its failure to assess these sources for additional emission reducing measures.).

[170] Comment Letter to New York at 15.

[171] Comment Letter to Ohio at 19-20 (Notably, OEPA appears to not have considered comments made by the U.S. Forest Service. Additionally, OEPA merely includes the companies' response70 to the several FLM comments, without providing its independent assessment of the information submitted by the companies. In doing so, it appears that OEPA has fully endorsed the companies' submittals critiquing the FLM comments. Comments from the NPS and USFS ignored by the State included:
• The lack of federally enforceable emission limitations in the SIP;
• Improper reliance on a broad weight-of-evidence approach, including visibility, rather than consideration of the four statutory RP factor to determine RP requirements;
• The need to broaden what OEPA considers as effective emission controls;
• Sources should not be excluded from the RP analysis requirement based on "design" efficiency of emission controls;
• Inflated cost analyses (*e.g.*, inaccurate interest rate, equipment life, control efficiency and retrofit factors) prejudicing emission reduction outcome;
• Analysis based on reduced capacity, where there are no enforceable limitations on capacity, are erroneous;
• Perceptibility is not a requirement for reasonable progress;
• If visibility benefit analyses are undertaken, they should reference a clean background;
• Use of PSAT modeled visibility impacts from specific sources should not be used to generically represent other sources;
• Scale PSAT modeled visibility impacts to reflect different emission scenarios from those that were actually modeled; and
• Relieve a source or group of sources from performing a four-factor analysis and installing cost effective controls if the Class I Area impacted is below the glidepath.).

[172] Comment Letter to Tennessee at 42-44.

[173] Comment Letter to Texas at 38-30.

[174] Comment Letter to North Carolina at 18-21.

July 2021 Clarification Memorandum, the states must amend the pre-public version of the SIPs in response to comments from the FLMs.

d. States must not delay control requirements and/or determinations to the next planning period.

EPA's July 2021 Clarification Memo made clear that "[i]f four-factor analyses evaluate a reasonable range of potential control options, we anticipate that in many cases states will find that new (*i.e.*, additional) measures are necessary to make reasonable progress."[175] Indeed, based on Four-Factor Analyses states are indeed determining control options are reasonable. However, despite these determinations, several states are delaying controls until the next planning period, while other states neglect to make a determination on whether controls are reasonable. Such state determinations are contrary to EPA's July 2021 Clarification Memo, which indicated that "[a]ll new measures must be included in the SIP."[176] Washington is one such state because despite finding reasonable controls for numerous sources, Washington is delaying controls for pulp and paper mills and refineries to the next planning period, planning on a subsequent SIP revision.[177] Other states where Four-Factor Analyses demonstrated reasonable controls are available and yet the state failed to make any determination at all include: Indiana. Michigan, and North Carolina.[178]

We ask that where additional measures satisfy a Four-Factor Analysis, EPA ensure SIPs include new measures to limit emissions to make reasonable progress.

e. States must not exempt emissions from new and modified sources from the Act's RH RP requirements.

Several states appear to have permitted new construction without ensuring that the source's emissions are consistent with the RH program requirements and making progress towards meeting the national goal of preventing any future, and remedying any existing, impairment of visibility.[179] This states must not do. The reasonable progress requirements apply to existing and *new* sources.[180] Indeed, the

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[175] July 2021 Clarification Memo at 8.
[176] July 2021 Clarification Memo at 8.
[177] Comment Letter to Washington - November 2021 at 30-41 (oil refineries); *id.* at 42-50 (pulp and paper mills).
[178] *See e.g.*, Comment Letter to Indiana; *see also* Comment Letter to Michigan; *see also* Comment Letter to North Carolina.
[179] *See e.g.*, Comment Letter to South Carolina at 32 (Dominion Energy Cope Generating Station), 72 (Nucor Steel Berkley); *see id.* Comment Letter to Florida at 13, 14, 17.
[180] 42 U.S.C. §§ 7491(g); 40 C.F.R. § 51.300(a); 40 C.F.R. § 51.307(c) ("Review of any major stationary source or major modification under paragraph (b) of this section, shall be conducted in accordance with paragraph (a) of this section, and § 51.166(o), (p)(1) through (2), and (q). *In conducting such reviews the State must ensure that the source's emissions will be consistent with making reasonable progress toward the national visibility goal referred to in § 51.300(a).* The State may take into

RHR requires that in deciding whether to grant an application for construction or modification at a major source the state must ensure that the new emissions will be consistent *with making reasonable progress toward the national visibility goal.*[181] States need a rational basis for making such a determination, which must be based on a Four-Factor Analysis.[182]

Moreover, when developing a long-term strategy a state must consider "[m]easures to mitigate the impacts of construction activities."[183] As the FLM's pointed out during the first round of RH SIPs, the states often ignored these requirements and thus Round 1 RH SIPs may lack provisions to mitigate the impacts of emissions from new and modified sources.[184] EPA's 2019 Guidance made clear that "[i]f the state does not select construction activities as a source category for an analysis of control measures, the SIP must nevertheless indicate how the state has considered measures to mitigate the impacts of construction activities."[185]

EPA must insist to the states that emissions limitations for new and modified sources—including Four-Factor Analyses and necessary controls—must be considered and included during a state's decision on whether to grant an application

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account the costs of compliance, the time necessary for compliance, the energy and nonair quality environmental impacts of compliance, and the useful life of the source." (emphasis added)).

[181] 40 C.F.R. § 51.307(c).

[182] 40 C.F.R. § 51.307(c).

[183] 40 C.F.R. § 51.308(d)(3)(v)(B).

[184] Alabama Regional Haze State Implementation Plan, Appendix P, FLM Comments on Alabama's Draft SIP (Email and Attachment from Catherine Collins, USFWS, to ADEM, "Fish and Wildlife Service Comments regarding the Alabama Regional Haze State Implementation Plan," (Dec. 26, 2007), at pdf 13, EPA-R04-OAR-2009-0782-0026, https://www.regulations.gov/document/EPA-R04-OAR-2009-0782-0026 ("…the State should include a discussion about the relationship between PSD/NSR programs as part of the other programs that will benefit visibility in the LTS section. A new or modified major industrial source can have a serious impact on the State's ability to obtain RH goals. As part of the Long- Term Strategy (LTS), the State will rely in great part on the New Source Review (NSR) and Prevention of Significant Deterioration (PSD) permitting programs to assure that new sources do not unduly impair the expected progress toward natural conditions. Section 7.2.1. of the November 2007 draft SIP speaks to emissions reductions of ongoing programs but does not include a discussion of the interaction between the existing NSR program and progress on the regional haze plan. Given the uncertainty in the new source growth estimates used to develop the 2018 emission inventory, and ultimately the 2018 visibility projections, it would be appropriate for the state to discuss the relationship between the Regional Haze Plan and requirements of the NSR and PSD programs within the SIP. Specifically, how does the State anticipate addressing new sources of air pollution in the PSD process in regards to its reasonable progress goals and long term strategy; and, how will it analyze the affect [*sic*] of new emissions from these new sources on progress toward the interim visibility goals established under this SIP, as well as the ultimate goal of natural background visibility by 2064.")

[185] 2019 Guidance at 22 (which further explains that "If the state has selected construction activities as a source category for an analysis of control measures, it will consider this factor in that analysis. That analysis and the decision about what measures are necessary for reasonable progress are the subjects of Sections II.B.4 and II.B.5 of this document.")

for a construction permit. The RH SIPs must also include the necessary mitigation and emission limitations from the permit terms and conditions to make them enforceable in the SIP. Additionally, as the rule requires the long-term strategy include measures to *mitigate* the impacts of emissions construction activities, the emissions from new or modified source must be limited, otherwise the new emissions will not be consistent with making reasonable progress. Moreover, when an EGU proposes to switch fuel from coal to natural gas[186] EPA must not allow states to approve construction permits that fail to apply the Act's Four-Factor Analysis requirement and resulting mitigation measures. In the absence of such analysis and associated requirements the construction or modification of a facility may cross the Act's provisions to prevent future visibility impairment, as well as the Act's anti-backsliding provision.[187]

f. States must not assert that that reasonable progress goals determine reasonable progress.

Many states set reasonable progress goals, *before* and *in lieu of* conducting the required Four-Factor Analysis. These states have impermissibly reversed the order of the requirements. The states must first conduct the Four-Factor Analyses, determine measures for reducing visibility impairing emissions based on the Act's Four-Factor Analysis, and then use the results to develop revisions to the reasonable progress goals. The reasonable progress goals are not to be developed before the Four-Factor Analyses but as a result of the Four-Factor Analyses.[188]

One example is Washington State, where they first set the reasonable progress goals, and then conducted the Four-Factor Analyses.[189] The MANE-VU states also apply this approach, calculating reasonable progress goals based on non-enforceable reasonable progress measures.[190] In the VISTAS states, some term the

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[186] *See* discussion *infra* Section 5.b. regarding EGU source modifications switching fuel from coal to natural gas.

[187] *See e.g. Sierra Club v. Env't Prot. Agency*, 985 F.3d 1055 (D.C. Cir.), *superseded,* 21 F.4th 815 (D.C. Cir. 2021).

[188] *See e.g.*, 82 Fed. Reg. at 3090-91.

[189] Comment Letter to Washington - November 2021 at 8, 53.

[190] Comment Letter to New Jersey at 2 ("New Jersey indicates that the long term strategy must include the measures necessary to achieve the reasonable progress goals (RPGs) established by states where the Class I areas are located.1 This is backwards. The state must determine what additional emission reductions measures are needed to make reasonable progress, considering the four statutory reasonable progress factors along with the factors specified in the revised RHR. Reasonable progress goals are determined from measures that are necessary to make reasonable progress, rather than measures being identified as needed to meet RPGs. While MANE-VU may have calculated values that it and its member states refer to as RPGs, these are not RPGs until the state with the Class I area adopts them as such. Regardless of the RPGs and regardless of how current visibility or projected visibility compares to values calculated by MANE-VU, New Jersey must show that it has adopted a long-term strategy that complies with the RHR and that was developed by NJDEP based on its own reasoned decision making. Additionally, for the second implementation period, the revised RHR does not require a state to consider "the uniform rate of

reasonable progress goals the "rate of progress" goals, and all reviewed thus far merely base goals on the flawed VISTAS modeling results.[191]

EPA must make clear to the states that failure to first conduct the Four-Factor Analyses and then use the results of those Analyses and the emission limitations secured in the SIP to develop revisions to the reasonable progress goals will result in an unapprovable SIP.

4. <u>States must not use unique approaches that conflict with Act and Regional Haze Rule.</u>

a. *Oregon.*

Oregon's Four-Factor Analyses indicated that controls were cost effective. But the State decided to replace those Four-Factor Analyses with industry agreed-upon plans that neither result in emission reductions nor apply the Act's four factors.[192] Oregon's enabling state law is potentially illegal as it considers issues outside of the RHR.

b. Washington.

Washington's SIP found cost-effective controls but claimed they are required to follow a State-RACT process under state law, which will delay controls until at least the third round. The State indicates it lacks authority to control sources under the Act's RP requirements and incorrectly asserts that Washington State RACT "is equivalent to the" Regional Haze Rule's four-factor analysis.[193] Based on the plain language in Washington's statute for RACT—and the detailed analysis in our Comment Letter— the *five*-factor State-RACT is neither equivalent to nor more stringent than the Clean Air Act's RP Four-Factor Analysis.[194] Washington must use one of the other authorities identified in our comments[195] and cannot use its

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improvement" or require a state to consider the measures that would be needed to meet the uniform rate of progress. That requirement of 40 C.F.R. § 51.308(d) does not have a counterpart in 51.308(f).");

[191] Comment Letter to North Carolina at 17; *see also* Comment Letter to South Carolina at 60-61; *see also* Comment Letter to Tennessee at 47; *see also* Comment Letter to West Virginia at 72-73.

[192] Comment Letter to Oregon at 2 ("… after comments on the Division 223 rules were closed, DEQ fundamentally altered its approach without engaging in any kind of public process and without consulting stakeholders other than the regulated entities. Instead of ordering all 17 facilities to implement the reasonable progress controls identified through four-factor analyses, DEQ inexplicably chose to extend offers that allowed all but one of these facilities to exit the program or comply with the program without investing in the highly effective pollution-reducing technology that DEQ could—and should—have required these facilities to install to meet the state's obligations under the regional haze program.); *id.* at 4-19.

[193] Comment Letter to Washington - November 2021 at 17-22.

[194] Comment Letter to Washington - November 2021 at 17-22.

[195] Comment Letter to Washington - November 2021 at 22-25.

State-RACT process to avoid compliance with the Act's reasonable progress requirements.

c. *Texas.*

Texas' SIP used a combined source evaluation.[196] Texas evaluated the annualized cost of controls across multiple sectors and types of sources against purported visibility benefits of those controls, rather than evaluating the cost-effectiveness of controls at very large individual sources. This is essentially identical to the illegal approach Texas took in evaluating reasonable progress in Round 1.[197] EPA rejected that approach and issued its own federal implementation plan because Texas's analysis overlooked cost-effective, source-specific pollution controls at a number of individual sources, each of which had significant visibility impacts:[198]

> [I]individual sources were not effectively considered by the TCEQ. . . . A primary flaw was that the control set was overinclusive. It included controls on sources that served to increase the total cost with little visibility benefit. As was noted in our proposal, Texas adopted this approach despite evidence in the record of identified source-specific, cost-effective controls that would have resulted in large emission reductions on certain EGUs, and despite source apportionment modeling that identified large impacts from EGU sources in northeast Texas. Our proposal explained that this approach obscured benefits that might be obtained from individual sources and only considered aggregated costs. . . . Therefore, whether the state's analysis is labeled a source category analysis, an analysis of multiple individual sources, or some hybrid, we conclude that it contained serious deficiencies that would materially affect the outcome of the state's SIP process. . . . Ultimately, however, while there is flexibility in available analytical approaches, states cannot adopt an approach to reasonable progress, which by its nature overlooks cost-effective controls that would otherwise be viewed as being beneficial.

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[196] Comment Letter to Texas at 14-15; *see generally* Texas Commission on Environmental Quality, 2021 Regional Haze State Implementation Plan Revision, Chapter 7 (June 30, 2021) ["Texas Round 2 SIP"].

[197] Texas Commission on Environmental Quality, Revisions to The State Implementation Plan Concerning Regional Haz at 10-5 (Feb. 25, 2009).

[198] This response to comment has been summarized from the original, which appears in the Texas-Oklahoma FIP, 81 Fed. Reg. 313 (Jan. 5, 2016).

Due, in part, to Texas's flawed first round SIP, EPA's 2019 Guidance explicitly advises against using that annualized approach during the second planning period:

> EPA does not believe it is reasonable to solely use a threshold for the capital cost or annualized cost to determine that a measure is not necessary to make reasonable progress. Large capital costs considered in isolation may not provide complete information about the potential reasonableness of a measure; additionally, decisions to exclude control measures from consideration should also take into account relevant information for other factors.[199]

Texas's continued use of a flawed annualized, aggregate control analysis is contrary to the Regional Haze Rule, flouts EPA's explicit guidance on the topic, and must be revised. This flawed approach is especially egregious since, similar to its first round SIP, Texas's contribution to particulate sulfate visibility degradation in nine out-of-state Class one areas is *greater* than the home state's contribution; and its particulate nitrate contribution to six out-of-state Class I areas is likewise greater than the state in which the Class I area is located.[200] This makes it impossible for Texas to satisfy section 51.308(f)(3)(ii)(B)'s requirement that the state demonstrate "that there are no additional emission reduction measures for anthropogenic sources or groups of sources in the State that may reasonably be anticipated to contribute to visibility impairment in [another state's] Class I area that would be reasonable to include in its own long-term strategy."

d. *Indiana.*

Indiana's SIP contains a blanket exemption of EGUs from the Four-Factor Analysis.[201] The EGUs are the largest source sector in Indiana, "even though they generally have the greatest visibility impacts at nearby Class I areas and together account for 11 of the 20 top sources on the Q/d list" contributing 77,777 tons of NOx and 85,329 tons of SO_2 per year.[202]

e. Use of Plantwide Applicability Limits (PALs).

Some states have proposed or are considering plantwide limits—in lieu of the Unit-Specific Four-Factor Analysis requirement—that give the source the flexibility

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[199] 2019 Guidance at 39.
[200] *See* Texas Round 2 SIP at 8-47 to 8-53.
[201] Comment Letter to Indiana at 11-12 (IDEM's explanation "intends to conduct a review of the EGU sector for the January 31, 2025 progress report, pursuant to 40 CFR 51.308 (g). If necessary, IDEM will evaluate EGUs more in depth for the third implementation period of the RH Rule, to be submitted in 2028" "is unsupported by the record, arbitrary and capricious, and inconsistent with the Clean Air Act and the Regional Haze Rule, for numerous reasons.").
[202] Comment Letter to Indiana at 11; *see also* Indiana Regional Haze State Implementation Plan for the Second Implementation Period at 55 (Dec. 2021)

to decide how to meet emission reductions. Oregon proposed this in its agreements with industry.[203] The PALs are an issue for numerous reasons: (1) they fail to meet the unit-specific technology based emission limit required by the Act; (2) they don't result in a reduction equivalent to reductions from a Four-Factor Analysis; (3) they are subject to abuse because in some instances PAL emissions are based on allowable emissions, don't amount to a reduction in actual emissions (*i.e.*, PacifiCorp), and ultimately don't require installation of pollution controls.

f. Ohio.

Ohio considered affordability of controls for some of its sources.[204] While Ohio noted that there is no provision in the RHR to consider affordability, the State nevertheless considered it.[205] Consideration of costs is outside the bounds of the Act's Four-Factor Analysis.[206] Moreover, as the Kordzi Report on Ohio clearly demonstrated in the "Comments on the Carmeuse Maple Grove SO_2 Analysis,"[207] despite the source's inappropriate costing methodology that highly inflated costs, the Kordzi Report shows that "SO2 controls are available for retrofit to the Carmeuse kilns at cost-effectiveness levels that have previously been found to be cost-effective by many states."[208]

We urge EPA to instruct these states that the unique approaches outlined above are inconsistent with the Act and RHR requirements.

5. States must ensure that SIPs are consistent with the Administration's priorities.

a. Consideration of Environmental Justice.

State and federal authorities require consideration of environmental justice.[209] While some states acknowledge their authority, commitment and need to

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[203] Comment Letter to Oregon at 9-12 (Table comparing emission reductions projected from installation of four factor analysis requirements as compared to requirements of "alternative compliance" agreements, heavily reliant on Plant Site Emission Limits or "PSELs").
[204] Kordzi Report on Ohio at 46, citing Ohio Draft SIP at 39.
[205] Kordzi Report on Ohio at 46.
[206] *See e.g.*, Kordzi Report at 47.
[207] Kordzi Report on Ohio at 42-45.
[208] Kordzi Report on Ohio at 44-45.
[209] *See e.g.,* Comment Letter to Connecticut at 12-17; *see also* Comment Letter to Florida at 22-25 ("FL DEP Must Consider Emissions from and Include Emission Limitations on Preharvest Sugarcane Field Burning"); *see also id.* at 39-43; *see also* Comment Letter to Indiana at 55-58; *see also* Comment Letter to Louisiana at 30-34 (Louisiana did not consult with Alabama regarding sources in Mobile, Alabama that impact the Breton Wilderness Area and the environmental justice communities); *see also id.* at 38-41; *see also* Comment Letter to Massachusetts at 15-18; *see also* Comment Letter to Michigan at 17-19; *see also* Comment Letter to North Carolina at 27-31; *see also*

consider environmental justice, most if not all SIPs do not contain meaningful consideration, much less emission limitations to protect environmental justice communities. States like Oregon have gone to great lengths to develop environmental justice methods and use environmental screening thresholds, but nothing material came of such considerations.[210] Colorado acknowledged the need to consider environmental justice, but again, nothing appears to have come of it.[211] Yet other states, like North Carolina, misunderstand an environmental justice analysis, and looked at whether the communities near Class I areas were classified as environmental justice communities rather than looking at the communities impacted by sources.[212]

Finally, the Table below contains the sources NPCA identified as sources of concern due to their potential to impair visibility at Class I areas *and* their

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Comment Letter to New Jersey at 21-27; *see also* Comment Letter to New York at 16; *see also id.* 18-22; *see also* Comment Letter to Ohio at 22-25; *see also* Comment Letter to South Carolina at 87-91; *see also* Comment Letter to Tennessee at 63-68; *see also* Comment Letter to Virginia at 7-9 ; *see also* Comment Letter to Washington - November 2021 at 52-56; *see also* Comment Letter to West Virginia at 88-94.

[210] Comment Letter to Oregon at 17-20 ("Despite the claim in the SIP that DEQ incorporated environmental justice into its regional haze decisions, nothing in the SIP suggests that DEQ considered environmental justice in making the choice to extend "alternative compliance" to 16 of the 17 facilities with reasonable progress controls. While DEQ carefully established a protocol and analyzed the environmental justice and vulnerable populations "score" of each facility with cost-effective controls identified in its four-factor analysis, it then seemingly ignored this information when making consequential decisions: in place of actual significant reductions in emissions that would be achieved though the implementation of four factor reasonable progress control analyses the agency instead established alternative compliance to these facilities regardless of the environmental justice impacts and the impacts on vulnerable populations.")

[211] National Parks Conservation Association and Sierra Club's Prehearing Statement Before the Colorado Air Quality Control Commission Regarding Proposed Revisions to the Regional Haze State Implementation Plan (SIP), Regulation 23 at 13-15 ("Rather than substantively incorporate equity and environmental justice principles into this rulemaking, the Division makes only one passing reference to community concerns in the proposed SIP and supporting documents. But notably, that sole reference to community concerns is for the Cemex facility in Lyons, where the Division noted that it rejected a proposed control technology in response to community outcry against the technology. (citation omitted) Tellingly, the Division's proposal makes no mention of any community concerns in the disproportionately impacted communities in North Denver, Pueblo, or Florence, which will be impacted by the Division's actions regarding Suncor, the GCC Rio Grande – Pueblo cement plant, and the Holcim Florence cement plant.")

[212] Comment Letter to North Carolina at 29 ("While we appreciate DAQ's efforts to prepare an environmental justice analysis, it falls short. DAQ's proposed SIP explains that it overlaid the State's Class I areas with maps of potentially underserved block groups, which was then used to inform the specific EJ focused outreach for the RH program. While this is a useful first step, DAQ must do more. DAQ must involve and consider the environmental justice communities impacted by harms from the reasonable progress sources. DAQ's SIP ignores the fact that many of the reasonable progress sources are located in communities of color and many live below the poverty line. For example, PCS Phosphate Company (Aurora) and Domtar Paper Company are located in vulnerable areas where the people of color is higher than 64% and the percentage of poverty rate is higher than 30%." (citation omitted)).

likelihood to impact vulnerable communities. The selection was made using environmental justice markers such as people of color and people living below the poverty line. NPCA used American Community Survey data from the United States Census Bureau at the county and city levels to identify vulnerable communities. Additional information at the community or neighborhood levels was used when available for this selection. The sources identified below lack the best pollution controls or lack of pollution control upgrades to further reduce emissions and lessen the burden of air pollution in these communities. We will continue to make EPA aware of similar sources of concern identified in our future comment letters.

Table 1. Sources Identified by NPCA of Concern Due to Potential Impacts on Visibility at Class I Areas and Their Likelihood to Impact Vulnerable Communities.

State	Facility	County	Description	Cumulative Q/d (>=5)	% of People of Color	% of People Living Below Poverty Line	NOx (tons)	SO2 (tons)
AZ	FREEPORT MCMORAN MIAMI SMELTER	Gila	Primary Copper Smelting/Refining	223	37%	21%	173	3,930
AZ	ASARCO LLC - HAYDEN SMELTER	Gila	Primary Copper Smelting/Refining	3,801	37%	21%	46	20,498
CO	Suncor	Adams	Petroleum Refinery	46	48%	13%	593	196
CT	Wheelabrator Bridgeport	Fairfield	Municipal Waste Combustor	12	36%	9%	1,096	120
FL	SEMINOLE ELECTRIC COOPERATIVE, INC.	Putnam	Electric Power Generation	338	28%	26%	2,203	4,563
FL	Northside	Duval	Electric Power Generation	297	45%	16%	2,864	1,917
FL	Big Bend	Hillsborough	Electric Power Generation	104	49%	16%	2,277	1,156
FL	Deerhaven	Alachua	Electric Power Generation	72	38%	23%	1,388	600
FL	MOSAIC FERTILIZER, LLC	Hillsborough	Phosphatic Fertilizer Manufacturing	44	49%	16%	171	1,487
FL	U.S. SUGAR CORPORATION	Hendry	Cane Sugar Manufacturing	26	66%	25%	1,326	171
FL	SUGAR CANE GROWERS CO-OP	Palm Beach	Cane Sugar Manufacturing	8	43%	14%	486	103
FL	OSCEOLA FARMS	Palm Beach	Cane Sugar Manufacturing	6	43%	14%	379	20
IN	United States Steel Corporation - Gary Works	Lake	Steel Mill Manufacturing	235	45%	17%	3,089	3,030
IN	Indiana Harbor East	Lake	Steel Mill Manufacturing	691	45%	17%	9,001	12,959
IN	Indiana Harbor West	Lake	Steel Mill Manufacturing	101	45%	17%	1,056	1,619
LA	R. S. Nelson	Calcasieu	Electric Power Generation	164	31%	17%	2,427	7,674
LA	Big Cajun II	Pointe Coupee	Electric Power Generation	207	39%	19%	1,989	6,021
MI	EES Coke	Wayne	Iron and Steel Mills and Ferroalloy Mani	113	50%	24%	1,351	2,820
MI	US Steel Great Lakes Works	Wayne	Iron and Steel Mills and Ferroalloy Mani	23	50%	24%	980	1,502
NC	PCS Phosphate	Beaufort	Fertilizer Plant	267	64%	30%	408	3,140
NC	Domtar Paper	Martin	Pulp and Paper Plant	118	64%	30%	1,806	770
OH	Cleveland-Cliffs (AK Steel)	Butler	Steel Mill	179	17%	13%	1,963	1,963
OR	Owens_Brockway	Multnomah	Glass Plant	23	29%	17%	404	118
TN	TVA Cumberland	Stewart	Electricity Generation via Combusti	536	8%	19%	3,380	6,649
TN	Trelleborg Coated Systems*	Hamblen	All Other Rubber Product Manufacturing	421	18%	21%	2	0
TN	Signal Mountain Cement	Hamilton	Cement Manufacturing	65	28%	14%	1,263	1
TN	O-N Minerals Company	Union	Lime Manufacturing	15	3%	23%	350	56
TN	Packaging Corporation of America	Hardin	Pulp and Paper Plant	62	8%	22%	1,416	616
TN	Tennessee Gas Pipeline, Station 860	Hickman	Compressor Station	29	9%	21%	1,484	0
WA	Ash Grove Cement	King	Cement Manufacturing	136	38%	11%	1,368	69
WA	Ardagh Glass	King	Glass Plant	12	38%	11%	153	99
WV	Harrison Coal Plant	Harrison	Electric Power Generation	1,047	5%	16%	5,575	11,270
WV	FORT MARTIN COAL POWER STATION	Monongalia	Electric Power Generation	815	11%	21%	9,388	4,234
WV	PLEASANTS COAL POWER STATION	Pleasants	Electric Power Generation	552	4%	16%	4,514	7,044
WV	MOUNTAINEER COAL PLANT	Mason	Electric Power Generation	384	3%	18%	3,579	4,600
WV	AMERICAN BITUMINOUS POWER-GRANT TOV	Marion	Electric Power Generation	204	7%	16%	1,672	1,964
WV	LONGVIEW COAL POWER PLANT	Monongalia	Electric Power Generation	191	11%	21%	1,532	2,158
WV	WEST VIRGINIA ALLOYS, INC.	Fayette	Iron and Steel Mills and Ferroalloy Mani	130	7%	18%	1,066	1,121
WV	MORGANTOWN ENERGY FACILITY	Monongalia	Fossil Fuel Electric Power Generation	70	11%	21%	1,142	703
TX	SAN MIGUEL ELECTRIC PLANT	Atascosa	Electric Power Generation	153	65%	15%	2,267	8,940
TX	TEXARKANA MILL	Cass	Paper (except Newsprint) Mills	40	23%	19%	1,796	76
TX	ODESSA CEMENT PLANT	Ector	Cement Manufacturing	12	64%	12%	938	19
TX	NEWMAN STATION	El Paso	Electric Power Generation	89	87%	22%	1,875	9
TX	WA PARISH ELECTRIC GENERATING STATION	Fort Bend	Electric Power Generation	476	65%	8%	4,589	28,811
TX	CORNUDAS PLANT	Hudspeth	Pipeline Transportation of Natural Gas	8.3	81%	32%	362	5
TX	OXBOW CALCINING	Jefferson	All Other Petroleum and Coal Products M	174	58%	19%	609	11,495
TX	TOLK STATION	Lamb	Electric Power Generation	780	59%	20%	2,488	13,625
TX	LIMESTONE ELECTRIC GENERATION STATION	Limestone	Electric Power Generation	255	40%	21%	7,470	10,240
TX	JONES STATION POWER PLANT	Lubbock	Electric Power Generation	6	45%	19%	1,395	3
TX	SANDY CREEK ENERGY STATION	McLennan	Electric Power Generation	40	43%	19%	1,147	2,961
TX	STREETMAN PLANT	Navarro	Ground or Treated Mineral and Earth M	74	42%	20%	681	3,493
TX	HARRINGTON STATION POWER PLANT	Potter	Electric Power Generation	1,005	54%	21%	2,945	10,476
TX	OAK GROVE STEAM ELECTRIC STATION	Robertson	Electric Power Generation	219	42%	15%	4,535	6,974
TX	WELSH POWER PLANT	Titus	Electric Power Generation	407	53%	20%	4,951	11,178
TX	OKLAUNION POWER STATION	Wilbarger	Electric Power Generation	386	40%	16%	5,215	1,779
TX	KEYSTONE GAS PLANT	Winkler	Natural Gas Liquid Extraction	41	62%	17%	1,130	435

* Source with extremely high PM2.5 and PM10 emissions

The RHR requires that the state should consider evaluating major and minor stationary sources or groups of sources, mobile sources, and area sources.[213] The states ignore emissions from area sources, and some states even ignore area sources that impact both visibility and vulnerable communities. For example, Florida ignored area source emissions from agricultural sugar cane burning. Much of the sugar cane acreage burned is owned or controlled by the sugar cane mills. Therefore, performing Four-Factor Analyses would logistically be a relatively straightforward exercise.[214] Moreover, green harvesting using mechanical harvesters—that does not involve burning—is already implemented in Florida and in other states.[215]

Additionally, oil and gas area sources are a problem for Class I areas and vulnerable communities.[216] Texas is an example of a state that declined to evaluate all areas sources for Four-Factor Analyses,[217] despite areas sources being the largest category contributor of NOx, Volatile Organic Carbon (VOC), ammonia (NH3), and Particulate Matter, with most of NOx, VOC and SO2 emissions from the Oil and Gas sector.[218] Moreover, Texas Emissions Inventory fails to include significant flaring emissions and drastically undercounts the actual levels of SO_2 emissions from oil and gas area sources.[219]

EPA must reinforce the need for states to engage environmental justice communities, select sources—including area sources—with priority for those in/adjacent environmental justice communities, and most importantly direct states to require reductions from environmental justice sources

[213] 40 C.F.R. §51.308(f)(2)(i).
[214] Comment Letter to Florida at 30.
[215] Comment Letter to Florida at 31-32.
[216] Examples of Class I areas currently or potentially impacted by oil and gas emissions, several of which also impact vulnerable communities, include but are not limited to: Theodore Roosevelt and Lostwood (i.e., Bakken Shale in eastern Montana and North Dakota); Wind Cave and Badlands (i.e., Powder River Basin in northeast Wyoming); Bridger and Fitzpatrick Wilderness Areas (i.e., Pinedale Anticline and Jonah Fields in western Wyoming); Mesa Verde (i.e., North and South San Juan Basin); Carlsbad Caverns and Guadalupe Mountains (i.e., Permian Basin in southeastern New Mexico and western Texas); Canyonlands and Arches (i.e., Uintah, Paradox, and Piceance Basins in Utah and Colorado); and Rocky Mountain (i.e., Denver-Julesburg Basin).
[217] Comment Letter to Texas at 24.
[218] Comment Letter to Texas at 24-25.
[219] Comment Letter to Texas at 25.

b. For EGUs, transition from coal to natural gas should not be a solution for regional haze.

EPA must ensure that long-term strategies include appropriate measures to prevent *future* impairment of visibility in mandatory class I Federal areas.[220] Reductions achieved with controls for some pollutants will be the same as those obtained with conversion from coal to natural gas. If a switch to natural gas takes place, the state must consider and require controls (*e.g.*, SCR for turbines). Controls should be required upfront reflecting low rates and should be required at a new facility or at a facility that switches fuel. As discussed above in section 2.e, fuel switch conversion should include permit (PSD) reviews and Four-Factor Analyses.

c. Retired or under-utilized EGUs are now being used to supply energy for onsite bitcoin mining – EPA must address this head on.

Some EGUs (*e.g.*, using waste coal, peaking units and other stationary and mobile sources) were previously running at a very low capacity (or not running at all) but are now run at high capacity for bitcoin mining. States do not appear to be considering the impacts from these sources on Class I areas and environmental justice communities in their permitting and oversight/enforcement activities. Indeed, where these sources are already permitted, the state RH SIPs assume—without enforceable limitations—that these sources will continue to operate at a lower capacity. Furthermore, as explained in the above issue, when a state considers whether to permit a new source or modification, it must apply the regional haze reasonable progress Four-Factor Analysis requirements and not conduct new source permitting in a vacuum. The proliferation of these bitcoin mining sources throughout the states undermines progress of the RH program. EPA should develop a strategic policy and initiatives to address this growing problem and ensure it is applied uniformly in regional haze SIP revisions.

d. Requiring States to Incorporate Planned Retirements as Enforceable SIP Provisions, as Required by the Clean Air Act, Would Result In Significant Reductions of Greenhouse Gas Emissions.

As noted, numerous states have declined or refused to impose emission reduction measures that would satisfy a Four Factor Analysis—and in some instances, refused to even evaluate controls—based on projected source retirements or reductions in utilization. The Clean Air Act, however, 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. 42 U.S.C. § 7410(a)(2)(A). The Regional Haze Rule similarly requires each state to include "enforceable emission limitations" as necessary to ensure reasonable progress

[220] 42 U.S.C. § 7491(a)(1).

toward the national visibility goal.[221] Thus, EPA must make clear that, where the state relies on a sources' plans to permanently cease operations or reduction in utilization to ensure reasonable progress or to avoid any control analysis, the state "must" make those parameters or assumptions into enforceable emission limitations in the SIP itself. [222] Including planned retirements as enforceable SIP provisions is not only required under the Clean Air Act and the Regional Haze Rule itself, but would result in significant greenhouse gas emission reductions and other pollution co-benefits.

Conclusion

EPA must ensure that second round haze plans comply with all legal requirements and deliver on the Clean Air Act goal of restoring natural visibility conditions to our nation's treasured national parks and wilderness areas. We strongly recommend that EPA issue findings of failure to submit by January 31, 2022, and take final action on all SIPs (or FIPs) a rolling basis, by August 2023. Moreover, EPA should not delay: once it determines a SIP is deficient,[223] the agency should begin developing a FIP. Please feel free to contact us if you need additional information or have any questions regarding the contents of this letter.

Sincerely,

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[221] *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.")

[222] 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* August 2019 Guidance at 22 ("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.").

[223] Furthermore, EPA must use its authority and reject incomplete SIPs and send them back to the states for completion. Good government and efficient use of public resources dictate the agency should not use resources in moving forward with an action knowing it is not approvable.

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